

Cub Scout

BEAR

Handbook



BOY SCOUTS OF AMERICA

Welcome to the **BEAR**
Handbook

Welcome to the

BEAR

Handbook



Hi! I'm Ethan.

I'm a Webelos Scout now, but I had a great time working on adventures with my Bear den. As you work on your Bear rank, I'll do my best to help you out. I might even have a few goofy stories to tell. So turn the page, and start the Bear adventure!



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Bear Parent Introduction

If you could give only one gift to your son, what would it be? No matter what your family situation, it is within your power to help him grow into a person with a good feeling about himself and a genuine concern for others. Cub Scouting can assist you in providing this greatest gift of all.

Today your son is a Bear, but soon he will graduate into a Webelos den. He'll then work to achieve the Webelos and Arrow of Light ranks. This will prepare him for more adventure as a Boy Scout and the opportunity to earn Scouting's highest rank—Eagle Scout.

Using This Handbook

This handbook is written for both you and your Bear. Much of it is for your son to enjoy, while other sections like this parent information are for you. However, it is our hope that you will read the adventures along with your Bear and help him to achieve them.



Your Son, Scouting, and You

As a parent or other caring adult, you want your Bear to grow up to be self-reliant and dependable, worthy and caring. Scouting has these same goals in mind for him.

The mission of the Boy Scouts of America is to prepare young people to make ethical and moral choices over their lifetimes by instilling in them the values of the Scout Oath and Scout Law.

Scout Oath (or Promise)	Scout Law
On my honor I will do my best To do my duty to God and my country and to obey the Scout Law; To help other people at all times; To keep myself physically strong, mentally awake, and morally straight.	A Scout is trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean, and reverent.

The Scout Oath and the Scout Law are defined on pages 18–21 in the Bobcat requirements.

Since 1910, the Boy Scouts of America has been weaving lifetime values into fun, developmental activities. These activities are designed to help families teach their sons how to make good decisions throughout their lives and give them confidence as they become the adult leaders of tomorrow.

In a society where your son is often taught that winning is everything, Cub Scouting teaches him to DO HIS BEST, to help others, and to try to live his life according to the Scout Oath and the Scout Law. If a Cub Scout has done his best to satisfy a requirement, then he has met the standard for advancement in Cub Scouts. It is up to his parent and den leader to gauge whether he has offered his best effort.

The Purposes of Cub Scouting

Cub Scouting is a year-round family-oriented part of the BSA

program designed for boys who are in first through fifth grades (or are 7, 8, 9, and 10 years old). Parents, leaders, and organizations work together to achieve the Purposes of Cub Scouting.

1. Character Development
2. Spiritual Growth
3. Good Citizenship
4. Sportsmanship and Fitness
5. Family Understanding
6. Respectful Relationships
7. Personal Achievement
8. Friendly Service
9. Fun and Adventure
10. Preparation for Boy Scouts



Cub Scout Den

Your Cub Scout is a member of a den. The Bear den will involve your son in a group of boys his own age where he can earn recognition for his accomplishments. He will also gain a sense of personal achievement from the skills he learns. Most dens have six to eight boys and meet two to three times a month. Den meetings are a time for learning new things, having fun, and going on outings.

Dens are led by a team of adult volunteers—the den leader and assistant den leader(s).

Cub Scout Pack Leadership

Your Bear is also a member of a Cub Scout pack. Most packs are made up of several dens that gather monthly at a pack meeting. The meeting usually follows a suggested theme, and it's a time for boys to be recognized for their accomplishments during the month, to perform skits and songs they have learned in den meetings, and to have fun with the entire family.

Packs are led by a Cubmaster and pack committee. Like the den leaders, the Cubmaster and assistants are volunteer leaders—usually family members of boys in the pack. The pack committee makes plans for pack meetings and activities and takes care of the “business” items that are necessary for a pack to operate smoothly.

Each pack is sponsored by a chartered organization. This is a community organization that has applied for and received a charter from the Boy Scouts of America National Council to operate the Scouting program. The chartered organization may be a school, service club, religious group, or other group interested in youth. The chartered organization sponsors the pack, approves the leadership of the pack, provides a meeting place, and operates the pack within the guidelines and policies of that organization and the Boy Scouts of America.

Your Bear's Advancement

In Scouting, advancement is the process by which a member meets certain requirements and earns recognition. The Bear advancement program is a blend of activities that boys complete in their den meetings as well as at home with their families.

If your son is a new Cub Scout, the first step in the advancement process is to earn the Bobcat badge (see page 16). The Bobcat requirements serve to orient a new Scout to the ideals and symbols of Scouting. When all of the Bobcat requirements have been completed, your boy becomes eligible to receive his Bobcat badge in a pack ceremony.



As a Bear, your son will work toward earning the Bear rank. This rank is for those boys who are in the third grade or are 9 years old. All the Cub Scout ranks (Tiger, Wolf, Bear, Webelos, and

Arrow of Light) are tailored for a grade and the corresponding age level. To advance, Bears work on the adventures described in this handbook, some required and some elective. As your son completes each requirement in an adventure to the best of his ability, you or another caring adult will sign the space marked “Akela’s OK.” His den leader will sign where it says, “Den Leader’s OK.” If the requirement is completed in a den meeting, the den leader may sign both places.



Akela's OK

Date

Den Leader's OK

Akela means “good leader” and is an important part of Cub Scouting. Akela can be you, a den leader, a teacher, or another important adult. Scouts can track their requirements in the Bear Adventure Tracking section found at the back of the book. As boys advance, they earn adventure loops and pins to mark their progress. These items will be presented to them during a ceremony at a pack or den meeting. It is important for boys to be recognized for the good work they do.

Do Your Best

Your Bear can keep track of his adventures using the Bear Adventure Tracking on page 291 of this handbook. This provides encouragement and helps him see his progress toward the Bear rank. Whenever possible, adventure requirements are written in a

way that allows them to be customized for each boy and den. Boys are never “tested” or placed in a position where they may not be successful. If a Cub Scout has participated and done his best to satisfy a requirement, then he has met the standard for advancement in Cub Scouts. It is up to his parent and den leader to gauge whether he has offered his best effort.

If a Bear is unable to participate in a den or pack activity due to an illness or conflict, you may work with him to complete the requirements to the best of his ability, but please make every effort to help him attend each meeting so he can get the full benefit of the Cub Scouting program.

If your Bear has an intellectual or physical disability that prevents him from attempting a requirement, talk to your den leader and Cubmaster about finding an alternative.



Bear Badge

The Bear badge is awarded when boys have completed the following:



1. Complete each of the following Bear required adventures with your den or family:

Required Adventures		
Bear Claws 	Bear Necessities 	Fellowship and Duty to God 
Fur, Feathers, and Ferns 	Grin and Bear It 	Paws for Action 

2. Complete one Bear elective adventure of your den or family's choosing.
3. With your parent or guardian, complete the exercises in the pamphlet *How to Protect Your Children From Child Abuse: A Parent's Guide*, and earn the Cyber Chip award for your age.*

*If your family does not have Internet access at home AND you do not have ready Internet access at school or another public place or via a mobile device, the Cyber Chip portion of this requirement may be waived by your parent or guardian.

Family participation is an integral part of the advancement process, and there are many chances to join in activities that are age-appropriate for your child. You may sign the “Akela’s OK” in his handbook each time he finishes a requirement, and you should always notify the den leader when a requirement is completed at home.

The Bear badge is presented during a special ceremony at a pack meeting to each boy’s parent or guardian, who in turn presents it to the Scout. The badge is worn on the left uniform pocket. (See page 12 or inside the back cover.)

Scouting and Duty to God

The Boy Scouts of America has always held steadfastly to the principle, embodied in the Scout Oath, that a Scout has a duty to God. The BSA does not promote any specific religion, and has always embraced all faiths. We do encourage youth members and their families to be active in their own faith, in keeping with the BSA’s Declaration of Religious Principle.

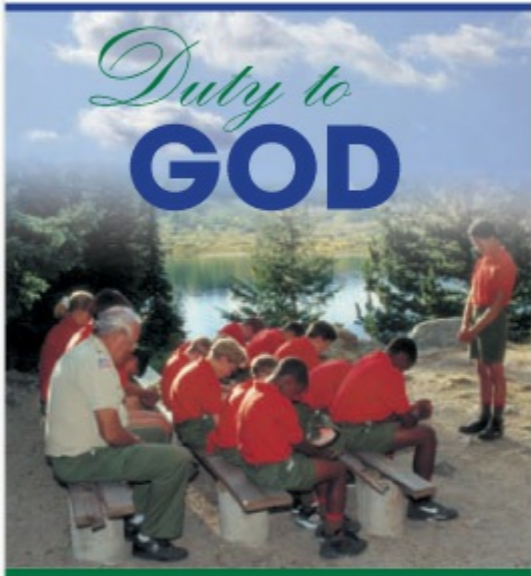
It naturally follows that the leadership for your son’s spiritual development, both within and outside Cub Scouting, must come primarily from your home and your family’s religious leaders. Your son will look to you as his example of how to learn and perform

his duty to God.

The adventures related to duty to God in each rank of the Cub Scouting program provide support, and each boy has the opportunity to earn the religious emblem of his faith. The emblem is created and presented by your son's religious group. Most of the world's religions have an emblem of their faith. However, alternative requirements are available for boys whose faith institutions do not have an emblem or whose families are not affiliated with an organized religious group.

In addition, the staff at your BSA local council service center should be able to help. Many local councils and districts offer organized opportunities for Scouts to earn their religious emblems while meeting and sharing fellowship with other Scouts of their faith.

Duty to
GOD



BOY SCOUTS OF AMERICA®



You can also find information on the Internet at

www.praypub.org or

www.scouting.org/filestore/pdf/512-879_WB.pdf.

Welcome, Bear!

Welcome to a fun and exciting year of Cub Scouting, Bear! You will go on adventures, exploring the world around you with other Bears in your den. You will play games, make fun things, learn about wildlife, and spend lots of time outdoors. Best of all, you'll even earn awards while having all this fun.

Cub Scouting

Do you know how many years Cub Scouting has been around? Cub Scouting began in 1930, which means it is now more than 80 years old. Can you imagine how many boys have been Cub Scouts in all those years? If you said “tens of millions,” you would be right.

Lord Baden-Powell founded the Scouting movement in 1907. Over time, a program developed to include younger boys.



Baden-Powell liked the stories in *The Jungle Book* by Rudyard Kipling, and he thought many of the characters were fun and playful, just like Cub Scouts. He also knew it was important for the boys to have a wise leader like Akela, the wolf. Akela lets Mowgli, the boy, join the wolf pack. Maybe you also know about Baloo the bear, who helps teach Mowgli the laws of the jungle so he can live among the animals. To this day, we have names like Akela and Baloo, and words like den and pack, in Cub Scouting. That's our way of remembering how Cub Scouting began with *The Jungle Book*.

Your Bear Leaders

As a Bear Scout, you have several people who you can call “Akela.” These include the den leader, the assistant den leader, and your parent or guardian. Akela can be anyone who is older than you and a wise teacher, just like Akela in *The Jungle Book*. These leaders help you to learn new things, and they can even help you find new ways to use what you have already learned! Akela will also sign your adventure requirements in the handbook when you complete them.



Did you know you can also help lead your den by becoming a Bear denner? The denner is a Scout chosen by the members of his den to help the den leader and den chief at meetings and outings. He serves for about one to two months. If you're elected to be the denner, do your best.

Your Bear Den and Den Meetings

Being a Bear in the Boy Scouts of America means that you

belong to a den of boys who are Bears just like you! These boys are in the same grade or are the same age as you, and you all come together in “den meetings” a few times a month. In these meetings you will work on the Bear adventures, earning awards, playing games, and making fun things with the rest of the den.

Your Pack Meetings

You, your family, and your den also go to a monthly pack meeting. This is a meeting for all the boys in all the dens in the pack to get together at the same time. It’s a chance to tell others about the hard work your den has done on the adventure that month, and also a time for awards and seeing what other Scouts in the pack are doing, at all different rank levels!

Your Bear Uniform

Your uniform is an important part of being a Cub Scout. Wearing it lets people know that you belong to a Bear den and a pack and, most important, you belong to the Boy Scouts of America! You should wear the uniform to den meetings, pack meetings, and any special activities you participate in as a Bear.

The official uniform for Cub Scouts includes blue Cub Scout pants or shorts and shirt with insignia for your rank. Each rank has its own neckerchief and slide in the rank colors and a belt buckle to be worn with the blue Cub Scout belt. Bear Scouts can also wear an

official navy-blue cap with a light blue front panel and Bear emblem. When you wear the full Cub Scout uniform, it shows you are a member of the team.



The pictures below show you where to put the Bear Scout insignia on the sleeves and pockets of your uniform.

You might receive an emblem for participating in day camp or a council popcorn sale. This is an example of “temporary insignia” and should be worn centered on the right pocket.



The denner wears gold shoulder cords suspended from the left shoulder of his uniform. The cords are removed when his time as the denner ends.



Character Compass

As you work on your Bear adventures in your *Bear Handbook*, you will notice this symbol:



A compass is a tool that guides a person from place to place. Character is how we act, and it guides our entire lives. This compass will be your guide to one or more of the 12 points of the Scout Law. Every time you check the compass, it will remind you of how the activities in each adventure are related to the Scout Law. This may also help you think about how the points of the Scout Law guide our way in Cub Scouting and in daily life. Those points are all different, and each one is a treasure for you to find!

The Outdoor Code

Much of Scouting, including Cub Scouting, happens outside. For more than 60 years, the Outdoor Code has been a guide for

Scouts in the outdoors. Remember to do your best by showing respect for the outdoors and by learning and upholding the Outdoor Code.

THE OUTDOOR CODE

As an American, I will do my best to—

- ◆ Be clean in my outdoor manners,
- ◆ Be careful with fire,
- ◆ Be considerate in the outdoors, and
- ◆ Be conservation-minded.



Being clean in your outdoor manners, careful with fire, and considerate means you can enjoy the outdoors in ways that do no

harm to the environment. Being conservation-minded encourages the protection and thoughtful use of natural resources and doing your part to improve the condition of the land and the environment.

As a Cub Scout, you will learn to use the Leave No Trace Principles for Kids to help you take care of an area where you hike or camp.

Leave no Trace Principles for Kids*



- 1. Know Before You Go.** Find out about the place you're going to camp ahead of time. Are there rules you need to know about? Are any activities against the rules? Is water available? Do you need to bring anything special?
- 2. Choose the Right Path.** Always walk on trails, even if that means getting your boots muddy. Don't take shortcuts. Set up tents in marked camping areas.
- 3. Trash Your Trash.** Use bathroom facilities when available.

Follow campground rules for handling dishwater. Pack out all your trash unless the campground has trash pickup.



- 4. Leave What You Find.** Leave any natural treasures where you find them so other campers can enjoy them, too. If you want a souvenir of your campout, take a picture. A good saying to remember is “Leave nothing but footprints, take nothing but pictures, kill nothing but time.”
- 5. Be Careful With Fire.** Cook on a camp stove or grill whenever possible. It’s easier and less messy than cooking over an open fire. Only build fires in designated fire rings. Always have someone keep an eye on your fire until it is dead out.
- 6. Respect Wildlife.** Travel quietly and give animals enough space that you don’t disturb them. Getting too close to an animal can potentially hurt the animal and you. Take pictures from a safe distance. You’re visiting the animal’s home, so be considerate.
- 7. Be Kind to Other Visitors.** Be respectful of other visitors by keeping noise down and not entering other groups’ campsites without permission. Be polite to other people you meet. Give

them the respect you expect from them.

To help you remember the Outdoor Code and the Leave No Trace Principles for Kids, you can find them in the back of your handbook.

**The member-driven Leave No Trace Center for Outdoor Ethics teaches people how to enjoy the outdoors responsibly. This copyrighted information has been reprinted with permission from the Leave No Trace Center for Outdoor Ethics: www.LNT.org.*

Your First Rank—Bobcat!



If you haven't earned your Bobcat badge yet, this is where you start. When you've earned your Bobcat, you'll know the signs, symbols, and big ideas of Scouting. And when you know those, you're a Scout!





If you haven't already earned your Bobcat badge, you will need to start your Cub Scouting adventures by learning what it takes to become a Bobcat.

Read through the Bobcat requirements and practice several times what you have learned. When you think that you are ready, share what you've learned with your family, your den leader, and with your den at a pack meeting. Then give yourself a pat on the back and congratulate yourself on earning your Bobcat badge.

BOBCAT REQUIREMENTS

- 1. Learn and say the Scout Oath, with help if needed.**
- 2. Learn and say the Scout Law, with help if needed.**
- 3. Show the Cub Scout sign. Tell what it means.**
- 4. Show the Cub Scout handshake. Tell what it means.**
- 5. Say the Cub Scout motto. Tell what it means.**
- 6. Show the Cub Scout salute. Tell what it means.**
- 7. With your parent or guardian, complete the exercises in the pamphlet *How to Protect Your Children From Child Abuse: A Parent's Guide*.**

1 | Learn and say the Scout Oath, with help if needed.

One of the most important parts of that is to understand that all members of the Boy Scouts of America believe in, live by, and often repeat the Scout Oath and the Scout Law. We learn those words and believe in them as a way to live our lives and be good members of our families, our communities, and the Boy Scouts of America!

Scout Oath

**On my honor I will do my best
To do my duty to God and my country
and to obey the Scout Law;
To help other people at all times;
To keep myself physically strong,
mentally awake, and morally straight.**

The Meaning of the Scout Oath

On My Honor I Will Do My Best

Saying “On my honor” is like saying “I promise.” It means that you will do your best to do what the Scout Oath says.



The Scout Oath has three promises. Let's look at what they mean.

To Do My Duty To God and My Country and To Obey The Scout Law

A duty is something you are expected to do. At home, you might be expected to make up your bed or take out the trash. You also have duties to God and to your country. You do your duty to God by following the teachings of your family and religious leaders. You do your duty to your country by being a good citizen and obeying the law. You also promise to live by the 12 points of the Scout Law, which are described on the next page.

To Help Other People at All Times

Many people need help. A friendly smile and a helping hand make life easier for others. By helping other people, you are doing a Good Turn and making our world a better place.

To Keep Myself Physically Strong, Mentally Awake, and Morally Straight

The last part of the Scout Oath is about taking care of yourself. You stay physically strong when you eat the right foods and get plenty of exercise. You stay mentally awake when you work hard

in school, learn all you can, and ask questions. You stay morally straight when you do the right thing and live your life with honesty.



Akela's OK

Date

Den Leader's OK

2 | Learn and say the Scout Law, with help if needed.

Scout Law

A Scout is trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean, and reverent.

The Meaning of the Scout Law

The Scout Law has 12 points. Each is a goal for every Scout. He does his best to live up to the Law every day. It is not always easy to do, but a Scout always tries.

A Scout is TRUSTWORTHY. A Scout tells the truth and keeps his promises. People can depend on him.

A Scout is LOYAL. A Scout is true to his family, friends, Scout leaders, school, and country.

A Scout is HELPFUL. A Scout volunteers to help others without expecting a reward.

A Scout is FRIENDLY. A Scout is a friend to everyone, even people who are very different from him.

A Scout is COURTEOUS. A Scout is polite to everyone and always uses good manners.

A Scout is KIND. A Scout treats others as he wants to be treated. He never harms or kills any living thing without good reason.

A Scout is OBEДИENT.

A Scout follows the rules of his family, school, and pack. He obeys the laws of his community and country.

A Scout is CHEERFUL.

A Scout looks for the bright side of life. He cheerfully does tasks that come his way. He tries to make others happy.

A Scout is THRIFTY.

A Scout works to pay his way. He uses time, property, and natural resources wisely.

A Scout is BRAVE.

A Scout can face danger even if he is afraid. He stands for what is right even if others laugh at him.

A Scout is CLEAN.

A Scout keeps his body and mind fit. He helps keep his home and community clean.

A Scout is REVERENT.

A Scout is reverent toward God. He is faithful in his religious duties. He respects the beliefs of others.



Akela's OK

Date

Den Leader's OK

3 | Show the Cub Scout sign. Tell what it means.

Make the sign with your right hand. Hold your arm straight up. The two raised fingers stand for the Scout Oath and the Scout Law. The fingers look like the sharp ears of the wolf ready to listen to Akela! Remember that Akela means “good leader” to a Cub Scout. Your mother or father or guardian is Akela. So is your Cubmaster or your den leader. At school, your teacher is Akela.



Akela's OK

Date

Den Leader's OK



4 | Show the Cub Scout handshake. Tell what it means.

When you shake hands with another Cub Scout, do this: Hold out your right hand just as you always do to shake hands. But then put your first two fingers along the inside of the other boy's wrist. This means that you help each other to remember and obey the Scout Oath and Scout Law.





Akela's OK

Date

Den Leader's OK

5 | Say the Cub Scout motto. Tell what it means.

The Cub Scout motto is “Do Your Best.”

A motto is a guiding principle and a rule for living. Do Your Best means trying your hardest, not just a little bit. Do your best all the time. Do your best in school and at home. Do your best when you play a game and help your team. Do your best as you work on your rank adventures!



Akela's OK

Date

Den Leader's OK



6 | Show the Cub Scout salute. Tell what it means.

Salute with your right hand. Hold your first two fingers close together. Touch your fingertips to your cap. If you aren't wearing a cap, touch your right eyebrow. You salute the flag to show respect to our country. Always use the Cub Scout salute when you are in your Cub Scout uniform, both indoors and outdoors. If you are not in uniform, you salute the flag by placing your right hand over your heart.





Akela's OK

Date

Den Leader's OK

7 | With your parent or guardian, complete the exercises in the pamphlet *How to Protect Your Children from Child Abuse: A Parent's Guide*.

If your handbook does not include the pamphlet, talk with your den leader.



Akela's OK

Date

Den Leader's OK

Congratulations on earning your Bobcat badge! You may now continue on the trail of your Bear adventures! Let's take a look at what those adventures are called, what you need to do to earn your Bear badge, and all the fun things you will explore as a Bear.



The Bear Adventures and Requirements

The requirements to earn your Bear rank may be completed in any order. Akela (your den leader, parent, or guardian) will decide on the order for your den. You can do the electives any time you want. You can even work on electives at home with your family. And you'll earn an adventure loop for each adventure you complete.

Go, Bear!



Bear Rank Requirements

1. Complete each of the following Bear required adventures with your den or family:



Bear Claws



Fur, Feathers,
and Ferns



Bear Necessities



Grin and Bear It



Fellowship and
Duty to God



Paws for Action

2. Complete one Bear elective adventure of your den or family's choosing. (See page 29.)
3. With your parent or guardian, complete the exercises in the pamphlet *How to Protect Your Children from Child Abuse: A Parent's Guide* and earn the Cyber Chip award for your age.*

*If your family does not have Internet access at home AND you do not have ready Internet access at school or another public place or via a mobile device,

the Cyber Chip portion of this requirement may be waived by your parent or guardian.

Once you have achieved all of the Bear rank badge requirements and your handbook has been signed, you are ready to earn your Bear badge! Let out a big GRAND HOWL, Bear Scout!

BEAR ELECTIVE ADVENTURES



Baloo the Builder



Marble Madness



A Bear Goes Fishing



Roaring Laughter



Bear Picnic Basket



Robotics



Beat of the Drum



Salmon Run



Critter Care



Super Science



Forensics



A World of Sound



Make It Move

Bear Required Adventures

BEAR CLAWS





Pocketknives are great tools to have on campouts. You can use them to carve hiking sticks, cut up food when you are cooking, and even open bottles and cans. But you have to know how to use them the right way or you'll end up hurting yourself or others. Learning to use pocketknives—and making neat things with them—is what this adventure is all about.

When I was working on this adventure last year, my dad gave me the knife he carried when he was a Boy Scout. It was the coolest gift ever! Now I'm using it to carve a hiking stick to take on Webelos campouts. What will you make with your pocketknife?



Snapshot of Adventure

A pocketknife is a useful tool to have for Scouting activities. It can also be dangerous if you don't use it the right way. In this adventure, you will learn how to use a pocketknife safely. You will also get to learn the basics of carving.



A Scout is trustworthy. You can show that you are trustworthy by taking care of your pocketknife and using it safely.



REQUIREMENT 1 | Learn about three common designs of pocketknives.

Pocketknives come in all shapes and sizes. Some can be used for many different tasks. Others are designed for special purposes like fishing.

Three common designs used in Scouting are the jackknife, the penknife, and the multipurpose knife. Let's look at each type.

Jackknife

A jackknife is a good tool for campers and fishermen. It is hinged at only one end and may have one or two blades. Sometimes one blade has a very sharp point, while another blade has a more rounded point.



Some jackknives (and other knives) have locking blades. That means you have to push a release before you can close the blade.

Locking blades prevent you from accidentally closing the blade on your fingers.

Penknife

A penknife is small and lightweight, so it is easy to carry in your pocket. It is hinged at both ends and usually has one or two blades at each end. Penknives were originally designed to cut or sharpen quills used for writing. Thomas Jefferson wrote the Declaration of Independence with a quill pen.



Multipurpose Knife

Multipurpose knives can be used to do many things. In addition to one or two blades, a multipurpose knife might include a can opener, scissors, leather punch, tweezers, and screwdrivers.



These knives can be fun to have, but all those extra pieces can get in your way when you are just trying to carve or cut some string. Also, the more tools your knife includes, the heavier it will

be. Pick a multipurpose knife that has only the tools you really need.



Akela's OK

Date

Den Leader's OK



It's fun and useful to be able to carry a knife. Keep it clean, keep it sharp, and it will be ready when you need it.

REQUIREMENT 2 | Learn knife safety and earn your Whittling Chip.*

*One of the items carved for Bear Claws requirement 3 may be used to fulfill Whittling Chip requirement 3.

It is very important to be safe when you use your pocketknife.

In this requirement, you will learn the rules of knife safety and earn your Whittling Chip. When you have earned your Whittling Chip, you will be allowed to carry your pocketknife to designated Cub Scout activities. Your parent or den leader will tell you when you may bring your knife. Always keep your Whittling Chip card with you when you are carrying your knife.



A Scout is obedient. When you follow the rules of knife safety, you keep yourself from getting hurt and you show that you are obedient.

Knife Safety Rules to Learn and Live By

- ◆ A knife is a tool, not a toy.
- ◆ Know how to sharpen a knife. A sharp knife is safer than a dull knife because it is less likely to slip and cut you.

- ◆ Keep the blade clean and dry.
- ◆ Never carry an open pocketknife.
- ◆ When you are not using your knife, close it using the palm of your hand and put it away.
- ◆ When you are using the cutting blade, do not try to make big shavings or chips. Cut slowly and steadily.
- ◆ Make a safety circle. Before you pick up your knife to use it, stretch your arm out and turn in a circle. If you cannot touch anyone or anything else, it is safe to use your knife. While using your knife, be sure to watch in case someone walks toward you and gets too close. If that happens, put your knife away until it is safe to continue.
- ◆ Always cut away from you, never toward you.
- ◆ Never hand a knife to someone else blade first. Learn and use the “eye contact” method of handing a knife to someone else. Do not release the knife until the other person makes eye contact with you and acknowledges he is receiving the knife.



- ◆ Never use a knife on something that will dull or break it.
- ◆ Never throw a knife for any reason.
- ◆ Always think before you cut. Do not use your knife to strip bark from a tree or to carve your initials into something that does not belong to you.



Once you understand the safety rules, agree to abide by the Pocketknife Pledge, and have your den leader sign your card, you will have earned your Whittling Chip.

POCKETKNIFE PLEDGE

I understand the reason for safety rules.

I will treat my pocketknife with the respect due a useful tool.

I will always close my pocketknife and put it away when I am not using it.

I will not use my pocketknife when it might injure someone near me.

I promise never to throw my pocketknife for any reason.

I will use my pocketknife in a safe manner at all times.

Keeping Your Knife Sharp

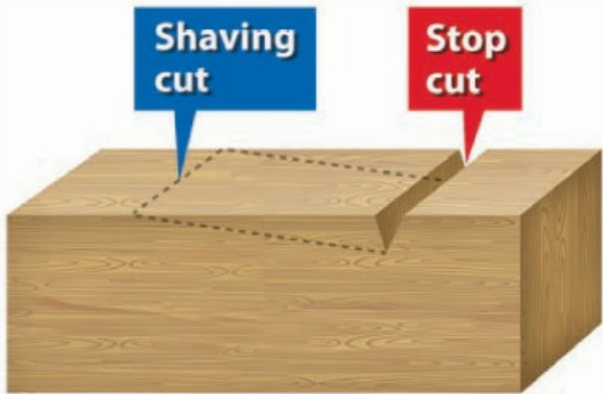
A good way to sharpen your knife is to use a sharpening stone. Lay the blade on the stone at a slight angle. Push the blade forward as if you were going to shave a thin sliver from the stone. Do not push down hard. Next, turn the blade over and shave the stone toward you. This is the only time you should move your knife toward yourself. Keep your fingers below the surface of the stone

to protect them. Continue this back-and-forth action until the edge is sharp along its entire length.



Making Stop Cuts

Here is a secret to use when you are whittling. Before you make a shaving cut, make a stop cut. At the place you want the shaving to stop, cut straight down with your knife. Press down and rock the blade back and forth until the cut is as deep as you want the shaving to go. This stop cut will prevent you from shaving off too much wood.



First Aid for Knife Cuts

Accidents can happen even when you are being careful. It is important that you know what to do if you or one of your fellow Scouts gets cut while using a pocketknife.

Small cuts in the skin can allow bacteria to enter the body and cause infection. Wash minor cuts with soap and water. Apply antibiotic ointment and cover with a dry, sterile dressing or an adhesive bandage to help prevent infection and protect the wound. Clean and rebandage wounds each day. If the cut is more serious, get help from an adult immediately.

Taking proper care of a wound will help prevent other health

issues like an infection.



Akela's OK

Date

Den Leader's OK



REQUIREMENT 3 | Using a pocketknife, carve two items.

It is fun to whittle sticks, but it is even more fun to make carvings of things like animals, acorns, and space aliens. A good way to learn to carve is to practice with a bar of soap. Carve a simple item and then try something a little harder.



What You Will Need

- ◆ A large bar of soap—it is best to unwrap the soap and let it dry for a day or two before you start carving
- ◆ A pocketknife
- ◆ One or two orangewood sticks (used for manicures) or a sheet of tracing paper
- ◆ Paper for sketching a design or a preprinted pattern
- ◆ A tray to work on—this will keep chips and shavings from going everywhere

What To Do

1. Choose a simple design that does not have too many projections or fine details. Start simple. You can pick a fancier design for your next carving.



2. Prepare the soap. Cut away the raised edges on the soap and scrape off the lettering. This will give you a nice, smooth block to work with.



- 3.** Sketch the outline of your design on the soap. You can do this by drawing with an orangewood stick or by tracing your design using tracing paper.



4. Make your first rough cuts. Cut away small pieces and slices of the soap that are not part of your design. Do not cut big pieces; if you do, the soap might break. Leave a margin of about one-quarter inch outside your outline.



5. Shape the model. Continue carving so you get closer and closer to your outline. Keep turning the soap to work on all parts of your design. Do not try to finish one part before another. Pay special attention to high points and low points on the carving.



- 6.** Polish your carving. Let the soap dry for a day or two, then rub it gently to smooth it out. Use a paper napkin first and then your fingertips.



7. Add detail. Finally, use your knife to add details like eyes or hair. If you like, create a crisscross pattern to give the carving more depth.



Akela's OK

Date

Den Leader's OK

Wood carving is a fun hobby. When you become a Boy Scout, you can even earn a merit badge for carving. You might even carve a neckerchief slide like this one to wear with your Boy Scout uniform. How cool would that be?



BEAR NECESSITIES





Do you like camping? Of course you do! One of my favorite things about camping is exploring nature, something I don't get to do much at home. When my pack did the Bear Necessities adventure last year, we saw a box turtle, a mother deer and her fawn, and a flock of geese flying south. There must have been 50 geese, all flying in a V-formation and honking like crazy. And they flew right over our campsite. It was so cool!

I hope you see some cool things on this adventure, too. I know you will learn some skills that will make camping even more fun as you move up to Webelos Scouts next year.



Snapshot of Adventure

A bear is at home in the outdoors, and so is a Bear Scout! In this adventure, you'll learn how to plan and set up a campsite, cook a meal with your den, and watch for changes in the weather. But best of all, you'll get to go camping! Are you ready?



REQUIREMENT 1 | While working on your Bear badge, camp overnight with your pack. If your chartered organization does not permit Cub Scout camping, you may substitute a family campout or a daylong outdoor activity with your den or pack.

Scouts love camping because they know how to take care of themselves outdoors. For this requirement, go on a camping adventure. This could be a pack campout with your den and pack, a weekend at Cub Scout resident camp, or any other Scout campout you have the opportunity to attend.



Akela's OK

Date

Den Leader's OK

At one of our campfires last year, our Cubmaster told us a really silly story about the place where we were camping. The end made us all burst out laughing. I almost fell off of my camp stool!



REQUIREMENT 2 | Attend a campfire show, and participate by performing a song or skit with your den.

Campfire shows are a fun part of any campout. Whether or not

you have an actual fire, a camp fire show lets you hang out with your buddies while you sing songs, listen to stories, and act in skits.

With your den leader and your den, pick a song or skit to perform. Practice it so everyone knows their parts and the audience can enjoy it. If you are doing a skit, make some simple costumes or props to help you tell the story. And when you perform, use your outside voice!



2

Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Make a list of items you should take along on your campout.

Being comfortable in the outdoors means taking along the right gear to keep you warm, dry, and safe. You don't need all the comforts of home, but a few key things can really help you enjoy your campout.

Make a list of personal items you should bring along on your campout, including your Cub Scout Six Essentials. You should take them on every outing. If you need help making your list, your den leader may have some ideas to help out.

CUB SCOUT SIX ESSENTIALS

First-aid kit

Filled water bottle

Flashlight

Trail food

Sun protection

Whistle

To go camping I'll need:

Be sure to bring this gear along on your campout.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Make a list of equipment that the group should bring along in addition to each Scout's personal gear.

Besides your personal gear, you will need some other items that the whole group will use. With your den or family, make a list of some of those items below. Your leader will make sure these items are at the campout for the group to use.



Our group will need:



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | With your den, plan a cooked lunch or dinner that is nutritious and balanced. Make a shopping list, and help shop for the food. On a campout or at another outdoor event, help cook the meal, and help clean up afterward.

One of the best parts of camping is cooking a meal and enjoying it with your friends. You can also use the skills you have learned to cook for yourself and your family back home. In fact, you will be glad you know how to cook when you get older and have to take care of yourself.

Decide with your den and den leader which meal you are going to cook, and list some menu choices. Plan a balanced menu by picking foods from several food groups. Does your menu include the food groups shown in this picture?



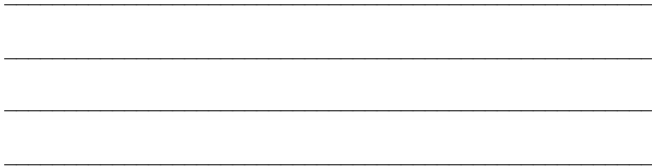
After you decide what to cook, make a shopping list for your meal. Decide how you will buy the food and carry it to the campout.

Be sure to read the instructions on the packages you buy. You might also need to buy milk, butter, or another ingredient to add to a packaged mix.

Our meal will be lunch/dinner. (circle one)

Our menu will be:

Our shopping list:





When you travel to your campsite, be sure to pack your food carefully. Carry food items like milk and meat in a cooler so they don't get too hot and spoil. You can also take food out of its original containers and freeze it in zipper storage bags ahead of

time. On the campout, the frozen food will thaw out gradually and help keep the rest of your food cold.

Some food items don't need to be refrigerated, but they do need to be protected. A cooler or plastic bin will keep things like bread from getting crushed.



Zipper storage bags also let you organize your food and reduce the number of cans and boxes you have to carry. If you need two cups of biscuit mix for your Dutch oven cobbler, pour it in a labeled storage bag and leave the box at home. If you need a mixture

of spices for your beef stew, mix them at home, and put them in a labeled storage bag.

If you have a den chief, ask what he or she knows about packing food for camping.



A Scout is clean. Be sure to wash your hands before cooking and thoroughly clean your dishes after each meal so nobody gets sick.

On the campout, be sure to help clean up after the meal. Follow the campsite's rules to dispose of any trash or food scraps. Leave the campsite just as you found it for others to enjoy.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 6 | Help your leader or another adult cook a different meal from the one you helped prepare for requirement 5. Cook this meal outdoors.

Once you've helped cook one meal, plan and prepare another one. Try something different and more challenging this time.



Our meal will be lunch/dinner. (circle one)

Our menu will be:



Akela's OK

Date

Den Leader's OK

REQUIREMENT 7 | Help set up a tent. Pick a good spot for the tent, and explain to your den leader why you picked it.

Where you put up your tent is an important part of being comfortable on a campout. Your tent should be in a flat area that is clear of any low spots where water will collect if it rains. It should also be sheltered from strong winds. During cold weather, try to face the door of your tent away from the wind.



Before you put up your tent, move any rocks, sticks, or other hard objects from the tent site. They can hurt bare feet and damage the bottom of your tent.

After you take down the tent, put back the objects you moved near where you found them. Also, pick up anything you and other campers brought to the campsite. Scouts always leave no trace!



Akela's OK

Date

Den Leader's OK

REQUIREMENT 8 | Demonstrate how to tie two half hitches and explain what the hitch is used for.

Every knot has a specific use. The two half hitches knot is used to tie items to a post or tree trunk. The knot is easy to untie when you are ready, but it will hold tight while in use. Each wrap around the rope is called a half hitch. Making two of them around the rope is what gives this hitch its name.



Tie a rope to a tree or post using two half hitches, then pull hard. Did the knot hold? Now stop pulling, and see how easy it is to untie. Just push the free end of the rope back through, and the knot is untied!



Akela's OK

Date

Den Leader's OK

REQUIREMENT 9 | Learn how to read a thermometer and a barometer. Keep track of the temperature and barometric pressure readings and the actual weather at the same time every day for seven days.

Have you ever watched weather forecasters on TV and wondered how they know what the weather will be tomorrow? They use many tools to report and predict the weather.

One important tool is a thermometer, which tells how hot or cold it is. What is the hottest weather you've ever felt? What is the coldest?





Another important tool is a barometer. It reads barometric pressure, which is the pressure the air in the atmosphere places on the ground. Keeping track of changes in barometric pressure can tell us how the weather will change. If the pressure is falling, a storm is probably coming. If the pressure is steady or rising gently, the weather should be calm and nice!



A Scout is cheerful. It's easy to be cheerful when the weather on a campout is great. If you are prepared with the right gear, you can also be cheerful on a rainy day.

Pay attention to how the weather feels to you when you know the temperature. You'll be able to better prepare for outings that way. When the temperature is going to be 50 degrees during the day, you know you'll need a jacket!

Understanding barometric pressure and weather forecasts can also help you be better prepared for outings. If you know that afternoon storms are likely, you can change your campout schedule to hike in the morning and stay close to camp in the afternoon.

Use this chart to track the weather for a week. Take temperature and pressure readings at the same time every day so you can compare. Circle whether the pressure is rising or falling for each day. In the last column, write a description like "sunny and

breezy” or “heavy rain.”

You can get your readings using a thermometer and a barometer. Or, with your parent’s or guardian’s help, you can also find temperature and pressure readings on the Internet or your local television news broadcast.





Weather-Tracking Chart

		Barometric		
Date	Temperature	Pressure	Change	Weather
1.	____degrees	_____inches/mm	rising/falling	
2.	____degrees	_____inches/mm	rising/falling	
3.	____degrees	_____inches/mm	rising/falling	
4.	____degrees	_____inches/mm	rising/falling	
5.	____degrees	_____inches/mm	rising/falling	
6.	____degrees	_____inches/mm	rising/falling	
7.	____degrees	_____inches/mm	rising/falling	



Akela's OK

Date

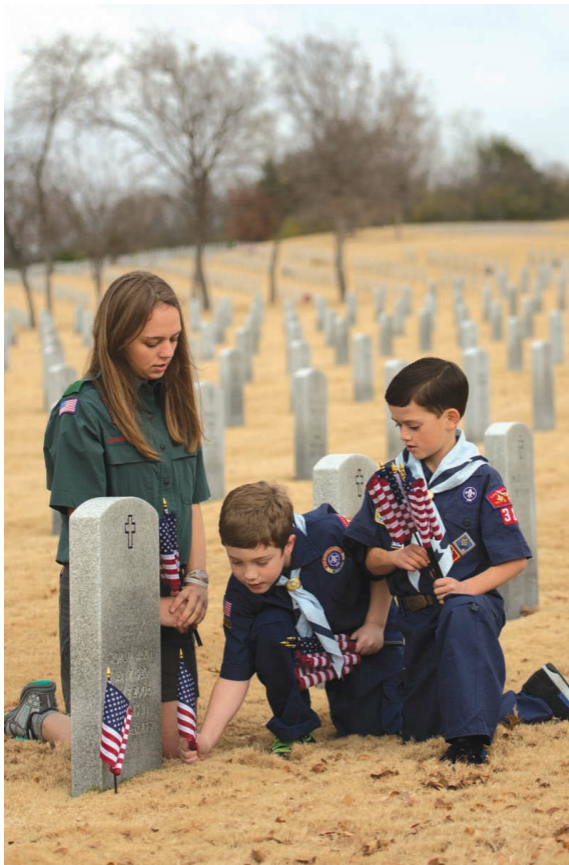
Den Leader's OK

Did you have a good time? Did you cook some great food? Keep those recipes handy because you have lots of great camping trips to look forward to next year as a Webelos Scout!



FELLOWSHIP AND DUTY TO GOD





Last year, my family looked at some different religious books and talked about what they mean. I told my mom that the books were really hard to understand since they didn't have many pictures in them. That's when she said, "The pictures are all around you."

What did Mom mean? Sometimes the best way to learn about God is to spend time with people who already know God. That's what the Fellowship and Duty to God adventure is all about. In this adventure, you'll learn about people from history who used their faith to help others. And best of all, you'll get to serve others yourself.

You see, your duty to God is more than just what happens in a worship service. It's an adventure you share with your friends!



Snapshot of Adventure

Just about every religion teaches the Golden Rule: “Treat others the way you would want to be treated.” The Golden Rule is a good rule to follow every day, and it’s one way we can practice our duty to God. Practicing the Golden Rule is a big part of this adventure. When we treat family members with kindness, help our neighbors, and reach out to people in our community, we help make life better for everyone. We become happier, and our faith in God is strengthened. In this adventure, you will get to practice your duty to God by helping people around you.

Maybe that’s what Robert Baden-Powell, who invented Scouting, meant when he said every Scout should do a Good Turn every day.

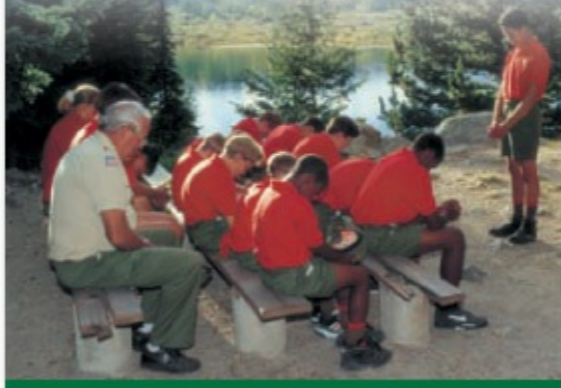


REQUIREMENT | Do either requirement 1 OR requirement 2.

REQUIREMENT 1 | Earn the religious emblem of your faith.

A religious emblem is a special award you can earn for learning about God. Many major faith groups have emblems that Scouts can earn. Your den leader can help you and your family get more information about the religious emblems for your faith.

Duty to
GOD



BOY SCOUTS OF AMERICA®



With the help of an adult, you can also find information on the Internet at www.praypub.org or www.scouting.org/filestore/pdf/512-879_WB.pdf.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Complete 2A and at least two of requirements 2B–2D.

REQUIREMENT 2A | Working with a parent or guardian, spiritual advisor, or religious leader, provide service to help a place of worship or spiritual community, school, community organization, or chartered organization that puts into practice your ideals of duty to God and strengthens your fellowship with others.

Cub Scouts are good at helping people. So are people of faith. When you serve others, you also serve and honor God.



A Scout is helpful. You can show you are helpful by participating in service projects.

There are lots of ways to help people and do your duty to God. You can collect food, clothes, or toys for people who are less

fortunate. You can read and play games with children. You can rake leaves for elderly people in your community or visit people who live in a senior living center.



For my service project, I visited people at a nursing home. One man used to be a Cub Scout and a Boy Scout, and he told me all about his adventures. One time, he went to a world jamboree, which is a big campout with Scouts from all over the world.

Think about people you might help and then talk with your parent or another trusted adult about ways you could help them. After your service project, write down what you did and how you felt about your experience.

MY SERVICE PROJECT

The people I served:

What I did:

The people who worked with me:

How helping other people made me feel:



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2B | Identify a person whose faith and duty to God you admire, and discuss this person with your family.

Many people throughout history have shown great faith in God by reaching out to people in their neighborhoods and communities. They freely gave their time and talent to help other people.

Here are some individuals who helped other people because of their faith. Find out more about one of these individuals or another person with a strong background of faith. What can you learn from that individual?

Roger Williams started the colony of Rhode Island so he and his friends could practice their faith freely. He was a friend to American Indians and wanted the slaves to be free.

Job Ben Solomon was a Muslim leader from Africa who was enslaved in the colony of Georgia. His intelligence and faithfulness may have helped convince the colony's founder, James Oglethorpe, to turn against slavery.

Barbara Heck was an Irish immigrant who helped found the first Methodist church in New York. At a time when women didn't tell men what to do, she convinced Philip Embury to lead the new church.

Father Pierre-Jean De Smet was known as Black Robe by Native Americans. He was a Catholic missionary in the American West and made friends with American Indians, mountain men, and pioneers of many different religions.



Abraham Lincoln did not go to any particular church, but he had a strong belief in God. That belief led him to decide that all people should be free and helped him win the Civil War, which freed the slaves.

Brigham Young was a pioneer leader of the Church of Jesus Christ of Latter-day Saints, which is also known as the

Mormon church. He helped establish many settlements in the western United States where Mormons could practice their religion in peace.

Jacob Schiff was a German-born American businessman. He worked hard to help Jewish people come to America between 1880 and 1920 and feel welcome here.

Jane Addams was inspired by her religious faith to improve the lives of children and immigrants. She helped turn a rundown Chicago mansion into a settlement house where people could get assistance and learn what it means to be an American.



Daisho Tana was a Buddhist priest who ministered to fellow Japanese Americans who were removed from their homes during World War II. He helped them practice their religion in difficult circumstances.

The Reverend Martin Luther King Jr. relied on his Christian faith in his nonviolent struggles for equal rights in America. He showed that by loving your enemies you can sometimes turn them into friends.



Cesar Chavez relied on his Catholic traditions in his work to help Hispanics and migrant farm workers earn civil rights and

respect. He also used principles of nonviolent protest and developed the slogan, “¡Sí, se puede!” (“Yes! It can be done!”).

Who I researched:

Characteristics I liked about this person:

Which characteristic I chose to practice for two weeks:

What I learned from this experience:



Akela's OK

Date

Den Leader's OK



A Scout is reverent. Part of being reverent is doing the things that God calls us to do.

REQUIREMENT 2C | Make a list of things you can do to practice your duty to God as you are taught in your home or place of worship or spiritual community. Select two of the items, and practice them for two weeks.

Every faith tradition has things its members are supposed to do. Some of those things draw you closer to God, like praying and going to worship services. Some of those things draw you closer to

other people, like serving and offering help to others in need.



Make a list of things you can do to practice your duty to God.

Your list might include praying each day, reading inspirational poems or books of faith, singing hymns, doing chores with a positive attitude, helping classmates with their homework, or using good manners.

Circle two practices from your list that you will do for two weeks.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2D | Attend a religious service, den or pack meeting worship service, or time of family reflection and discussion about your family's beliefs.

Religious services are a time when we meet together and share our faith in God. We grow closer to God and one another when we attend religious services together. We gain confidence to make good choices when we listen to others share their experiences and the blessings they have received by practicing their faith in God. We gain strength when we pray for others and know that others pray for us.



For this requirement, you can also meet with your family to reflect on your family's beliefs. What does your family believe about God? Where did those beliefs come from? How does your family act on what it believes?

The event I attended:

What I did:

What I learned:

My favorite part:



Akela's OK

Date

Den Leader's OK

When I was doing this adventure, I went to a worship service with a friend and his family. Everything about the service was different from what I am used to. Some of it was even in a different language. But do you know what? There was a lot that was similar, including the idea that God wants us to help other people, something we as Scouts are really good at doing.



FUR, FEATHERS, AND FERNS





When I did this adventure last year, we took a field trip to a nature center and saw a great horned owl. He did a crazy thing where he turned his head nearly all the way around. The guide also played a recording of the call he makes. It was a really cool sound.

A couple of weeks later, I actually heard that sound outside my house one night! My mom let me go outside in my pajamas to look for the owl. We stayed out for 10 or 15 minutes and finally saw it perched up in a tree right outside my bedroom. Wow!

I hope you will see something just as cool when you do this adventure.



Snapshot of Adventure

In this adventure you will explore the world of mammals, birds, plants, and more. You will learn more about where wild creatures live and you will do your part to help them. You will practice the Outdoor Code by showing ways to be considerate in the outdoors. So grab your binoculars and start exploring the natural world.



A Scout is kind. You can show you are kind to animals by improving their habitat.



REQUIREMENT 1 | While hiking or walking for one mile, identify six signs that any mammals, birds, insects, reptiles, or plants are living nearby the place where you choose to hike.

Do you remember that as a Cub Scout you must always Do Your Best? One way is to prepare for hiking by warming up your muscles.

To warm up for your hike, walk or jog for a few minutes and then do these stretches. When you stretch, don't bounce. Just move gently until you feel your muscles start to stretch.



Quadriceps (muscles in the front of your thighs): Stand up and hold on to a sturdy support. Grab your left ankle and bring it up behind you. With your knees close together, push your hips forward until you feel the muscles stretching. Hold for 20 seconds. Repeat on the other side.



Abductors (muscles in your hips, bottom, and sides of your thighs): Sit on the floor with your right leg straight out. Bend your left leg so your left foot is to the right of your right knee. Twist

your upper body to the left until you feel the muscles stretching. Hold for 20 seconds. Repeat on the other side.



Hamstrings (tendons on the backs of your thighs): Sit on the floor with your right leg straight out and your left leg bent. With your back straight, bend forward from your hips, reaching toward

your right foot. Hold for 20 seconds. Repeat on the other side.



Hip Flexors (muscles in your hips that flex your thigh bones):
Kneel on the floor, then position your right leg so your right foot is in front of you and your right knee forms a 90 degree angle. Push forward with your hips, keeping them as square as possible. Hold for 20 seconds. Repeat on the other side.



Calves (muscles in your lower legs): Stand up and take a big step forward with your right leg. Keep your left leg straight. Lean forward a little so that your body and left leg form a straight line. Hold for 20 seconds. Repeat on the other side.



With your den or a family member, explore your neighborhood or the area around your den meeting location, or take a 1-mile hike. Bring binoculars and a notebook and pencil to take notes or a camera or smartphone to take pictures. Be sure to pack your Cub Scout Six Essentials.

CUB SCOUT SIX ESSENTIALS

First-aid kit



Flashlight



Sun protection



Filled
water
bottle



Trail food



Whistle



As you walk, look up, down, and all around for signs that mammals, reptiles, insects, or birds have been there. Also look for different types of plants. Write down what you see.



Here are some things to look for:

- ◆ Partly chewed leaves or flowers that insects or mammals have left
- ◆ Slime trails that show where snails have traveled
- ◆ A bird flying by with a leaf or twig in its beak on its way to build a nest nearby
- ◆ Scratch marks on a tree where an animal has marked its territory
- ◆ Holes that lead to the underground home of a mammal, reptile, or insect

◆ Animal scat (droppings) that indicates a creature ate a meal nearby

HIKE LOG

Animal Signs
I Saw

Actual Animals
I Saw

Plants I Saw

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

All Scouts learn and follow the Outdoor Code. As Bears, you'll focus on the part of the Outdoor Code that says to be considerate in the outdoors. Two of the Leave No Trace Principles for Kids go right along with that idea. Those principles are "Leave What You Find" and "Be Kind to Other Visitors."

After your hike, discuss with your den leader ways that you demonstrated those principles. How do those principles support the Outdoor Code?



Akela's OK

Date

Den Leader's OK

I have a friend who is a Boy Scout, and he says that taking short hikes is great preparation for the bigger adventures he takes now. Imagine the animals you could see on a backpacking trip deep in the wilderness!



REQUIREMENT 2 | Name one animal that has become extinct in the last 100 years and one animal that is currently endangered. Explain what caused their declines.

An animal species becomes extinct when its last member dies. Extinction happens for many reasons, including loss of habitat, overhunting, climate change, or the appearance of a new predator or disease.

You've heard of animals like dinosaurs that became extinct

millions of years ago. But some animals became extinct more recently. A good example is the passenger pigeon. When Europeans first came to North America, there were billions of passenger pigeons. In the 1700s, a man named Cotton Mather wrote about a flock of birds that was a mile wide and took several hours to pass overhead!

Passenger pigeons were an important source of food in the 1800s, and they were hunted nearly to extinction. A few survived in captive flocks, but the last passenger pigeon, Martha (named after Martha Washington), died in 1914 at the Cincinnati Zoo.



Not all stories have sad endings. After World War II, the American bald eagle was in serious decline. A pesticide called DDT was poisoning the fish that eagles liked to eat and hurting the eagles. In 1967, the species was listed as endangered.

DDT was banned in the United States in 1972, which helped eagles rebound. Conservationists also worked hard to breed captive eagles, reintroduce them into nature, and protect their nest sites.

By 1995, bald eagles were listed as threatened, which is better than endangered. In 2007, the species was removed from the list of threatened and endangered species altogether. (It is still illegal to kill, sell, or possess bald eagles without special permission.)

THREATENED, ENDANGERED, AND EXTINCT

“Threatened” means a species is likely to become endangered if people don’t work to protect it.

“Endangered” means a species is likely to become extinct in all or a major part of its natural habitat.

“Extinct” means a species no longer exists.

Extinct animal: _____

Endangered animal: _____



You can learn about threatened and endangered species in your area by visiting www.fws.gov/endangered with your parent's or guardian's permission.

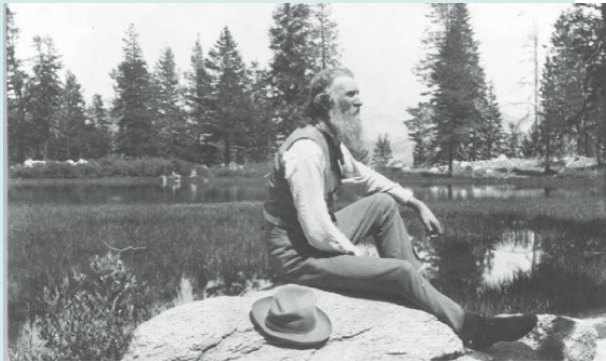
There are many reasons to conserve threatened and endangered species:

- ◆ **Contributions to medicine.** Many important medicines come from plants. For example, scientists make cancer medicine from the bark of the Pacific yew tree.
- ◆ **Contributions to agriculture.** Birds and insects pollinate one third of the food we eat. For example, bees pollinate fruit and nut trees and melon vines.
- ◆ **Environmental monitors.** Problems with animal species can alert humans to dangers to our planet. For example, the decline in bald eagles helped people discover that DDT was dangerous.
- ◆ **Keeping the food chain going.** Animals and plants are part of a food chain that provides food for other animals (including

us!). For example, eagles eat snakes, which eat mice, which eat crickets. If crickets became extinct, mice, snakes, and eagles would all go hungry.

◆ **Beauty.** Nothing compares with the beauty of nature!

“Keep close to Nature’s heart ... and break clear away, once in a while, and climb a mountain or spend a week in the woods. Wash your spirit clean.” – *John Muir, naturalist and co-founder of the Sierra Club*



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Visit one of the following: zoo, wildlife refuge, nature center, aviary, game preserve, local conservation area, wildlife rescue group, or fish hatchery. Describe what you learned during your visit.

Many organizations and government agencies work to protect animals and plants. Some of them have facilities you can visit to learn more about their work and perhaps see the creatures they protect.



You may even be able to help them help those creatures!
Agencies like the U.S. Fish and Wildlife Service use volunteers to

remove invasive species, conduct wildlife surveys, plant native grasses along riverbanks, and put identification bands on migratory birds.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Observe wildlife from a distance.
Describe what you saw.

If you've ever seen an animal in the wild, you know how exciting watching wildlife can be. It is important to watch from a distance, however. Some animals can be dangerous to you. Also, you don't want to scare an animal off or disturb it while it is eating.

A good place to spot wildlife is along shorelines. Even if you don't see any animals, you'll probably find lots of footprints where they've come down to get a drink.

Some wildlife refuges and parks have blinds that you can get behind to watch birds and other animals. A blind is a camouflaged wall or shelter with windows in it. Sometimes, one-way glass is used so you can see out but the animals can't see in.

You can also use a periscope to peek over a wall or around a corner at wildlife. The directions below show how to make a

simple periscope out of milk cartons. A field guide will help you identify what you see.



Check with your den leader or another adult before using a knife or scissors for this activity.

Make a Cardboard Periscope

1. Cut the tops off two quart-sized milk (or similar style) cartons.
2. Cut a square hole on one side of one carton, just above the bottom. Leave a $\frac{1}{4}$ -inch border around the hole.



3. On the sides to the left and right of the hole, cut slits at a 45-degree angle. The bottom of each slit should be near the edge close to the hole. The top of each slit should be near the edge away from the hole.



- 4. Slide a mirror into the slot with the reflecting side facing the hole. Tape it in place so it doesn't fall out.**



5. Repeat steps 2 through 4 with the other milk carton.



6. Slightly crimp the open end of one milk carton. Slide that carton into the open end of the other one with the holes facing in opposite directions. Tape the two cartons together.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | Use a magnifying glass to examine plants more closely. Describe what you saw through the magnifying glass that you could not see without it.

Plants are beautiful at a distance, but sometimes they are even more fun to look at up close. When you examine a plant with a magnifying glass, you can see all sorts of things that are hidden from the naked eye.

What can you see? You can see the veins that form a leaf's skeleton. You can see tiny aphids sucking sap out of a plant stem. You can see drops of dew rolling down pine needles. You can see the tiny seeds that make up the eye of a sunflower.



Grab a magnifying glass and start looking!



The Outdoor Code (found in the back of your book) reminds Scouts to be considerate in the outdoors. One of the ways you can show consideration is by following the Leave No Trace principle of “Leave What You Find.” Let future hikers enjoy the plants you see as well. Instead of taking souvenirs, use the space below to jot notes or draw a picture of your observations.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 6 | Learn about composting and how vegetable waste can be turned into fertilizer for plants.

When you eat a banana, do you throw the peel away? When you scrape extra food off your plate at dinner, where does it go? You can actually turn banana peels, food scraps, grass clippings, and even paper into fertilizer for plants by composting.

Composting is a process where you mix organic materials in a pile or a container, along with a little water. Worms and insects chew up the material and help good bacteria grow in it. In a month or two, you end up with a dark, rich fertilizer that you can spread around plants to help them grow.

You can make a compost pile in the corner of your yard, or you can use a special composting container. This page shows how to make a compost bin out of an old trash can.

BUILD A COMPOST BIN

Find a metal trash can with a tight-fitting lid.

Ask an adult to drill or punch 10 air holes around the can near the top edge.

Ask an adult to drill or punch 20 drain holes in the

bottom, each one-quarter inch or three-eighths of an inch in diameter.

Dig a hole about 15 inches deep in a corner of your yard that drains well.

Set the can in the hole and push the dirt from the hole up around it.

Start composting!



Here are some things that can go into your compost pile or container:



- ◆ Table scraps (nothing greasy or meaty)
- ◆ Fruit and vegetable scraps
- ◆ Crushed eggshells

- ◆ Leaves
- ◆ Grass clippings (in thin layers)
- ◆ Pine needles (in moderate amounts)
- ◆ Flowers and chopped stems
- ◆ Coffee grounds and filters
- ◆ Tea leaves and tea bags
- ◆ Newspaper and shredded paper (avoid glossy paper and colored ink)
- ◆ Shredded cardboard
- ◆ Barnyard manure (no dog and cat waste)



Add water from time to time so the compost stays as wet as a damp sponge. Once a week, stir the compost from the outside in.

That's all you have to do. The worms and insects will do the rest!



A Scout is thrifty. One way to be thrifty is to keep food out of landfills by composting it.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 7 | Plant a vegetable or herb garden.

Growing your own vegetables and herbs is a fun way to learn how plants grow. And nothing tastes better than food you have grown yourself.

Some people think you have to have a big yard to have a garden, but you can grow vegetables and herbs in a small space

using pots or plastic trays.

Grow a Pizza Garden

If you like pizza, you'll love growing your own herbs to put on it. Fresh herbs make any pizza better, whether you baked it yourself or bought it at a store.

What you need:

- ◆ Some small pots with drainage holes (and trays if your garden will be inside)
- ◆ Potting soil
- ◆ Herb plants like basil, thyme, oregano, rosemary, and parsley
- ◆ A place where the herbs can get lots of sunlight

Thyme

Rosemary

Basil



What to do:

- ◆ Put some soil in the bottom of each pot so your plants will sit a couple of inches below the top.
- ◆ Remove the plants from their nursery containers. Place one in each pot and gently fill the pot with soil. Pat the soil down.
- ◆ Water the plants enough that water runs out the bottom.
- ◆ Place the pots where they can get sunlight.
- ◆ Water them when the soil feels dry, and add some fertilizer every two weeks.
- ◆ Once the herbs grow, just pinch off pieces to put on your

pizza. (You can also dry herbs to use later.)



Akela's OK

Date

Den Leader's OK

I don't know about you, but I love learning about nature—and doing things to help it. This summer my dad and I are going to build some bat houses and hang them. Bats are really cool creatures. Plus, they like to eat mosquitoes, and we have plenty of those around!



GRIN AND BEAR IT





Hurry, hurry! Step right up to the greatest show in Cub Scouting: the Cub Scout carnival! What's a Cub Scout carnival, you ask? It's a special pack meeting that is just for fun—and you will get to help plan one as part of the Grin and Bear It adventure.

I had lots of fun at our pack's carnival last year. Our den was in charge of the ring-toss game. Everybody who hit the target three times won a prize. It was great to see the Tigers smile when they got a prize!

You know, a smile is one of the best things you can wear. And I've noticed that when I help other people smile, I end up smiling a lot, too!



Snapshot of Adventure

The Grin and Bear It adventure is very special because you will share it! In this adventure, you will play some games with your den, and then you will help plan a Cub Scout carnival for all the other Cub Scouts and their families.

At the carnival, you will have stations where kids and adults can play midway games like Clothespin Ring Toss and Keep Your Balance. You might also do activities like face painting or making balloon animals or maybe have someone demonstrate juggling. Adults and Boy Scouts might provide snacks and prizes or play music. The Cubmaster will serve as the ringmaster, just like in a big carnival. It's a great way to "grin and bear it"!



REQUIREMENT 1 | Play a challenge game or initiative game with the members of your den. Take part in a reflection after the game.

Lots of games are fun to play. Some also teach you important things. Challenge or initiative games help you learn more about

yourself and your friends. They also teach you how to work together as a team. One great thing about these games is that everybody can win!





A Scout is loyal. Team-building games help you practice being true to the other members of your den.

Here are some games you might play with your den. Your den leader knows other games you can play.

Batting Down the Line

Needed: Large indoor or outdoor playing area, any number of players, an inflated balloon

Stand in a line with Scouts about 2 feet apart. On a signal, the first player bats a balloon to the player next to him, who bats it to the next player, and so on until the balloon reaches the end of the line. If the balloon touches the ground, a player must take it to the starting line, and the players must begin again.

Two or more dens can play this game at the same time by

forming parallel lines.

Blanket Ball

Needed: Indoor or outdoor area, any number of players, sheet or blanket, playground ball or large soft object

Lay the blanket on the ground and put the ball in the center. The players stand around the blanket, grab its edges, and pick it up. They throw the ball up and catch it by moving the blanket up and down together, trying to get the ball as high as possible.

Two or more dens can play this game. You just need extra blankets and balls. For extra fun, try to toss a ball from one blanket to another and back!



Group Stand-Up

Needed: Indoor room or grassy outdoor area, long thick rope (about an inch thick) tied to form a circle

Players sit in a circle holding onto the rope, which is on the ground in front of their feet. Everyone grabs the rope and then pulls gently and evenly on it. If everyone pulls together evenly, the entire group should be able to come to a standing position.

Line Up

Needed: Any number of players, one blindfold per player or

“honor blindfolds” (players promise to keep their eyes closed)

Players are blindfolded and told that no one may talk during the game. The leader asks them to line up by height. When they are done, they should stand in place and remove their blindfolds to see how they did. You can substitute other requirements, such as lining up by shoe size.

You can also play with eyes open. Players cannot talk but can use sign language to communicate. This time they line up by birthday, middle name, number of brothers and sisters they have, or any other direction.

Forehead Squeeze Relay

Needed: Large playing area, even number of players, several tennis balls or oranges

The object is for two players on each team to carry a ball or orange across the room and back again by holding it between their foreheads. If they drop it, they must start again. When the first pair returns to the starting point, the next pair begins. Keep playing until all players have had a turn. The trick with this game is to see how fast you can move without dropping the ball or orange!



REFLECTION

After you play a game, sit down with your den and talk about these questions:

- ◆ **How did you know you did your best?**
- ◆ **How did you make sure everyone was included?**
- ◆ **How was this game related to the Scout Law?**
- ◆ **How do you know that everyone had fun?**
- ◆ **How would you make the game different next time?**
- ◆ **What did the game teach you about teamwork?**

Some games are called feats of skill or are played just for fun. You can play these games at a den meeting or choose a few to teach at the Cub Scout carnival.

Clothespin Ring Toss

Materials: Bucket or wastebasket, clothespins, jar rings

Clamp clothespins around the rim of a bucket or wastebasket. Players stand 10 feet away and try to toss jar rings over the clothespins.



Keep Your Balance

Materials: Six- to 8-foot-long two-by-four board, neckerchief for blindfold

Lay the board flat on the ground. One by one, blindfold each

player and have him try to walk the length of the board. If he steps off at any point, he falls into the water and is out of the game. If you have more than one team, put boards side by side and have a relay race.

Smile

Materials: Coin for flipping

Two teams line up facing each other about 10 feet apart. One team is Heads; the other is Tails. Flip a coin and call it. If heads comes up, the Heads team laughs and smiles while the Tails team members try to keep their faces serious. Any player who laughs at the wrong time switches teams. Then flip the coin again.

Marble Chop Suey

Materials: Supply of marbles or small candies, several pencils or chopsticks, two dishes for each team

Put six marbles or candies in a small dish. Using two pencils or chopsticks, and using only one hand, players try to move the marbles or candies into a second dish. Using pencils with eraser tips can make this a little easier for younger Scouts. Play this as a skill activity or relay race.

Juggler Toss

Materials: Ball or orange for each player

Pairs of players stand about 5 feet apart in two lines facing each other. Each player has a rubber ball or orange. They toss their balls simultaneously. Score one point for a team when both make the catch. After each catch, they take one step back and repeat. The pair with the most points after a set time limit wins.



With your parent's or guardian's permission, search for additional game ideas in the *How-To Book* or on www.scouting.org.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Working with the members of your den, organize a Cub Scout carnival and lead it at a special event.

You and your den will help plan and lead a Cub Scout carnival. Other dens may help, and the leaders will help, too. At a den meeting, take turns sharing ideas about what you would like to do at the carnival.

Talk about these things:

- ◆ What games and activities will take place at the carnival?
- ◆ Who will run each game or activity?
- ◆ When and where will the carnival take place?
- ◆ How will you tell the other dens about the carnival?

If the weather will be nice out, you could have the carnival outside. If not, plan to have it indoors.

It helps to write things down when you plan an activity. You could also draw pictures of how the carnival will look.

Pick an activity to lead. Make a list or draw a picture to show what you need. You might like to work with a friend so that you can practice teaching the activity. This will help you get ready to lead it at the carnival.

Be sure you know what you need to do to get ready for the game you will lead. If you are not sure, ask your den leader or your parent or guardian for help.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Help younger Cub Scouts take part in one of the events at the Cub Scout carnival.

When the time for the carnival arrives, your Cubmaster will give a signal and the fun will begin. Everyone will get a chance to try

out the games you and your den brought to play.



Your job will be to help younger Cub Scouts or their brothers or sisters take part in one of the activities. The activity may be new to many of the players, so take time to explain how to do it. Demonstrate the activity and answer any questions the players have. And be sure to cheer for them, even if they don't do well at first. If you make sure that they have fun, you will have fun, too.



A Scout is friendly. You can show that you are friendly by being patient and nice with the younger Cub Scouts at your carnival.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | After the Cub Scout carnival, discuss with the members of your den and your den leader what went well, what could be done better, and how everyone worked together to make the event a success.

Your Cub Scout carnival should be a lot of fun. After all, there will be games and snacks and prizes. Cub Scouts, brothers and

sisters, adults, and friends should all have a great time.

But even when events go well, we can learn to do things better. After the Cub Scout carnival is over, talk with your den and your den leader about what you learned.

Talk about these questions:

- ◆ What games or activities would we repeat next time?
- ◆ What games or activities would we not do next time?
- ◆ What games or activities would we add to the carnival next time?
- ◆ How could we make it better next time?



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | Make and present an award to one of the adults who helped you organize the activities at the Cub Scout carnival.

It is nice to show appreciation for the people who helped plan your carnival. Make a medal or a trophy for your den leader, Cubmaster, or another adult who helped.

Here are some ideas.

Metal Lid Medals

Materials: Canning jar or frozen juice lid, nail and hammer, yarn or one-eighth inch ribbon, paint, paintbrush, paint pen

In the Baloo the Builder adventure, you can learn to use tools like hammers and make other fun projects. Be sure to follow safety guidelines and have an adult help when you use tools.

Canning jar or frozen juice lids make good medals. Begin by making evenly spaced holes around the lid edge with a nail and hammer. Paint the lids different colors and use a paint pen to add a label like “Carnival Superhero.” Weave yarn or ribbon in and out of the holes. Then, make a loop of yarn or ribbon long enough to hang around the recipient’s neck.



Trophies

Materials: Two cans of different sizes, hot glue, spray paint, coat hangers, chenille stems or small figurine, small square of wood, stain or paint, foam board, paint pen

Glue the smaller can to the top of the larger can with hot glue. (Have an adult help you so you don't burn yourself.) Make two handles out of coat-hanger wire and glue them to the top can. With help from an adult, paint the trophy. Glue a figurine to the top, or add a small figure made out of chenille stems. Glue the whole thing to a square of wood that you have stained or painted. Attach a "plate" made from foam board to the front that says what the award is for.



Wood Medallion

Materials: Three-inch square of wood; stain or paint; markers; ribbon, leather lacing, or yarn

With help from an adult, drill a hole in the corner of a wood square. Stain or paint the square. Use markers to decorate, indicating what the award is for. Attach ribbon, leather lacing, or yarn to hang around the recipient's neck.



Akela's OK

Date

Den Leader's OK

How did your Cub Scout
carnival go?

At our Cub Scout carnival, one of our den chiefs let us try walking on some stilts he had made. He was really good at stilt-walking. He even walked from one end of the gym to the other! How did I do? Let's just say that I'm going to stick with juggling. But it was cool for the three seconds I was able to balance!

I hope your carnival was as much fun as ours. Thanks for helping the younger boys in your pack "grin and bear it" during this adventure!



PAWS FOR ACTION





Do you see the house behind me? It's a museum today, but it once belonged to an important general from the Civil War. I visited it when I was working on the Paws for Action adventure and learned some really amazing stuff about what life was like back in the 1800s.

The most amazing thing I learned was that the house even exists. You see, it's only about 5 miles from where I live, but I had never heard of it. I guess history can happen anywhere, even right down the street.

In this adventure, you'll learn a lot about American history and what makes America great. You'll also learn how you can make it even greater. Who knows? Maybe someday people will put a historical marker in front of your home!



Snapshot of Adventure

This adventure is all about different ways of helping your community and country. You will learn about people who helped make America great and visit a place where history happened. You will learn how law enforcement officers keep your community safe and find out how you can support them. And you will discover ways you can help your community by conserving energy and doing cleanup projects. A Scout is helpful, so let's get started on the Paws for Action adventure!



REQUIREMENT 1A | Find out about two famous Americans. Share what you learned.

Our country didn't just appear on Earth by magic. Men and

women (and children!) worked over hundreds of years to create it. You have learned about some of these people in school.

Here are some famous Americans. Study two of them or other Americans you respect.

Thomas Jefferson was the main author of the Declaration of Independence, which declared that the United States was now independent of Great Britain.



George Washington led the army that won the American Revolution and served as our first president.



William Clark and Meriwether Lewis traveled from St. Louis, Missouri, to the Pacific Ocean to explore the Louisiana Purchase for President Jefferson.



Sequoyah was a Cherokee Indian who created a writing system for the Cherokee language.



Clara Barton created the American Red Cross to help people hurt by wars and natural disasters.



Susan B. Anthony worked tirelessly to help women get the right to vote.



Thomas Edison invented light bulbs, movie cameras, X-ray machines, and much more.



Wilbur and Orville Wright built the first successful airplane.



Rosa Parks helped start the civil rights movement by refusing to give up her seat on a bus in Montgomery, Alabama.



Charles McGee, an Eagle Scout, was a member of the Tuskegee Airmen and flew more than 400 missions during three wars.



Jimmy Carter served as president and later became famous for promoting peace, supporting human rights, and working to end suffering around the world.



Neil Armstrong, an Eagle Scout, was the first human being to stand on the moon.



You can find information about famous Americans in your school or local library, in school textbooks, in social studies class, or on the Internet with the help of an adult. Try to find out at least one fact that nobody knows.



I studied Thurgood Marshall.
He was the first African-American justice on the
Supreme Court, and he worked to make the
laws equal for all Americans.

Write down what you learn on this page.

MY FAMOUS AMERICANS

Name

Birthplace and birthdate

How this person helped our country

One thing I found out about this person that was very interesting to me

Name

Birthplace and birthdate

How this person helped our country

One thing I found out about this person that was very interesting to me

Share what you learned with your den or family.

There are lots of ways to do this:

- ◆ Write a skit for your den to perform.
- ◆ Do a solo performance dressed as your character.
- ◆ Make a poster showing important things about the person.
- ◆ Create a movie on the computer.

◆ Make a true-false quiz.

◆ Play a guessing game using facts about the person.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 1B | Find out where places of historical interest are located in or near your community, town, or city. Go and visit one of them with your family or den.

History is all around us. Learn about and visit a place of historical interest near where you live. This might be the site of an important battle, the place where an exciting discovery happened that is still helping people today, or the home or school of a famous American. Important events might have happened there hundreds of years ago or even since you were born.



A Scout is courteous. You can show courtesy by being on your best behavior when you visit a historic site.

Take along a camera, notebook, or sketchbook to record your visit. Afterward, share what you learned with other people.

MY PLACE OF HISTORICAL INTEREST

The place I visited _____

What makes this place important _____



Akela's OK

Date

Den Leader's OK

REQUIREMENT 1C | Learn about our flag. Display it at home for one month. Say the Pledge of Allegiance and learn its meaning.

The United States flag is a very important symbol of our country. We respect the flag because it represents our country and those who have fought to protect it.



United States flag, 1777

The flag was born on June 14, 1777. At first, it had 13 stars and

13 stripes for the 13 original states. As more states joined the United States, it changed many times. Now, the flag has 50 stars, representing the 50 states, and 13 stripes, representing the original states.

The flag should be treated with courtesy and respect. There are some basic rules every person should know:

- ◆ The flag should only be flown from dawn to dusk, unless it is illuminated by a light.
- ◆ The flag should only be flown in nice weather, unless it is made of all-weather material.
- ◆ You can print out a picture of a flag to display or post a fabric flag outside your home.
- ◆ The flag can be displayed every day. Special days to display the flag are holidays like Memorial Day (the last Monday in May), Flag Day (June 14), and Independence Day (July 4).
- ◆ The flag should be kept clean, so try not to let it touch the ground. If it does touch the ground, however, it can still be used. If it gets dirty or torn, it's OK to clean and mend it.
- ◆ If the flag becomes so dirty, torn, or faded that it can't be used anymore, it should be retired by burning it in a dignified manner. Talk with your den leader or Cubmaster to learn more about retiring ceremonies.



- ◆ If you are in uniform, give the Cub Scout salute when the flag passes in a parade, when it is being raised or lowered, or when you are saying the Pledge of Allegiance. If you are not in uniform, hold your right hand over your heart at those times.

One way we show respect to the flag and our country is by reciting the Pledge of Allegiance:

I pledge allegiance to the Flag of the United States of America, and to the Republic for which it stands, one Nation under God, indivisible, with liberty and justice for all.



Talk with your den leader or another adult about what the Pledge of Allegiance means to you. Write it below.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2A | Visit a local sheriff's office or police station, or talk with a law enforcement officer visiting your den. During the visit, take turns with your den members asking questions that will help you learn how to stay safe.

Just like a mother bear takes care of her cubs, the adults in your family help keep you safe. There are also people in your community whose job is to keep you and your family safe, even if it means putting their own lives in danger. That's what law enforcement officers do every day to help your community.

Visit with a law enforcement officer at a den meeting or at a local sheriff's office or police station. Learn more about what he or she does and how you can help keep your family and community safe.



A Scout is brave. One way to learn about bravery is by asking law enforcement officers how they show bravery in dangerous situations.

Before your visit, think of some questions you could ask. Here are some examples:

- ◆ What are some things law enforcement officers do to keep our community safe?
- ◆ How do law enforcement officers collect evidence of crimes?
- ◆ How realistic are TV shows, movies, and books about crime?
- ◆ How can I help prevent crime in my neighborhood?
- ◆ How do I get help in an emergency? What phone numbers should I call to get help?

◆ What should I do if someone I know is being a bully?



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2B | During or after your visit with a law enforcement officer, do at least two of the following:

- i. Practice one way police gather evidence by taking fingerprints, taking a shoeprint, or taking tire track casts.
- ii. Make a list of emergency numbers to post in your home, and keep a copy with you in your backpack or wallet.
- iii. With your family, develop a plan to follow in case of an emergency and practice the plan at least three times. Your family can determine the emergency, or you can develop several plans.
- iv. Discuss with your parent or another adult you trust any worries you have about your safety or a friend's safety.
- v. If you have younger brothers and sisters, make sure they know how to call for help in an emergency.

Your visit with a law enforcement officer will teach you what you can do to help keep your family and community safe. For this requirement, do at least two of the things on the list above.

KEEPING MY FAMILY AND COMMUNITY SAFE

What I did _____



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3A | Learn about the energy your family uses and how you can help your family decrease its energy use.

Energy is anything that makes lights work, keeps your home at a comfortable temperature, cooks your food, and makes cars and buses go. Energy costs money, and how we use it can affect the environment. You can help your community and be a good citizen by using energy as sparingly as possible in your daily life.

Talk with an adult in your family about the kinds of energy your family uses and how much money you pay for energy. Pick two ideas from use of energy below and try them for a month. Talk with your family about the differences you noticed by making the changes. The next time your family receives a utility bill, see if the changes affected how much energy you used.

Remember, it takes energy to purify water, move it to your home, and heat it.

Water

- ◆ Search for dripping faucets or other ways water might be wasted. With an adult, correct those problems.
- ◆ Turn off the water while you brush your teeth.
- ◆ Ask your parent or guardian to use cold water for doing laundry.
- ◆ Take a shorter shower, or run less water in the bathtub.
- ◆ If you didn't drink all of your water, use it to water a plant.
- ◆ Try any other water-saving idea your family agrees to.



Electricity

- ◆ Replace old light bulbs with LED bulbs or compact fluorescent bulbs.
- ◆ Be sure no lights are left on when a room is empty.
- ◆ Help your parent or guardian hang laundry outside to dry.
- ◆ Unplug electronic devices that are not in use.

- ◆ Read a book instead of watching the television.
- ◆ Try any other electricity-saving idea your family agrees to.



Heating/Cooking Fuels (Natural Gas, Propane, Fuel Oil, Etc.)

- ◆ Turn the thermostat down in the winter and up in the summer.
- ◆ Use energy-saving settings on your clothes dryer.
- ◆ Help your parent or guardian look for and repair places where outside air is leaking into your home.
- ◆ Keep doors and windows tightly shut.

- ◆ Turn down the heating element on a gas water heater.
- ◆ Try any other heat-saving idea your family agrees to.

Transportation

- ◆ Walk or ride your bicycle to run an errand or go to school.
- ◆ Participate in a car pool to attend school or another activity.
- ◆ Help your family keep lists of errands to reduce driving.
- ◆ Use public transportation if it is available to you.
- ◆ Try any other idea to use the family car less.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3B | Do a cleanup project that benefits your community.

Cleaning up after ourselves is something we all should do. However, you have probably noticed that not everyone remembers to do that. Sometimes you will see an empty lot where people have dumped trash or where weeds have grown tall. As you travel, you may see trash along the roadside. As a Bear Scout, you can help your community take care of these problems. This is another

good way to show pride in your community. By giving your time, you can make a big difference.

With your family or den, discuss a cleanup project you can perform as a group. Plan your project on the next page. Then go do it!



OUR CLEANUP PROJECT

Our project is

_____.

We will need to contact Mr./Ms.

_____ to get permission to do our project.

Our project date will be

_____.

Our project will take _____ hours to complete.

We will need these supplies:

- ◆ **Gloves**
- ◆ **Trash bags**
- ◆ **Safety or other protective clothing, if needed**
- ◆ **Water**
- ◆ **First-aid kit**
- ◆ **Safety glasses**
- ◆ **Sun protection**



Akela's OK

Date

Den Leader's OK

What was your favorite part of this adventure? Mine was learning about the American flag. Our den got to perform a flag ceremony on a day when some veterans were visiting. They said later that we did a great job. I think we did, but I've never seen anybody stand at attention the way those men did. You could just tell how much the flag and our country meant to them.



Bear Elective Adventures

BALOO THE BUILDER





Snapshot of Adventure

Learning to build things that are useful or fun is an important skill. You might grow up to build houses as a career or models as a hobby. Or you might just learn some skills that will help you in everyday life.

Building materials may include wood, cement, plastic, steel, or a combination of all these things. For this adventure, we will focus on wood. You will learn about hand tools and how to use them safely. You will learn how to choose the right type of wood for a project and follow project instructions. And before you are finished, you will use your new skills to make two projects from wood.

REQUIREMENT 1 | Discover which hand tools are the best ones to have in your toolbox. Learn the rules for using these tools safely. Practice with at least four of these tools before beginning a project.

NOTE TO AKELA: Cub Scouts are not allowed to use power tools.

A woodworker may have dozens—or even hundreds—of tools. You will only need a few tools to complete this adventure.

Using the right tool for the right job is very important. This keeps your tools in good working order. It also keeps you safe. It is a good idea to inspect your tools before using them to be certain they are in good condition.



A Scout is trustworthy. Show that you can be trusted to use tools by following safety rules.

Here are some tools you might want in your toolbox. You may borrow these tools from your parent, neighbor, or den leader, but always ask permission first.

When you have finished learning about these tools and how to use them safely, practice using them on pieces of scrap wood.

Safety Glasses

Safety glasses aren't really tools, but they can help keep you safe when you are using tools. It is extremely important that you protect your eyes when working with tools and wood. You will need a good pair of safety glasses that are kid-sized.

Safety glasses are different from regular glasses or sunglasses. They are designed not to break when something hits them. They also cover a larger area around your eyes to keep sawdust and other construction debris out. Keep them clean with a soft cloth, and store them in a safe spot. Wearing safety glasses while working is like wearing your safety belt in a car. Don't think about it. Just do it!





Hammer

A hammer is used to drive nails into wood. There are many different kinds of hammers. The best one for a Cub Scout is an 8- to 10-ounce claw hammer like the one shown here.

To drive a nail, tap it in gently until it stands up by itself. Then move your hand out of the way, and give several firm hits. For the most force, hold the handle near the end, not near the head.



If a nail bends, pull it out with the hammer's claws. Set a small block of wood next to the nail. Place the head of the hammer on the block of wood, and slide the claws under the head of the nail. That creates a lever that helps you easily pull the nail out. Start over with a new nail.



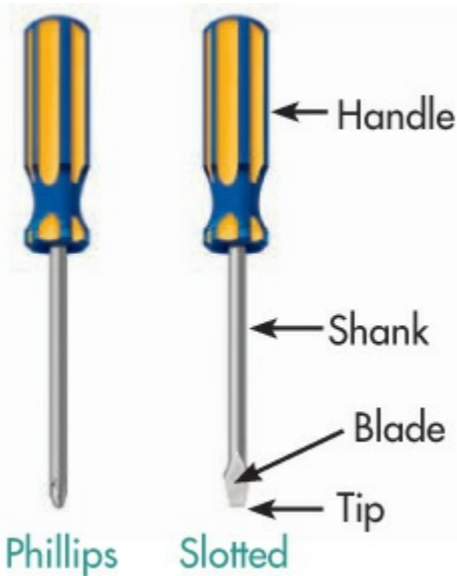
Safety: Do not use a hammer that is too large or heavy for you. Grip the hammer tightly so it does not slip from your hand. Be careful of the fingers on your other hand. If they get in the way, it will hurt!



Screwdriver

A screwdriver puts a screw into a piece of wood. Screws do a better job than nails of holding projects together when the pieces will be under strain.

There are two main kinds of screwdrivers: slotted and Phillips. Pick the one with a tip that matches the screw you want to drive. A slotted screw has a single slot across its head. A Phillips screw has an “X” design.



Screws go in more easily if you first make a pilot hole with a brace and bit (see the following page). The pilot hole should be smaller in diameter than the screw. It can also help to rub a little soap on the threads, or ridges, of the screw.

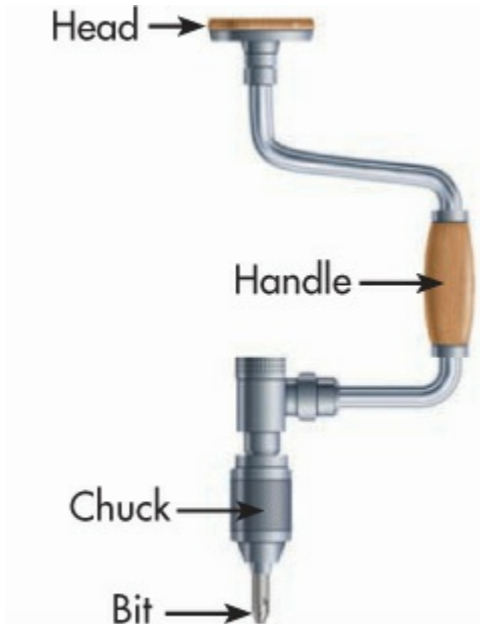


Safety: Use the longest screwdriver you can handle that is practical for your job. Pick the screwdriver that best fits the screws you are using. Only use a screwdriver to drive screws.

Brace and Bit

A brace and bit is used to drill holes. This is a two-part tool.

The bit does the drilling, and the brace turns the bit. There are many kinds and sizes of bits depending on the material and size of hole needed. All bits for wood have a spiral edge that digs out small pieces of wood as you turn it.



The brace has a hole where you insert the bit. Tighten the chuck

so the bit is held firmly in place while you are working with it.

To use the tool, guide the bit into place with one hand. Press down firmly with one hand on the head to keep the bit in place. Turn the handle clockwise with your other hand to drill your hole.

Before you drill all the way through the wood, turn the wood over, and finish your hole from the other side. This step will keep the wood from splintering.



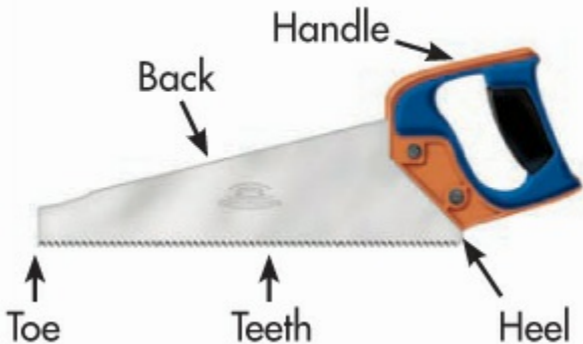


Safety: The bit has a sharp point, so be careful when handling it. Always use two hands. You may need an adult's help to get the hole started. Put on safety glasses before you begin.

Hand Saw

A hand saw lets you cut boards along straight lines. A 20-inch hand saw is best for boys your age.

Before you begin sawing, draw a pencil mark on the board where you want to make your cut. Start the cut by making a notch on the mark at the edge of the board. This notch will act as a track for the blade to sit in. Steady the blade with your thumb well above the cutting edge, and then draw back gently to create the notch.



Now, remove your thumb, and begin sawing down the pencil mark. Be sure to tilt the saw at a 45-degree angle to the board. Cutting the wood is a simple action of pushing the saw away from you at a downward angle, then pulling it back toward you. Each time you do this, the sharp teeth of the saw will cut deeper into the wood. You may need to straighten the saw handle to correct the direction of the cut, but be careful not to pinch the saw. If this happens, gently work the saw back and forth to release the blade.

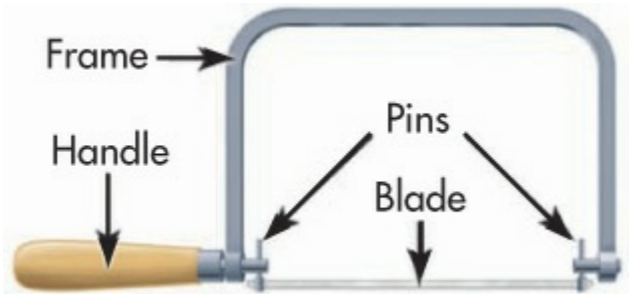




Safety: A saw has sharp teeth. Be careful when you carry it and when you lay it down. It is a good idea to keep your saw hanging up when not in use so you don't brush up against the teeth. Always know where all your fingers are when using a saw. This tool will create sawdust, so safety glasses are a must.

Coping Saw

A coping saw lets you cut curves and odd shapes in wood. Hold the wood securely with a vise or C-clamp (see below) so it can't move. Mark the curve you want to cut, then follow it with the saw, making long back-and-forth strokes. A heavy blade is a good idea.



Safety: Like a hand saw, a coping saw has lots of sharp teeth. Be careful with your fingers, and wear safety glasses.

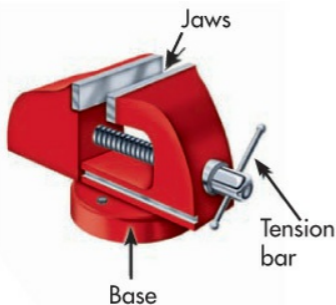
Vise or Clamp

At times, you may feel like you need a third hand to hold the wood you are cutting or drilling. Using a vise or clamp is like having that third hand. To use a vise or clamp, place the wood between the jaws then tighten the tension bar to hold the wood in

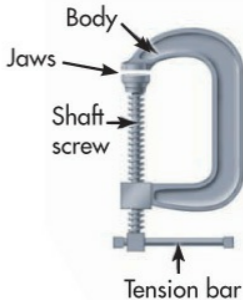
place.



Safety: Vises and clamps can pinch fingers and hands, so be careful as you tighten them. If you are using a vise, make sure it is properly secured to a table.



WISE



CLAMP

Measuring Device

Carpenters have a favorite saying: “Measure twice and cut once.” To measure things you are cutting, you can use a measuring tape, a ruler, or a speed square. A speed square rests on the straight edge of a board to help you mark a straight line across it. A measuring tape or ruler lets you measure the length of a board you want to cut.



Sandpaper

Sandpaper is just what it sounds like: a piece of heavy-duty

paper that has a scratchy surface on one side. Sandpaper is used to rub off any rough edges on your project. It comes in grades ranging from very coarse (very scratchy) to very fine (not very scratchy). Most of the time, you will shape the wood with a coarse sandpaper first. Then change to a finer sandpaper to make a smooth surface.

You can make a hand sander by nailing or gluing a piece of sandpaper around a wooden block you can hold in your hand. Home improvement stores also sell hand sanders.



Small First-Aid Kit

When working with tools, it is always a good idea to have a small first-aid kit nearby. It should include adhesive bandages in case you cut yourself and tweezers, a small magnifying glass, and

some antiseptic in case you get a splinter.



Practicing With Tools

Here are some ways you can practice using your tools:

- ◆ With a hammer, see how many hits it takes you to drive a nail into a piece of wood, or see how many nails you can drive in five minutes.

- ◆ With a screwdriver, see how long it takes you to place one screw through two small pieces of wood. You could also use a vise or a clamp with this, which is using two tools at one time.
- ◆ With a saw, see how well you cut using different thicknesses of wood. Check your cuts to make sure they are straight down, not slanted.

I practiced using the following tools:

1.

2.

3.

4.

Once you have finished with your tools, wipe them off with an old cloth or rag, and place them back where they belong. This will help your tools last longer. It will also help you find them the next time you need them.



Akela's OK

Date

Den Leader's OK



A Scout is helpful. Working with tools can be messy. If you notice safe ways you can help clean up, offer to help!

REQUIREMENT 2 | Select, plan, and define the materials for the projects you will complete in requirement 3.

You can use the tools you've learned about to make many kinds of projects. But all of them will begin with similar steps. Here's how to plan a project and read instructions or drawings.

- 1. Select your project.** Will it be something useful, something fun to play with, or a gift for another person?
- 2. Read the directions.** If you are using project instructions or drawings, read through them completely before beginning. Then

read them one more time.

Just as a road map shows the route from one place to another, project instructions or drawings show you how to complete your project from beginning to end. It is important to read through the instructions before you begin to gather your materials. They may tell you the best type of wood for the project, how thick it should be, and how much you will need. You might also need other items, such as nails, screws, glue, and paint. You will also be able to determine which tools you will need.

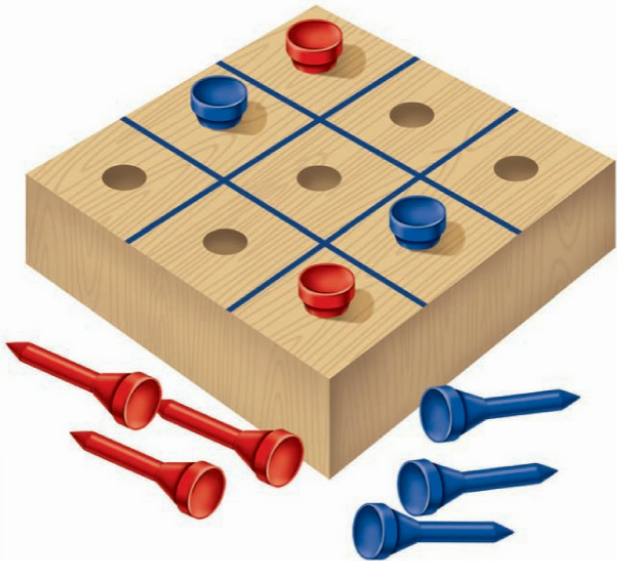
The next page includes the instructions for a simple tic-tac-toe board. As you can see, the picture only shows the finished result. It does not show any dimensions or other details.



Later in this adventure, you will find more detailed instructions for other projects. Compare those instructions with the tic-tac-toe instructions. Which one helps you understand how to build your project in a better way? How could it be helpful to have both kinds of instructions (written and illustrated)?

Tic-Tac-Toe Board

Cut a block of wood so it is 4 inches by 4 inches by 1 inch. Mark evenly spaced holes, and drill. Paint golf tees—five of one color for “X” and five of another color for “O.”



3. Determine the type of wood needed. If your instructions do not tell you the type of wood you need for your project, you can decide this by asking yourself some questions.

- ◆ Do I want to paint or stain my project? Some woods might hold paint better than stain. Also, you may want to paint an inexpensive wood that has some flaws. But you may choose to stain one that has lots of color or pattern.

- ◆ Does my project need sturdy wood to hold it up (like a stool, chair, or a table)? Using the wrong wood type might mean you end up sitting on the floor!
- ◆ Is my project a showpiece (like a stand for a pinewood derby car) that will show off a pretty color or pattern of wood? Using wood with a pretty color or an interesting pattern is a fun way to make the project more attractive.
- ◆ Will my project ever be outside? If your project will stay outside (like a flower box), use a strong wood that takes paint well. Also use a good sealant so the weather won't damage it.

By answering these questions, you will determine the right type of wood for your project.



Here are common types of wood:

- ◆ Pine, cedar, fir, cypress, and spruce are soft and easy to work with.
- ◆ Oak, walnut, hickory, maple, birch, and elm are hard and more sturdy.
- ◆ Oak and walnut have interesting grains.
- ◆ Cedar has pretty colors and a nice smell.

Since different types of trees grow in different parts of the country, is there another type of wood where you live that is good for projects?

If the type of wood you want to use is not important, think about finding wood that has been recycled. Your parent or den leader can help you locate a place to find recycled wood. Some ideas are house construction sites, cabinet shops, or wooden pallet companies.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Assemble your materials, and build one useful project and one fun project using wood.

Useful projects include things like toolboxes. Fun projects

include things like tic-tac-toe boards. With your parent or den leader, pick one useful and one fun project, and build both.

Below are some ideas to get you started. You may also choose projects that aren't listed here. Your local or school library is a good place to begin searching for projects.

Toolbox Or Art Caddy

Materials and Tools

- ◆ Five 1-by-6-inch pieces of wood to be cut to various lengths
- ◆ Broomstick piece or dowel, 18 inches long, for the handle
- ◆ Wood screws
- ◆ Wood glue
- ◆ Hand saw
- ◆ Brace and bit
- ◆ Screwdriver
- ◆ Measuring tape



Instructions

1. Cut two pieces of wood $17 \frac{1}{2}$ inches long for the two long sides.



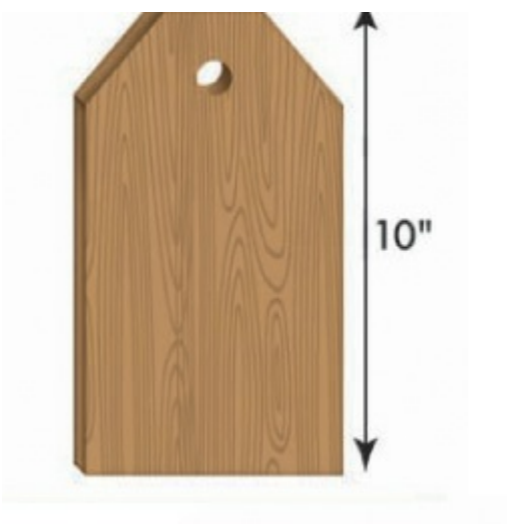
17.5"

2. Cut one piece of wood 16 inches long for the bottom.



16"

3. Cut two pieces of wood 10 inches long for the ends.



4. Cut off the corners of the end pieces at an angle, then drill a hole in each large enough for the handle. The center of each hole should be $1\frac{3}{4}$ inch from the top and centered between the edges of the piece.
5. Insert the handle. Then, put your toolbox together with wood screws. If you wish, you may put wood glue on the joints and let it dry before using the wood screws.



6. Finish your toolbox using one of the methods described in requirement 4.

Bookends

Cut these easy bookends from one piece of wood.

Materials and Tools

- ◆ ½-by-8-by-18-inch board
- ◆ Nails
- ◆ Coping saw
- ◆ Hammer
- ◆ Clamps
- ◆ Sandpaper
- ◆ Measuring tape



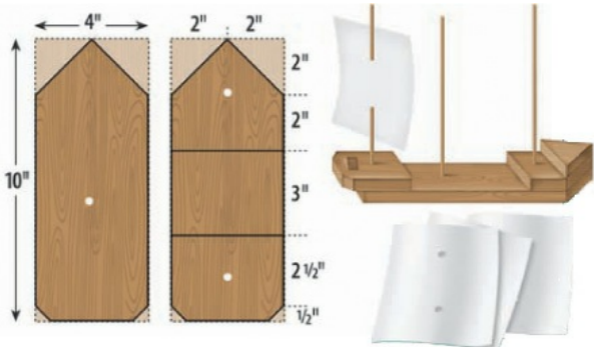
Instructions

1. Cut a 1-inch wide piece from the end of the board and set aside. You will use this piece later as a support for the middle.
2. At each end of the board, measure and draw the pieces to be cut out for the ends. Measure approximately one-third the distance from each end toward the center of the board. This will be the line to cut across the board. Measure 1½ inch from the long edge of the board toward the center on each side. These will be your long cuts on the board.
3. Carefully cut out each of the pieces.
4. Nail the cutout pieces in an upright position at the ends of the remaining piece of board according to the illustration so that the board is 1 inch off the table.
5. Nail the 1-inch piece that you cut off at the beginning under the middle of the board to provide support. Use a short nail for this step.
6. Sand and finish as desired.

Sailing Ship

Materials and Tools

- ◆ Two pieces of 1-by-4-inch board
- ◆ Heavy cardstock
- ◆ Three 10-inch-long pieces of $\frac{1}{8}$ -inch dowel
- ◆ Wood glue
- ◆ Saw
- ◆ Small hole punch
- ◆ Scissors
- ◆ Sandpaper
- ◆ Brace and bit



Instructions

1. Cut each piece of board as shown in the illustration.
2. Sand all edges smooth.
3. Drill three holes into the pieces of the ship about halfway through the wood as shown: one into the center of the base, one into the prow block, and one into the stern block to accommodate dowels for the masts. (The holes should be large enough so the one-eighth inch dowels fit into them.)
4. Stack the pieces as shown and glue.
5. Dip one end of each dowel in glue, and insert into the drilled holes for masts.
6. Cut three sails from heavy cardstock, and color as desired.

Punch holes where indicated, and slide onto each mast.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Apply a finish to one of your projects.

Once you have completed your project, you may want to put a finish on it. There are many ways to finish the wood. How you are going to use your project will help guide you in selecting the correct method of finishing it. Ask a parent or guardian to help with handling the finishes and cleaning fluids.

Always sand projects before you finish them. Sand the wood with the grain, never against it or in circles. To get the best results from sanding, use a wood filler for scratches and holes. When the filler dries, sand the project lightly again.

You can use several finishes on wood projects: acrylics, varnish, enamel, and wood stains. Apply a clear wax polish to raw wood to emphasize the beauty of the natural wood grain.



Here are some things you should know about different finishes.

- ◆ **Acrylics:** Acrylic paint is nontoxic and good for painting almost anything, including wood projects. It can be thinned with water and doesn't need a finishing coat. Clean your brushes with water.

- ◆ **Varnish:** Prepare wood with one or two coats of thin shellac or wood sealer first, sanding between coats. This will fill the pores of the wood and prepare it for varnishing. Use shellac thinner or alcohol to clean the shellac brush, turpentine to clean the varnish brush.
- ◆ **Enamel paint:** Prepare wood in the same manner as for varnishing. Two thin coats of enamel produce a colorful finish. If it is too thick, it will leave brush strokes. Clean the brush with turpentine.
- ◆ **Wood stain:** To prepare the wood, moisten it with turpentine before applying the stain. Experiment on a scrap of wood to make sure the results please you. If it is too thick, it will leave brush strokes. Clean the brush with turpentine.

Remember to get help from your parent or den leader before you begin this part of your project. Always use finishes in a well-ventilated area. It is a good idea to wear a simple paint mask and eye protection as well.



Akela's OK

Date

Den Leader's OK

I hope you like building stuff as much as I do. I think it's really fun to turn some old scraps of wood and a few nails into a ... well, I'm not really sure what this is. I'll just call it a



A BEAR GOES FISHING





Snapshot of Adventure

Grizzly bears in the wild use their fishing skills to catch good, nutritious food. After you complete this adventure, you'll be able to do the same thing. You won't have to use your paws, however! Instead, you'll use a cane pole or a rod and reel. You'll also learn about the fish that live nearby and the rules that good fishermen follow. And who knows? You may discover a hobby that you can enjoy for years to come. So grab your tackle, and let's go fishing!



REQUIREMENT 1 | Discover and learn about three types of fishes in your area. Draw a color picture of each fish, record what each one likes to eat, and describe what sort of habitat each likes.

Do you know someone who is a picky eater? (Maybe it's you!) Do you have friends who really hate cold weather or who love being out in the sun?

Fish can be the same way. Some species of fish will eat just about anything; others are pickier. Some like cold water; others like warm water. Some live in fresh water (inland lakes and rivers); others live in salt water (oceans and shoreline areas). Some like to hide in underwater brush piles; others like to swim in open water.

Before you go fishing, it is important to know about the fish that live in your area. Learn about three fish species that live in your local waters. Record what you discovered on these pages.



You can find links to state fish and wildlife agencies on the Internet (with permission) at www.fws.gov/offices/.

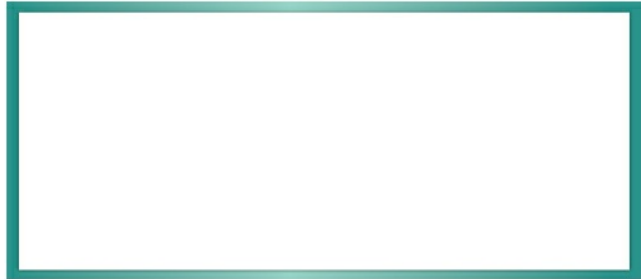
You can learn about fish species at your school or local library or on the Internet with the help of your parent or guardian. Your state has a government agency that takes care of the fish population. It can be a good source for information about fish species. Some communities have fish hatcheries (places that grow fish eggs) that you can tour and where you can learn about fish. Other good sources of information are local fishing clubs and stores that sell fishing equipment and bait.



Fish in My Area

Fish Species 1: _____

Looks Like:



Likes to Eat: _____

Habitat: _____

Fish Species 2: _____

Looks Like: _____



Likes to Eat: _____

Habitat: _____

Fish Species 3: _____

Looks Like: _____



Likes to Eat: _____

Habitat: _____



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Learn about your local fishing regulations with your leader or a parent or guardian. List three of the regulations you learn about and one reason each regulation exists.

There are rules to follow when fishing. These rules (which are sometimes called regulations) are important because they help protect the fish and the environment they live in. It is important that you learn these rules, understand what they mean, and promise to obey them. A Scout is obedient!

Your local area may have rules about where and when you can fish, how big a fish must be to keep, and how many fish you are allowed to catch and keep. In some places you must put the fish you catch back in the water. This practice is called catch and release. It is a good way to make sure fish can continue to live in the place you are fishing.

FISHING REGULATIONS

Fishing Regulation 1:

This regulation is important because

Fishing Regulation 2:

This regulation is important because

Fishing Regulation 3:

This regulation is important because

Your state probably has a license requirement, meaning that people must apply for a fishing license before they go fishing. Cub

Scout-age fishermen often don't have to have a license, but be sure to find out about licensing requirements in your area.

In addition to your state and local fishing laws, there are also some “good neighbor” rules that are important for you to follow.

- ◆ Always ask permission before fishing on another person's property. (A Scout is courteous.)
- ◆ Always leave the area cleaner than you found it. Take along a trash bag for any trash you find. (A Scout is clean.)
- ◆ Always let an adult know where you are going and when you will be back. (A Scout is trustworthy.)
- ◆ Do not intrude on a spot where others are already fishing, which can scare away fish. (A Scout is friendly.)
- ◆ Do not fish in a swimming area. People might step on lost hooks.
- ◆ Decide with your parent or guardian whether you should wear a life jacket while fishing. (A Scout is obedient.)
- ◆ Check the weather forecast before you go fishing and watch the weather while you are fishing. Never fish when lightning is striking in the area or when there is a possibility of flooding.
- ◆ Be sure the place you choose to fish is safe. Things to watch for include slippery rocks, a steep bank that goes to the

water's edge, unclean water, debris left from previous high water, and a swiftly moving current.

Be sure to discuss any other rules your family has so you will be safe while fishing.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Learn about fishing equipment, and make a simple fishing pole. Practice casting at a target.

There are many ways to catch fish. You can use a fishing pole, a rod and reel, or a net. Some fishermen even use their bare hands!

Fishing Pole

The simplest way to catch fish is with a fishing pole. To make a fishing pole, you will need:

- ◆ A sturdy stick, 4 to 5 feet long
- ◆ Fishing line
- ◆ Scissors
- ◆ A fishhook

You could use your hiking stick for your fishing pole, but the best type of wood to use is something that is strong but flexible. Bamboo that is about a half inch thick is a good choice.



Tie one end of the fishing line to one end of the pole. If one end of the pole is bigger than the other, tie the line to that end. Now, wrap the line in a spiral around the pole until you reach the tip. Tie

the line firmly to the tip, but don't cut the line. Instead, measure out more line so you have a piece hanging down that is a foot or so longer than the pole.

That line you wrapped around the pole will help you if you catch a fish so big it breaks your pole in two. Even though the pole is broken, you will still have captured the fish!

Cut off the line and tie a fishhook on the end. To prevent injuries, stick the hook's barb into the bottom of the pole until you get to your fishing spot. Then, bait the hook, and you're ready go fishing. Just hang your pole out over the water and lower the bait. Once a fish is on the hook, jerk the line out of the water and grab your fish.

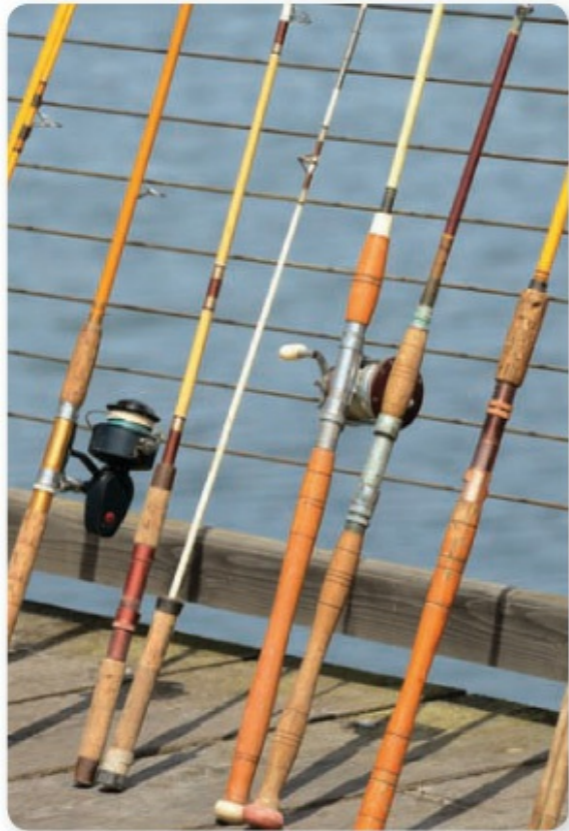
Rod and Reel

It's fun to fish with a simple fishing pole, but most fishermen use a rod and reel instead. This equipment lets you cast your line farther out in the water. And when you hook a fish, it's easy to reel it in. Here are the pieces you will need.

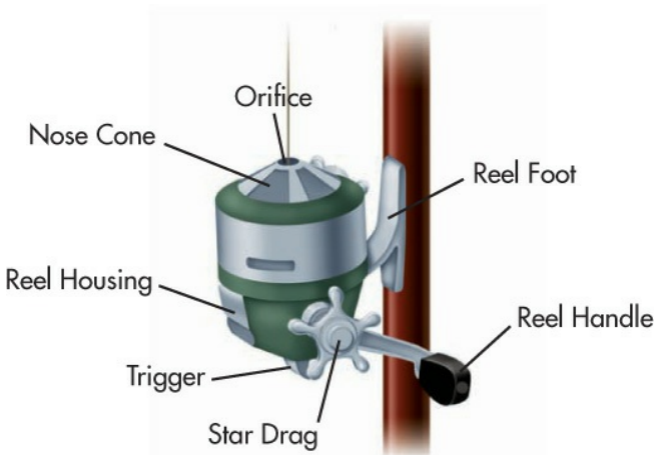
Rod The rod takes the place of the fishing pole. It has eyelets (metal rings) along its length that fishing line runs through. Most rods are made of fiberglass or synthetic material like carbon fiber.

Some come apart so you can transport them easily; these are called take-down rods.

The weight of rods varies. To catch small fish, you could use an ultralight rod. To catch fish like trout, you would use a long, thin lightweight rod called a fly rod. For bigger fish, you would need a rod that is bigger around and stronger. If you were going deep-sea fishing, you might use a rod that's 20 feet long!



Reel The reel connects to the rod near its handle. Inside the reel is a spool that your fishing line wraps around (and around and around and around and around). From the reel, the end of the line goes up the pole through the eyelets before you add your hook or lure. To reel in the line, you turn a handle. To let the line go when you are casting (tossing your line out on the water), you release a trigger.



There are many types of reels. As a new fisherman, you might want to pick a close-faced reel that has a cover to protect the line inside. Open-faced or spincasting reels don't have a cover and take more skill to use. Without practice, you can end up with something

called a “bird’s nest”: a big knotted wad of fishing line that is no longer usable.

Fishing Line

There are many types and colors of fishing line. Some line is meant to catch fish that weigh only 2 pounds. Some is meant to catch fish that weigh 10, 20, or even 50 or more pounds. Be sure to use line that is strong enough for the fish you want to catch. Otherwise, a fish can break the line and get away.



Bait

You will also need to have the correct bait for the type of fish

you are fishing for. If the fish don't like to eat the bait you are using, they won't bite. Do you remember what you learned in requirement 1 about the fish in your area?

You will need to decide if you want to use live bait like minnows, worms, or crickets or if you want to use artificial bait. There are many types of artificial bait. Some make noise in the water or spin around to attract fish. Some are designed to look like live bait.



One special kind of artificial bait is a fishing fly. This is a lure that looks like a real fly. It sits on top of the water waiting for fish to come up and bite. Some fishermen tie their own flies. If you are good with your hands, you might try tying your own flies one day.

Tackle Box

A tackle box is a good place to store your bait and other fishing supplies (called tackle) while you are traveling and while you are fishing. It keeps your tackle clean and organized.





You can buy a tackle box at a store or reuse something you find around your home. Be sure there is a way to secure the lid so it doesn't open at the wrong time!

Here are some things to carry in your tackle box:

- ◆ Artificial bait
- ◆ Bobbers
- ◆ Barbless hooks
- ◆ Needle-nose pliers
- ◆ Scissors
- ◆ Sinkers

Bobbers are small floats that attach to your fishing line and

keep your hook at a certain level.

Sinkers let you fish lower in the water because they pull down on the hook.

Barbless hooks cause less harm to a fish's mouth when you are practicing catch-and-release fishing. If you cannot find barbless hooks, you can use pliers to flatten the barbs on regular hooks.

Pliers help you remove hooks from fish and pull knots tight.

Scissors let you cut off fishing line after you tie it on a hook.



You might also want to carry a snack in your tackle box. I don't know about you, but fishing makes me hungry.

It is also a good idea to carry the Cub Scout Six Essentials when you go fishing. Other items to carry include raingear and a life jacket.

CUB SCOUT SIX ESSENTIALS

- ◆ **First-aid kit**
- ◆ **Filled water bottle**
- ◆ **Flashlight**
- ◆ **Trail food**
- ◆ **Sun protection**
- ◆ **Whistle**

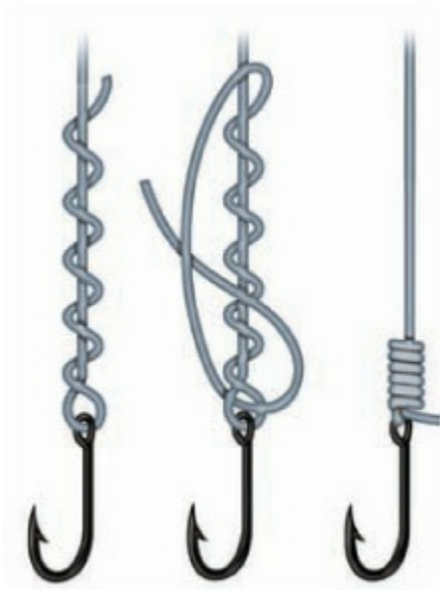
Fishing can be an expensive hobby, but it doesn't have to be. If you want to learn about fishing but aren't sure whether you will like it, you may be able to borrow some equipment from a family member or friend. Once you decide you like it, you can purchase the proper equipment. You can also buy one or two items at a time and slowly build up a collection of fishing gear.

Fishing Knots

You must know the proper types of knots for tying hooks to your line. Because fishing line is stiff and slippery, you can't just use a regular knot. You need a knot that will jam against itself and

hold tight. Here are two good knots to learn.

Improved Clinch Knot Run the end of the line through the eye of the hook, double the line back, and make six twists around the standing part (the long part of the line). Run the end of the line through the small loop where the line joins the eye and then back through the large loop you just formed. Partially close the knot and moisten it a little with water before securing it tightly against the hook eye.



Palomar Knot Double the line to make a 4- to 6-inch loop, then pass the end of the loop through the eye. (You may need to crimp the end of the loop so it will go through the eye.) Tie a loose overhand knot in the doubled line. Pass the hook through the loop and pull on the doubled line to tighten the knot, guiding the loop over the top of the eye. Cut off the short end of the line.



Casting

To practice casting, you will need a rod with a reel attached. Instead of using a hook, tie a sinker on your line so it will be heavy enough to cast.

Place a target, and practice hitting the target with the sinker. Do

this until you can get closer to the target than you were at first. As your accuracy improves, move farther from the target. The time you spend practicing will help make fishing safe and fun.





Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Go on a fishing adventure, and spend a minimum of one hour trying to catch a fish. Put into practice the things you have learned about fish and fishing equipment.

It is fun to practice casting and to pick out fishing gear, but the real fun happens when you actually go fishing. Nothing is as exciting as watching your bobber disappear under the water or feeling the pull on your line as you reel in a big fish! Make a plan with your parent or guardian for where and when you'll go fishing.

Spend a minimum of one hour trying to catch a fish. Remember all the things you have learned about fish, fishing equipment, and the rules of fishing. And remember that a Scout is cheerful—even if you don't catch a fish.



Akela's OK

Date

Den Leader's OK

When my den went fishing last year, I caught a fish that was almost 2 feet long. Really! In fact, it was so big my dad had to help me reel it in, and we almost broke my rod. We were practicing catch-and-release fishing, so we tossed the fish back in the lake. I hope one of the other Cub Scouts in my pack gets to catch it this year when they go on their fishing trip. That would be awesome!



BEAR PICNIC BASKET





Snapshot of Adventure

When your stomach growls like a bear, you know it is time to eat. In this adventure, you will get to eat some yummy food that you create yourself. You will learn how to cook at home and at a camp, and you will even put together your own Bear cookbook to record your favorite recipes. Cooking is a lot of fun, so go wash your paws and let's get busy in the kitchen!

REQUIREMENT 1A | Create your own Bear cookbook using at least five recipes you can cook or prepare either on your own or with some adult help. Include one page with information about first aid. You should include one recipe for a breakfast item, one for lunch, and one for dinner, and two recipes for nutritious snacks.

How does a new chef get started? With a recipe, of course! There are many places you can look for recipes. Here are some of them.

Family. Ask your family members about things they like to cook. Some families hand down recipes from generation to generation. Your parents or grandparents may have cookbooks they have used for many years that you can borrow.



People from other countries. Do you have friends and neighbors who came to the United States from other countries? Do you have family members who live in another part of the world? Different cultures often have very different styles of food that are fun to try.

The library. Your local library probably has cookbooks you can borrow. You may even find cookbooks designed just for kids

like you.

Newspapers. Many newspapers have a food section with recipes.

Magazines. Ask your family, neighbors, or other adults you know if they have magazines with recipes you can look through.

Television. There are several TV networks that have shows dedicated to food and recipes.

The Internet. With the help of an adult, you can research recipes on the Internet. You'll be surprised at how many different recipes you can find for the same food item!

Food packages. Check cereal and baking mix boxes for recipe suggestions.

Other Cub Scouts. Ask your friends what they like to eat and how they cook it. You can exchange recipes with your friends.

You! You can create your own recipes by experimenting with flavors, seasonings, and cooking methods. Start with a few basic ingredients, and then add other ingredients to make your recipe. Be sure to keep notes as you are creating so you will remember what you did. Don't be afraid to try new things!

After you have gathered your recipes, put them in a book that you can use at home or take on a campout. One way to do that is to write each recipe on a 4-by-6-inch index card. Make front and back covers out of heavy cardboard. Punch two holes along the upper edge of each card and each cover, then use string or a

shoelace to tie the book together. (Be sure the holes are in the same places on each card.) Cover the front and back with fabric and glue, stickers, or your own original artwork.

Apple Crisp

Serves: 8

Cooking Time: 35 minutes

8 apples, peeled

1 ½ cups brown sugar

1 cup flour

1 cup oats

1 teaspoon cinnamon

1 teaspoon nutmeg

½ cup cold butter

1 tablespoon lemon juice

Apple Crisp

Serves: 8

Cooking Time: 35 minutes

Ingredients:

8 apples, peeled

1 ½ cups brown sugar

1 cup flour

1 cup oats

1 teaspoon cinnamon

1 teaspoon nutmeg

½ cup cold butter

1 tablespoon lemon juice



Instructions:

Preheat oven to 375 degrees. Mix the apples with the lemon juice until well coated. (The lemon juice keeps the apples from turning brown.) Spray a 13-by-9-inch baking dish with cooking spray. Spread the apples in the bottom of the dish. Mix the remaining ingredients together in a medium-sized bowl until crumbly. Spread over the apples. Bake at 375 degrees for 35 minutes.



COOKING FIRST AID

Here is some first-aid information to add to your cookbook. Write this information on an index card or have an adult make a photocopy that you can cut out and glue onto an index card.



Any time a member of your den is injured, tell an adult first.

Cooking First Aid

Minor Burn Or Scald

A burn happens when your skin touches something hot. A scald happens when your skin comes in contact with hot steam. Both can be painful and need some first-aid attention.

If the skin is unbroken, run cool water over the area of the burn

or soak it in cool water (not ice water). Keep the area under the water for at least five minutes. A clean, cold, wet towel will also help reduce pain. Show the burned area to an adult.

Minor Cut

Small cuts in the skin can allow bacteria to enter the body and cause infection. Wash minor cuts with soap and water. Apply antibiotic ointment and cover with a dry, sterile dressing or an adhesive bandage to help prevent infection and protect the wound. Before applying a bandage, show the cut to an adult. Clean and rebandage wounds each day. If the cut is more serious, get help from an adult immediately. Taking proper care of a wound will help prevent other health issues like an infection.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 1B | Prepare for cooking by explaining the importance of planning, tool selection, and cooking safety.

You've collected your recipes and you're ready to roll, right? Before you start opening packages and mixing things up, you need to understand a few things. These things will help you be the best

cook you can be.

Planning

Do these things first:

- ◆ Decide what you want to cook, and find a recipe.
- ◆ Read the recipe all the way to the end. Now read it again. Make sure you have plenty of time and you understand what to do. If the recipe is hard to understand, ask for help.
- ◆ Check your pantry and refrigerator to make sure you have all the ingredients you need. It's hard to make a peanut butter and jelly sandwich if you don't have any peanut butter!
- ◆ Check your pans and utensils to make sure you have the right ones. Some recipes call for special tools, such as cookie cutters or a mixer.
- ◆ Consider food allergies. If you are cooking for other people, ask them about any food allergies they have so you don't prepare something that will make them sick.
- ◆ Wash your hands and make sure your work surfaces are clean. Wipe down surfaces with soapy water and rinse them off.



A Scout is clean. Food safety is the most important part of cooking. It's even more important than dessert!

Cooking Tools

Depending on what you are going to cook, you may need some of these tools.

Kitchen spoon. This is a large version of the spoon you eat cereal with. Some have slots in the bowl to drain liquid.

Whisk. This tool lets you whip egg whites or scramble eggs.



Hand mixer or electric mixer. These tools make it easier to mix ingredients.



Blender or food processor. This tool mixes liquids together. It may also have a setting to chop ingredients.



Kitchen knife. This tool is used to cut up ingredients like fruit and vegetables.



Measuring cups. These tools let you measure ingredients. When a recipe calls for 2 cups of flour or a half cup of milk, grab your measuring cups.



Measuring spoons. These tools are similar to measuring cups, but they measure small amounts like teaspoons and tablespoons.



Cooking Terms

Here are some words you may see in recipes.

Stir. Combine ingredients until they look smooth and are all one color. Batters (cake, cupcake, pancake, etc.) should usually not be lumpy, but check the recipe to be sure.

Mix. Combine wet ingredients (eggs, milk, butter, etc.) and dry ingredients (flour, salt, baking soda, etc.) to form a batter. You can do this with a whisk or a mixer.

Beat. Mix quickly to make the mixture smooth and light.

Blend. Make a very smooth liquid with no lumps. The mixture should look like a runny milkshake or smoothie.

Chop. Cut ingredients into smaller pieces with a knife on a cutting board. Ask for help from an adult with this so you don't cut yourself.



Bake. Cook the food in an oven. Preheat the oven to the right temperature before putting the food in. An adult can help you with this step.

Fry, sauté, or brown. Cook something in a skillet on the stovetop. Heat a little oil in the pan first to keep the food from sticking.

Cooking Safety

Stoves and ovens can cause serious burns, steam from pots can scald your skin, and sharp tools can cause cuts. Also, if you handle food the wrong way, people can get sick. Follow these rules to keep yourself and the people who will eat your food safe.

- ◆ Request permission to use the kitchen, and know your family's safety rules before using anything in the kitchen.
- ◆ Have a first-aid kit nearby in case you hurt yourself.
- ◆ Ask an adult for help when you need to use a knife, the stovetop, or the oven.
- ◆ Wear shoes in case you drop a heavy pan or a glass bowl or measuring cup.
- ◆ Keep work surfaces and your hands clean. Wash your hands before you start cooking, after you handle raw meat, and when you are done cooking.
- ◆ Clean up your pots and pans, utensils, and work surfaces once you have finished. Wash your dishes or place them in the dishwasher.

When you become a Boy Scout, you will work with your patrol (which is similar to a den) to plan your meals, do the shopping, and prepare and cook them as a group.

Recipe Changes

Sometimes you will need to change a recipe to make it work for you. Let's say you have a recipe for one apple crisp but you need to double the size. You can use math skills to change the recipe.

Use your math skills to change this recipe.

Apple Crisp

Recipe for One Apple Crisp	x 2 =	Doubled Recipe
8 apples		_____ apples
1 ½ cups of brown sugar		_____ cups of brown sugar
1 cup of flour		_____ cups of flour
1 cup of oats		_____ cups of oats
1 teaspoon of cinnamon		_____ teaspoons of cinnamon
1 teaspoon of nutmeg		_____ teaspoons of nutmeg
½ cup of cold butter		_____ cup of cold butter
1 tablespoon of lemon juice		_____ tablespoons of lemon juice

See how easy that was? You can use the same math to prepare enough snacks for your entire den. You can also divide everything if the recipe will make more food than you need.

That's not the only kind of change you can make. If you don't like apples, you can substitute peaches. If you like nuts or raisins, you can add those too.



Usually, it's a good idea to follow a recipe exactly the first time you make it. The next time, try some small changes. Make a note of your changes so you can remember them in the future.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 1C | Go on a grocery shopping trip with your den or with an adult. Check the price of different brands of one single item, and compare the price of a ready-made item with the price of the same item you would make yourself.

A big part of learning to cook is learning to shop for groceries. Whether you shop at a big grocery store or a farmer's market, it is important to buy the right foods and manage your money wisely.

When you go to the grocery store, you will see many types of

the same item. You may see six different types of apples, five brands of pancake syrup, and several sizes of milk. Prices will vary depending on the size of the package, the brand, and whether the store is running a sale.

Look at several containers of the same item that are all the same size. Do they all cost the same? Which one is the best to buy? Use this chart to help you decide.



Item	Brand Name	Container Size	Cost
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

While you are at the grocery store, compare the cost of a ready-made food item with a similar item you would make at home. Ready-made means the food has already been prepared. All you have to do is cook it or heat it up.

Pizza is a good item to compare. You can buy a ready-made frozen pizza, you can have a pizza delivered to your home, or you can make it from scratch. Write down the cost of each kind of pizza here. Try to compare pizzas that serve the same number of people and have similar toppings.

Homemade Pizza	Frozen Pizza	Delivery Pizza
Premade Crust \$ _____	Total Cost \$ _____	Total Cost \$ _____
Sauce \$ _____		
Cheese \$ _____		
Toppings \$ _____		
Total Cost \$ _____		

Which pizza would cost less? Did the answer surprise you? Besides the cost, why might you choose one pizza over the others? One important consideration is the ingredients in ready-made food. When you make food yourself you can make decisions about the ingredients you eat. Thinking about healthy choices as well as your budget is part of grocery shopping.

Discuss what you learned with members of your family or den.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2A | With the help of an adult, select one food item, and follow a recipe to prepare it for your family in your kitchen. Clean up after the preparation and cooking.

You can choose all sorts of food items to prepare at home.

Here are some examples:

Breakfast: French toast or scrambled eggs

Lunch: Tuna, chicken salad, or grilled cheese sandwich

Dinner: Spaghetti with sauce or tacos

Pick one of these items or something else to prepare. Talk with everyone about how they liked what you cooked and decide what you would do differently next time.

I cooked _____ **Date**

You may decide you want to make changes to your recipe the next time. Maybe there wasn't enough food to go around. Maybe the food was too spicy (or not spicy enough). Write down the

changes you would make so you remember them next time.

Finally, be sure to clean up the kitchen and all the pots, pans, and utensils you used. Remember that a Scout is clean!



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2B | With the help of an adult, select one food item, and follow a recipe to prepare it outdoors for your family or den. Clean up after the preparation and cooking.

In many ways, cooking outdoors is just like cooking indoors. You can really cook anything at camp that you can cook at home.

But there are some additional questions to think about. What will the cooking source be? Will it be charcoal in a fire ring, a grill, or a camping stove? (All of these methods require the help of an adult.) Is there water nearby for easy cleanup? How will you get the food to the cooking site? How do you need to adjust the cooking times and methods?



Here are some ideas for each meal:

Breakfast – Oatmeal or pancakes

Lunch – Grilled hot dogs or soup

Dinner – Foil dinner or English muffin pizza (see the recipes on

the next page)

English Muffin Pizza

You will need one English muffin split into two pieces. Spread pizza sauce on both halves, add any ingredient to the top that you like, and cover with cheese. Place your pizzas on a piece of heavy-duty foil and turn the edges of the foil up, or place them in a pan covered with foil. Have an adult help you place the foil on a heated grill. Watch carefully. Once the cheese has melted, your pizza should be ready to eat.



Foil Dinner

Cooking in foil packs is a fun way to cook meat, vegetables, and even fruit over hot coals. Plus, the cleanup is easy!

Start with a square piece of heavy-duty aluminum foil. A square sheet that is the width of the roll will work fine. Lay the foil shiny side up on a table, and smear a little butter or margarine on it.

Put a hamburger patty on the foil, and then add sliced potatoes, carrots, onions, broccoli, or whatever else sounds good. The vegetables should all be cut to about the same thickness to help them all cook evenly. Season with salt, pepper, garlic salt, or your favorite herbs. Sprinkle with a little water, maybe two or three teaspoons full. Fold the foil edges up over the food. Fold them down once, crease gently, then fold down again and crease. Now, do the same thing with the open ends of the foil pack. The idea is to seal the moisture in the package. Try not to rip the seams, but if you do, finish wrapping, then repeat with another layer of foil. Cook the foil pack for 20 to 30 minutes over white-hot coals, turning once. Ask an adult to take the foil pack off the coals. Be careful when you open the foil pack because a lot of steam will come out.



FOIL COOKING TIMES

You can cook many foods in foil packs. Here are approximate cooking times for some of them. The depth

of the charcoal bed, the temperature of the food, and the size of the food will affect cooking times.

- ◆ **Hamburger: 15-20 minutes**
- ◆ **Chicken pieces: 20-30 minutes**
- ◆ **Hot dogs: 5-10 minutes**
- ◆ **Pork chops: 30-40 minutes**
- ◆ **Carrots: 15-20 minutes**
- ◆ **Ears of corn: 6-10 minutes**
- ◆ **Whole potatoes: 45-60 minutes**
- ◆ **Potato slices: 10-15 minutes**
- ◆ **Whole apples: 20-30 minutes**



Akela's OK

Date

Den Leader's OK

My brother and I love making mini pizzas with veggie designs on top. I'm quite a pizza artist!



REQUIREMENT 3 | Select and prepare two nutritious snacks for yourself, your family, or your den.

Nutritious snacks help you make it to your next meal. They can also give you a boost of energy. There are lots of great snacks that you can make with little or no help from an adult.

Here are some examples:

- ◆ Nuts (pecans, walnuts, peanuts, etc.)
- ◆ Fresh fruit, dried fruit, fruit juice
- ◆ Raw vegetables (carrots, celery, broccoli, cauliflower, green peppers)
- ◆ Cheese
- ◆ Yogurt
- ◆ Popcorn
- ◆ Peanut butter
- ◆ Milk

You can eat these snacks by themselves or put them together to create something even better.



Here are some examples:

- ◆ Cream cheese and jelly on graham crackers and a glass of milk
- ◆ Sliced apple with peanut butter or cheese
- ◆ Dried fruit mixed with your choice of nuts
- ◆ Raw vegetables or sliced fruit dipped in yogurt

◆ Celery with peanut butter and raisins



None of these snacks have to be cooked, so they are easy to prepare. However, you do need to remember the kitchen safety rules you learned. You should also wash raw vegetables and fruits with skin on them before you eat them.

These ideas are just the beginning. Put on your chef's hat and see how creative you can be in making snacks that taste great and are good for you, too.

The two nutritious snacks I selected and prepared were:

Snack _____ prepared for _____.

Snack _____ prepared for _____.



Akela's OK

Date

Den Leader's OK



So what do you like to cook? Our Webelos den loves to cook foil meals on campouts. I think my favorite meal was when we cooked some fish our den leader had caught. We just added potato chunks, asparagus spears, and a little seasoning. It was delicious!

BEAT OF THE DRUM





Snapshot of Adventure

Most Americans have ancestors who came here from other parts of the world. But American Indians have always been here—or at least they've been here since around 12,000 B.C., which is a long, long time ago!

American Indian culture is an important part of our country's traditions. In this adventure, you will learn about American Indian tribes in your area and about customs like crafts, music, and dancing. You'll also get a chance to make some of these traditions your own.

REQUIREMENT 1 | Learn about the history and culture of American Indians who lived in your area at the time of European colonization.

When Christopher Columbus first came to North America in 1492, people had already been living here for tens of thousands of years. These American Indians lived off the land, planting crops and hunting for food. They also did some pretty amazing things, like building huge pyramids in Mexico, developing new types of crops, and inventing the number zero.



Why are the native peoples of the United States often called American Indians? At first, Christopher Columbus thought he'd sailed all the way around the world and reached India.

Groups of American Indians with similar family backgrounds

and cultures are referred to as tribes, and there are many of them. Today, the United States government recognizes more than 500 tribes. Every tribe is unique, but history and customs are very important to all of them.



For this requirement, see what you can learn about the American Indians who lived in your area before the European explorers arrived. Did they stay in one place or move around all the

time? Did they hunt, fish, or grow crops? Were they peaceful or warlike? Do they still have a presence in your part of the country? Do any cities or rivers in your area have names based on their words?

MY AMERICAN INDIAN NEIGHBORS

One tribe that lived or lives in my area:

What I learned about them:



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Write a legend.

A legend is a story that is passed down from generation to generation. Some legends tell about famous characters like King

Arthur or people like Pocahontas. Others explain why things are a certain way. American Indian tribes have legends that they have preserved for thousands of years.

Here is a legend from the Cherokee tribe that explains how the Milky Way came to be:

Once upon a time, there weren't many stars in the sky. In those days, people grew a lot of corn, which they dried and turned into cornmeal. One day, the people in a Cherokee village discovered that something had stolen some of their cornmeal. They saw dog prints around the bag. The prints were huge, far too big to be from an ordinary dog. The elders of the village said it must be a spirit dog.

That night, the people all got together to guard their cornmeal. After darkness fell, the spirit dog swooped down from the sky and stole some cornmeal. The villagers chased the dog away with noisemakers and loud shouts. It ran out of the village, up a hill, and leaped into the sky. As it flew across the sky, kernels of cornmeal fell out of its mouth and became the stars of the Milky Way.

For this requirement, make up your own legend. It could explain how something came to be, like the Cherokee story does. Or it could be based on something that happened in your family a

long time ago. It could even describe how a character you admire visited your town.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Make a dream catcher.

Long ago, the Ojibwe (pronounced o-JIB-way) people created dream catchers to hang over the beds of people who were sleeping, especially children. They believed that the night air held dreams, both good ones and bad ones. The dream catcher would let good dreams get through to the sleepers. Bad dreams would be caught in the dream catcher's web and would disappear at daybreak.

Other tribes adopted the dream catcher. Today, many people see the dream catcher as a symbol of American Indians across the country.

A dream catcher has three main parts: a round ring, a web of thread that looks like a spider's web, and feathers. You can imagine good dreams sliding down the feathers onto the sleeper.

Dream Catcher

Materials and Tools

- ◆ Paper plate
- ◆ Scissors
- ◆ About 7 feet of yarn
- ◆ Hole punch
- ◆ Beads
- ◆ Feathers



Instructions

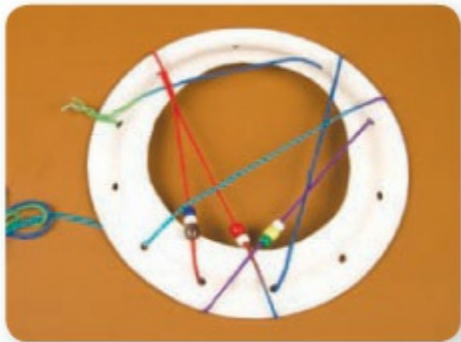
1. Using the scissors, cut out the center of the plate so you have a ring that's about 2 inches wide.
2. Using the hole punch, punch holes every inch or so around the ring.



3. Cut a piece of yarn about 5 feet long. Tie one end of the yarn to one of the holes you just made. Run the other end through one of the holes on the other side of the ring and pull it snug (but not so snug that it warps the ring).



4. Keep weaving the yarn between all the holes. Along the way, you can string beads on to the yarn if you like.
5. When you get to the end of the yarn, tie it off in the nearest hole.



6. Cut three pieces of yarn 5 inches long. Tie a feather to one end of each piece. Tie the other end of each piece to a hole on the bottom of the ring. (Punch extra holes if you need to.)



7. Cut one more piece of yarn about 5 inches long. Run it through a hole at the top of the ring and tie it in a knot to form a loop. Use this loop to hang your dream catcher on the wall or from the ceiling.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Make a craft similar to one made by American Indians.

Crafts are a very important part of American Indian culture (and many other cultures). Crafts are pretty to look at, but they

also record history, show which tribe someone belongs to, and meet daily needs like providing clothing and shelter. American Indian crafts include beadwork, baskets, cornhusk dolls, moccasins, totem poles, rattles, rain sticks, and more.

For this requirement, pick a craft and make it. You can find ideas for crafts from your library or the Internet with the help of an adult.



There are also kits available from many sources, including your local Scout shop and the **ScoutStuff.org** website.

A talking stick is an easy craft to make. American Indians in many parts of the country have used talking sticks for centuries. During special meetings, a talking stick helps speakers take turns and encourages respectful listening.

Talking Stick

Materials and Tools

- ◆ Stick or dowel rod, approximately one-half inch by 24 inches
- ◆ Yarn
- ◆ Scraps of felt or fur
- ◆ Leather or suede cord
- ◆ Craft glue
- ◆ Scissors
- ◆ Jingle bells, pony beads, feather, or shells



Instructions

1. Cut a piece of 1-inch-by-2-inch felt.
2. Wrap it around the end of the stick. Glue it in place.



3. Wrap yarn tightly around the stick, adding more glue as needed. Cover about 5 inches of the stick, changing color if desired.



4. Tie the suede lace near the bottom of the yarn wrap. Thread the lace through bells, beads, feathers, or shells to decorate it as

you want. Then knot the lace again.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | Make a drum. Once your drum is complete, create a ceremonial song.

Drums are very important in many American Indian ceremonies and ceremonial dances. In some tribes, several drummers will gather around a big drum and hit it all at the same time as they sing. Dancers move in time with the rhythm of the drum, which represents the heartbeat of the American Indian people.

Authentic American Indian drums are usually made of wooden frames or hollow logs covered with animal skin. You can make your own drum out of a large empty container like a coffee can or oatmeal canister. Cover the outside with construction paper and decorate it. Work with your den leader or family to choose a material to stretch across the opening and attach. Make up your own song to sing as you beat your drum.



Akela's OK

Date

Den Leader's OK



REQUIREMENT 6 | Visit an Order of the Arrow dance ceremony or American Indian event within your community.

Many groups work to preserve American Indian traditions. One of them is the Order of the Arrow, which is the national honor society of the Boy Scouts of America. Many Order of the Arrow lodges have ceremony teams and dance teams that study and preserve the traditions of specific tribes. They often perform at camporees, summer camps, Cub Scout pack meetings, and other Scouting events.



Some communities also have powwows where American Indians and people who want to learn about their culture get together. Powwows usually include dancing, ceremonies, craft demonstrations, and traditional food.

To find out about powwows in your area, check with local parks, museums, and cultural centers.



The **PowWows.com** website, which you can visit with help from an adult, includes a calendar of powwows across the United States and Canada.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 7 | Learn and demonstrate ceremonial dance steps.

Ceremonial dancing is an important part of American Indian culture. Some dances have religious significance. Some re-enact

great events in a tribe's history. Some celebrate successful hunts, harvests, or important times like the summer solstice (the longest day of the year).

Talk with a member of the Order of the Arrow or someone at an American Indian powwow. Find out about the dancing that they do. Learn about the significance of the dances. Learn a few dance steps.





A Scout is courteous. Always show respect when you learn about the traditions of a group of people.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 8 | Create a dance.

Some American Indian dances express thanks for good things that have happened. For this requirement, create a ceremonial dance to give thanks for something special to you. Create a costume that you can wear as you do your ceremonial dance. Have a friend or family member create a beat on the drum you made.



Akela's OK

Date

Den Leader's OK

When I become a Boy Scout,
I hope I get to become a member of the
Order of the Arrow. It's really cool how those
Scouts help preserve American Indian culture. And the
dances they do are amazing! I think it would be really
fun to learn a dance that people have been doing for
hundreds and hundreds of years.

What was your favorite part of Beat of the Drum?



CRITTER CARE





Snapshot of Adventure

Did you know that two-thirds of Americans have a pet dog, cat, horse, bird, fish, hamster, or other animal? It's true. In fact, there are more pets than people in America!

Pets are fun, but they are also a big responsibility. Pets need food, water, shelter, and exercise in order to stay healthy. When you look after a pet, whether it belongs to you or a neighbor, you learn a lot about love, loyalty, and caring. Learning to look after pets—and having fun with them—is what this adventure is all about.

REQUIREMENT 1 | Care for a pet for two weeks. Make a list of tasks that you did to take care of the pet. If you do not have a pet, research one that you would like to have and write about the care it needs.

Does your cat open cans of food when it's hungry? Does your dog take itself for a walk? Of course not! Unlike people, pets can't take care of themselves. They need someone to take care of them.

Every kind of pet needs a clean, dry place to sleep (except for fish, of course!). A dog might have a special place in your home where it sleeps. A horse might live in a barn or out in a pasture. A

hamster lives in a cage. A cat will make its own bed in a sunny spot by a window.

Nutritious food, clean water, and plenty of exercise help keep pets healthy. Just like you, your pet will get sick if it eats nothing but junk food and never gets any exercise. Your veterinarian can suggest the right food and exercise for your pet.



Speaking of your veterinarian, most pets need regular checkups. Your veterinarian can help you make sure your pet stays healthy. He or she can also give your pet vaccinations to prevent serious diseases. Your vet might even clean your pet's teeth.



For this requirement, take care of a pet for two weeks. Write down the things you did. If you do research on an animal you would like, record your notes on a separate page.

MY PET

The pet I cared for is a _____ (type of animal).

Its name is _____.

Things I did to care for it:



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Learn more about your pet or a pet you would like to have. List three interesting facts that you learned about your pet.

Pets have amazing stories. Did you know that cats can see six times better than humans at night? Did you know that dogs can vary in size from 2 pounds (a Chihuahua) to more than 150 pounds (a Great Dane)? Did you know that hamsters bathe themselves like cats? Did you know that horses produce 10 gallons of sweat a day?

See what you can learn about your pet by reading a book or exploring the Internet (with your parent's or guardian's permission). Write down what you learned on this page.



WHAT I LEARNED ABOUT MY PET



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Make a poster about your pet or a pet you would like to own. Share your poster with your den, pack, or family.

Tell other people about your chosen pet by making a poster. You could include pictures, the facts you learned in requirement 2, and something about the toys your pet likes to play with or the tricks it can do. If you own the pet, you might also include

information about where you got your pet and anything you know about its lineage (its parents and family history).

My Pet Slippy



He is a Pomeranian puppy.
He is 2 years old and weighs 5 pounds.
He likes to chase a tennis ball.
His favorite dinner is chicken.



Jed my Rabbit



He is a Lop Rabbit.
He is deaf. He weighs 7 pounds. Now he is 8 years old. He is friendly and likes to eat apples and carrots.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Do your best to train a pet to perform a trick or follow a simple command, and explain how you trained it. (If your pet is a hermit crab, fish, snake, or the like, you may skip this requirement.)

Many pets, especially dogs, can learn tricks like sitting, rolling over, and talking or barking on command. A good way to teach a trick is to give the pet a treat each time it does the right thing. Offer plenty of praise, too, and be patient!

Find out what tricks your type of pet can learn, and pick one trick. Try to teach your pet that trick and explain how you taught it.

You can also teach your pet to be courteous to others they may meet. For example, a courteous pet will know what it means when you say “no” or will come when called. Just like Bear Scouts, pets need to learn to be courteous and friendly.



Akela's OK

Date

Den Leader's OK



REQUIREMENT 5 | Tell three ways that animals can help people.

There are many ways pets can help people. Search-and-rescue crews use dogs to find people who are missing. Guide dogs help blind people get around on their own. Therapy pets help people who are sad or who are dealing with a lot of stress (like kids in the hospital). There are even dogs that can call for help if someone is having a medical emergency.



How have you seen animals at work? Can you think of other ways animals might help people?

HOW ANIMALS HELP PEOPLE



Akela's OK

Date

Den Leader's OK

REQUIREMENT 6 | Tell what is meant by an animal being “rabid.” Name some animals that could have rabies. Explain what you should do if you are near an animal that might be rabid.

Just like people, animals can get sick. And sometimes they make other animals and people sick, too.

Rabies is a disease animals get when a dangerous virus affects their brains. Rabid animals (animals that have rabies) act strangely. They might walk in an odd manner, seem excited or afraid, drool a lot, or do things that are unusual. For example, a bat with rabies might stay on the ground instead of being up in the trees.

Rabies is rare, but any mammal can get rabies. Wild animals such as raccoons, skunks, foxes, and bats are more likely to get rabies than pets. That’s because dogs, cats, and horses usually get vaccines to prevent rabies. However, don’t assume that an animal is safe just because it is someone’s pet. Pets that are allowed to roam outdoors can get bitten by wild animals that have rabies and may be infected if they have not been vaccinated.

If you see an animal acting strangely or if you get bitten or scratched by an animal (even your own pet), tell an adult right away. Remember that Scouts always look to safety first.



Akela's OK

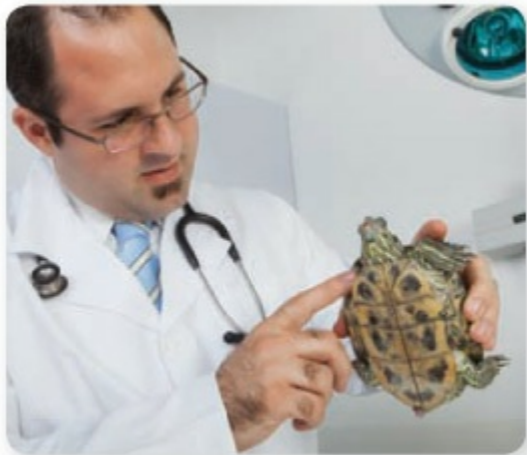
Date

Den Leader's OK

REQUIREMENT 7 | Visit with a local veterinarian or an animal shelter caretaker. Find out what types of animals he or she might see on a regular basis. Ask what type of education is needed to become a veterinarian or shelter caretaker and why he or she chose to pursue this career.

A veterinarian is a doctor who takes care of animals. If you have a dog or a cat, you probably already know a veterinarian.

But not all veterinarians take care of family pets. Some take care of farm animals. Some take care of pets in animal shelters. Some even take care of zoo animals. Imagine cleaning a tiger's teeth or taking a giraffe's temperature!





A Scout is kind. Learning about caring for animals can help you understand what it means to be kind.



Visit with a veterinarian or shelter caretaker in your community. Learn about his or her work and what type of education is required to be a veterinarian. If you like animals, you might decide to become a veterinarian yourself someday.



Akela's OK

Date

Den Leader's OK

What did you learn about pets while you were doing the Critter Care adventure?

I learned about service dogs. Well, I already knew about them since my neighbor has one. But now I know how they get trained.

My mom said that when I get a little older, our family might help train a service dog. That would be a really cool way to care for a critter and another person all at the same time!



FORENSICS





Snapshot of Adventure

Everywhere you go, you leave behind clues: fingerprints on your juice glass, DNA on your toothbrush, bits of fabric on your favorite chair, and footprints in your yard. Criminals leave behind clues, too. Forensic scientists study those clues to help law enforcement officers solve crimes.



Forensics is all about using science to answer questions about crimes (and other things that have happened). In this

adventure, you will get to practice some of the skills of a forensic scientist. You will analyze a fingerprint, a footprint, the contents of ink, and some mysterious white powder. So grab your magnifying glass, and start detecting!

The word “forensics” comes from a Latin word that means to make public. Forensic scientists make information public that was hidden in plain sight.

REQUIREMENT 1 | Talk with your family and den about forensics and how it is used to help solve crimes.

Thanks to detective stories and crime shows on TV, many people know something about forensics. Talk with the other people in your family and den to find out what they know (or think they know) about forensics.



EVIDENCE IDENTIFICATION

Date: _____ Time: _____ Case No: _____

For Use: POLICE/LEAD FORENSICS LABORATORY INVESTIGATION DOCUMENTS FORENSIC DNA ANALYSIS

Description of Evidence: _____

Location Collected: _____

Class: _____

Subclass: _____

Reference Details: _____

Agency: _____

Signed: _____

Write down any questions they have. As you do the other requirements for this adventure, you might be able to answer some of those questions. With an adult's supervision, you can also search the Internet for sites that teach about forensics for kids.



Did you know that the Federal Bureau of Investigation (FBI) has a site for kids? It's: www.fbi.gov/fun-games/kids. Check it out with an adult's permission.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Analyze your fingerprints.

As you probably know, everybody's fingerprints are unique. Even identical twins have different fingerprint patterns! Police use fingerprints to identify criminals. Fingerprints are also used in other ways, like fingerprint scanners on laptop computers and smartphones.

In this requirement, you will discover what your fingerprints look like. You will need an ink pad and a magnifying glass. Press the tip of one forefinger down on the ink pad so your fingertip is covered with ink. Press that finger straight down in the space

below, and then lift it straight up. (If you let it slide around, you will get a smeared print.)

Wait for the ink to dry. Be sure to wash your fingers off!

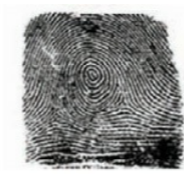
LEFT

RIGHT

Using the magnifying glass, study the print you made. Do the ridges form an arch, a whorl, or a loop? Is the pattern short or tall? Does it lean one way or the other? How does it compare with the prints of other members of your family or other boys in your den?



Arch



Whorl



Loop



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Learn about chromatography and how it is used in solving crimes. Do an investigation using different types of black, felt-tip markers. Share your results with your den.

Chromatography is a big word that means “color writing.” It is a technique for separating mixtures of different chemicals. Most chromatography is done in laboratories with expensive equipment, but you can do a simple experiment using materials found around your home. With these materials, you can separate the components of ink.

The picture on this page shows what your investigation might produce. In this example, several different colors were hidden in the black ink. Chromatography causes the different pigments that make up the black ink to separate and spread out. Each formula used for black ink will create a unique spread of colors.



Forensic scientists do similar investigation on chemicals found at crime scenes. For example, using chromatography, they could identify the type of pen that was used to write a document.

Materials and Tools

- ◆ A coffee filter
- ◆ Several nonpermanent felt-tip markers of different brands
- ◆ A glass of water
- ◆ Scissors

Instructions

1. Cut the coffee filter into strips an inch or so wide.
2. Draw a horizontal line across the middle of one of the strips.
3. Put the strip in the glass of water, making sure the line you drew is above the water.



4. Now watch what happens. The coffee filter will slowly absorb water, which will rise toward the top of the strip. As the water rises, it will carry along components of the ink. Lighter

components will travel the longest distance; heavier components will not travel very far.



5. When the water nearly reaches the top of the strip (or when you don't see any more changes happening), take the strip out of the water and set it on a piece of newsprint to dry.

Repeat the experiment with several pens. Compare the results to see how similar or different the inks you used are.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Do an analysis of four different substances: salt, sugar, baking soda, and cornstarch.

Forensic chemists do other tests to identify unknown substances. For example, they might add a chemical to the substance to see how it changes.

For this requirement you will analyze four common substances:

salt, sugar, baking soda, and cornstarch. Use the chart on the next page to keep track of your results.



Do these tests:

- ◆ Examine what the substance looks like, with both your naked eye and with a magnifying glass.
- ◆ See how it feels when you rub it between your fingers.
- ◆ Sniff it to determine how it smells.
- ◆ Add a drop of water and, in a different spot, a drop of vinegar. Record how the substance reacts. Does it dissolve? Does it become hard?

	Salt	Sugar	Baking soda	Cornstarch
Appearance (naked eye)				
Appearance (magnifying glass)				
Feel between fingers				
Smell				
Reaction to water				
Reaction with vinegar				

After you've tested all the substances, ask your parent or a friend to give you a sample of one of the substances without telling you what it is. Can you identify it based on your test results?



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | Make a shoe imprint.

Shoe imprints are one type of evidence law enforcement officers look for at a crime scene. Many times the impressions they find are used to help identify the suspect.

If you look at your shoe and a friend's shoe, you will see that the designs on the bottoms are different. Even if you have the exact same type of shoe, each pair will show a different wear pattern.



For this requirement, make an imprint of your shoe. Using sidewalk chalk, color the sole of your shoe and then carefully step on a dark piece of paper. Be careful not to slide your foot around.

If the other members of your den or family also make shoe imprints, you can play a game. Mix up the imprints and see if you can match each one to the correct shoe without looking at the bottom of the shoes.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 6 | Visit the sheriff's office or police station in your town. Find out how officers collect evidence.

Law enforcement officers collect all sorts of evidence. They interview witnesses. They check security camera videos. And they collect forensic evidence like you've studied about in this adventure.

Visit your local sheriff's office or police station. Find out how law enforcement officers look for and collect evidence.



A Scout is loyal. Learning about how police protect your community can help you understand what it means to be loyal.



Akela's OK

Date

Den Leader's OK



REQUIREMENT 7 | Learn about the different jobs available in forensic science. Choose two, and find out what is required to work in those jobs. Share what you learned with your den.

There are numerous jobs in the area of forensic science.

Here are a few:

- ◆ A medical examiner performs autopsies to determine why people died.

- ◆ A toxicologist tests for poisons.
- ◆ A fingerprint expert identifies patterns in fingerprints.
- ◆ A forensic engineer tries to figure out how a structure collapsed.
- ◆ A multimedia scientist looks for clues in surveillance videos and crime-scene photos.



Learn more about two of these jobs or others in the field of forensics. Share what you learned with your den.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 8 | Learn how animals are used to gather important evidence. Talk about your findings with your den.

You probably know that dogs have a really good sense of smell. Because of that, they can be trained to find all sorts of evidence, including blood and drugs that humans might not be able to detect.

Visit the library, explore the Internet (with your parent's or guardian's permission), or talk with a law enforcement officer to learn more about how animals are used to gather evidence.

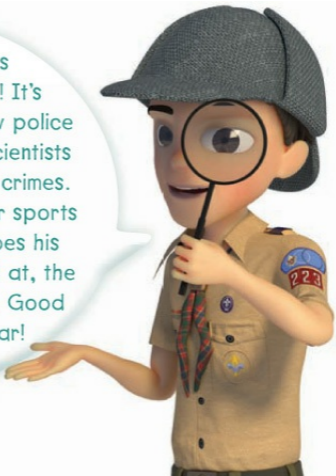


Akela's OK

Date

Den Leader's OK

Those police dogs
are great detectives! It's
pretty cool to learn how police
officers and forensic scientists
work together to solve crimes.
It's a lot like your den or sports
team. If everybody does his
best at what he is good at, the
team will be successful. Good
detective work, Bear!



MAKE IT MOVE



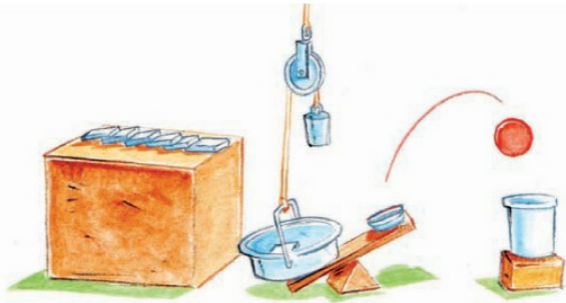


Snapshot of Adventure

There are lots of ways to do just about anything. Let's say you wanted to put a ball in a cup. The easy way would be to drop it in with your hand. But imagine this solution: You knock over a row of dominos. The last domino bumps into a marble. The marble rolls off a ledge into a bucket that's attached to a pulley. The bucket whizzes down onto a seesaw, causing it to tip. The motion launches a ball from a small cup on the other end of the seesaw into a second, larger cup, which is in just the right place to catch the ball.

Silly? Yes. Fun? Of course!

In this adventure, you'll use your imagination to dream up machines like that. You'll also learn about some important science concepts that make both silly and serious machines work. So put your brain in gear and get ready to make it move!



REQUIREMENT 1 | Create an “exploding” craft stick reaction.

You can make all sorts of things with craft sticks, but one of the most fun things is a stick “bomb.” What you do is weave together a bunch of craft sticks so they form a path around the room. When you pull the first stick out of the weave, all the sticks jump into the air in a chain reaction.



Despite the name, stick “bombs” don’t really

explode. However, you should wear safety glasses just in case a craft stick jumps toward your eye.



For even more fun, set up a stack of plastic cups at the end of your stick “bomb.” The jumping sticks should send the cups flying.

Kids your age and a little bit older have made stick “bombs” with more than 10,000 craft sticks. You don’t have to use that

many to have fun, however!

All you need for this activity is a bunch of craft sticks. It helps to have two different colors so that you can keep the pattern straight. Or simply draw a line on both sides of half your sticks so you can tell them apart.

If possible, work on a rug or low-pile carpet. The softer surface makes it easier to weave the sticks in and out. Just don't trap any carpet fibers in between your craft sticks.

Here's how to make the weave:

1. Make an X out of two craft sticks, one of each color.



2. Weave in two more sticks, one of each color, using an under/over pattern. The third stick you place should create a tight “V” with the first.



3. As you add new sticks, keep sticks of the same color parallel to each other. The end should stay locked in place by the “V” at the start.



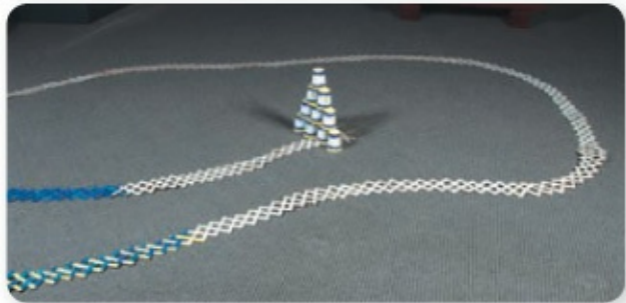
4. Continue weaving as far as you want to go. Always alternate between going under and over, and match up the tips of the sticks.



5. You can make turns as you weave; they just have to be gradual. On the outside of the curve, put the tips of each pair of sticks on top of each other. On the inside of the curve, push each new stick in a little farther than before.



6. To lock the end of the stick “bomb” together, add another diagonal stick at the end. When you’re ready for an explosion put a finger on the first sticks you laid down and pull out the end stick. Let go to start a chain reaction of jumping craft sticks!



Did you notice how weaving the craft sticks together held them in place and how you had to lock them together until you were ready for the explosion? When the sticks are woven together, they have what's called *potential* energy, or energy that is stored up. When they spring apart, they have *kinetic* energy, which is the energy of motion.

How long of a chain reaction were you able to make? Did you knock down a stack of cups? How many cups? Was it easier to do this as a team? What would you do differently next time?



To see this craft stick activity in action, search for videos on the Internet with a parent's or guardian's permission.



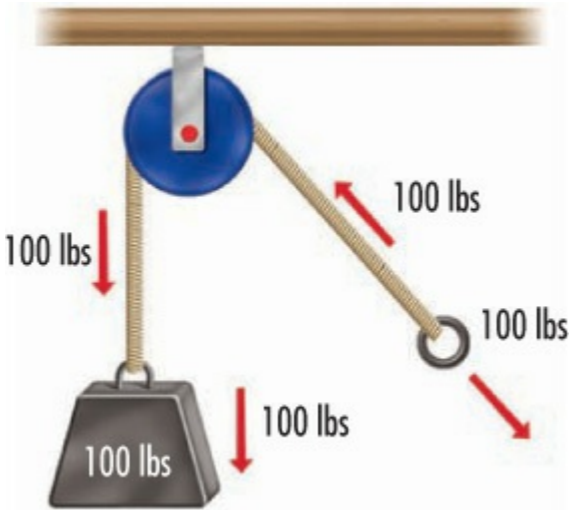
Akela's OK

Date

Den Leader's OK

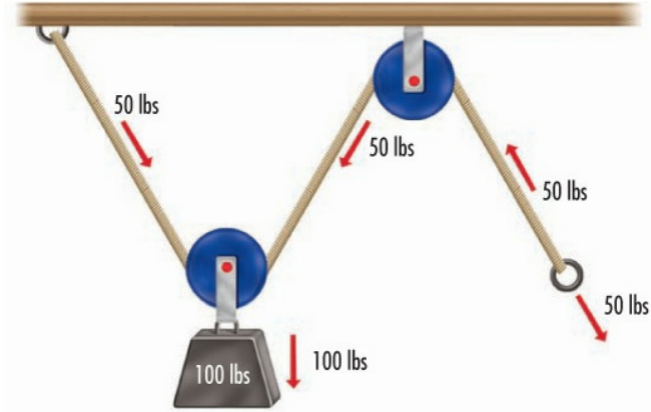
REQUIREMENT 2 | Make two simple pulleys, and use them to move objects.

A pulley is a simple machine that lets you lift objects into the air. It was invented thousands of years ago but is still used every day. When your den raises a flag on a flagpole, you use a pulley. When a construction crane lifts girders into the air, it uses a pulley. In fact, everything from elevators to workout equipment uses pulleys.



A pulley has just a few parts: a wheel, an axle that the wheel turns around, and a rope or cable. The wheel usually has a groove in it so the rope won't slide off.

Simple pulleys are useful, but what makes them really cool is when you put pulleys together. When you use two pulleys to lift an object, the object becomes twice as easy to lift. When you use four pulleys, it becomes four times as easy to lift. With enough pulleys (and enough really, really strong cable), you could actually lift a car off the ground all by yourself!



Here are two simple pulleys you can make.

Pulley #1

Materials

- ◆ Rolling pin with handles
- ◆ String
- ◆ Heavy book

Instructions

1. Wrap the end of the string around the book a couple of times and

then tie it snugly.



2. Place the book on the floor and use the string to lift the book with one hand.
3. Now, have a partner hold the rolling pin tightly by the handles at chest height.
4. Loop the string over the top of the rolling pin.

5. Use the string to pull the book up.

Which way of lifting the book was easier? Did one way take more strength than the other?

Pulley #2

Materials

- ◆ Two large spools
- ◆ Two pencils or dowels (they must be able to fit in the spool hole and move easily)
- ◆ 30 feet of string or strong yarn
- ◆ An index card
- ◆ A clothespin or clip



Instructions

1. Insert a pencil or dowel into each spool, making sure the spool can spin easily.
2. Tie the two ends of the string or yarn together to form a big loop.

3. Place the loop around the spools.
4. Have a partner hold each of the spool pulleys by its pencil or dowel axle.
5. Stretch your loop until it is tight enough to be straight, but still loose enough to turn.
6. Write a message on a card and attach it to the string with a clothespin near one pulley.
7. Gently pull the string to make the string roll over the spools.

See if you can use your pulley system to deliver a message to a friend on the other side of the room. How else could you use this pulley system? How could you secure the pulleys at both ends so your friends don't have to hold them? What other improvements could you make?



Akela's OK

Date

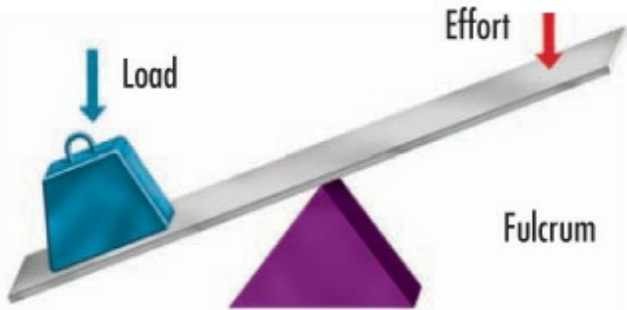
Den Leader's OK



My dad said the ancient Egyptians used machines like pulleys and levers to build the pyramids. I guess that makes sense. They sure didn't have construction cranes!

REQUIREMENT 3 | Make a lever by creating a seesaw using a spool and a wooden paint stirrer. Explore the way it balances by placing different objects on each end.

What's a lever? That's a fancy term for the science that makes a playground seesaw work. The fulcrum is the hinge or balancing point. The lever is the board.

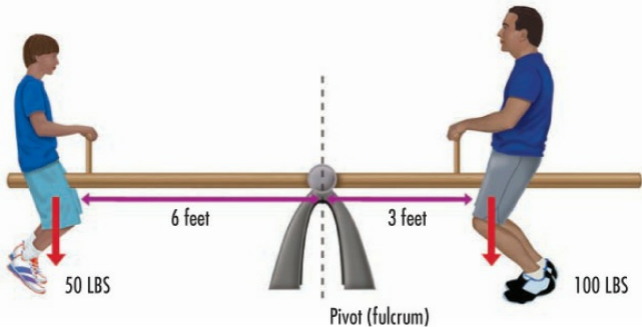


As you've probably figured out on the playground, if an object is farther from the fulcrum, it takes a smaller force to produce the same work. When you get on the seesaw with someone who's a lot bigger than you, he has to sit closer to the fulcrum for the seesaw to balance. When you sit very far from the fulcrum, you can lift a heavier person at the other end. (With a really long seesaw, you could even lift a 300-pound football player!)

That principle, called leverage, is why levers are so useful. You can find levers in all sorts of places, including a pair of scissors, a crowbar, a hammer pulling a nail, a wheelbarrow, a bottle opener, a nutcracker, and even your own jaw. (There are three classes of levers, so these things don't all work exactly the same way.)

Person B

Person A



For this requirement, you will make an experiment with a simple lever.



A Scout is thrifty. You can try many investigations with simple items from home.



Materials

- ◆ Paint stirrer
- ◆ Pencil
- ◆ Spool (the edges should be wider than the paint stirrer)
- ◆ Rubber band
- ◆ Small weights or other objects



Instructions

1. Find the middle of the paint stirrer and mark it with the pencil.

2. Hold the spool on the line you just drew.
3. Lay the rubber band over the paint stirrer and loop it over each end of the spool. (This will hold the spool and paint stirrer together.)

Congratulations! You've just made a lever! Now, experiment with it by adding weights or other objects to each end. How easy is it to get the lever to balance? What happens if the weight on one end is too heavy?

After you've played with your lever for a while, move the spool closer to one end of the paint stirrer. How does that change the way the lever works? Do you see why levers can be useful tools?



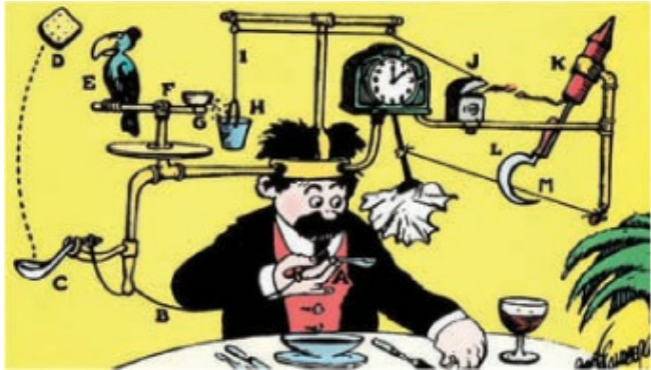
Akela's OK

Date

Den Leader's OK

REQUIREMENT 4A | Draw a Rube Goldberg-type machine. Include at least six steps to complete your action.

Rube Goldberg was an amazing inventor, engineer, and cartoonist who lived in the 20th century. He was famous for dreaming up really complicated machines to do simple things like scratching your back or using a napkin.



For this requirement, you will dream up two Rube Goldberg-type machines. The first one will just be on paper, like a Rube Goldberg comic strip, so you can make it as crazy as you want. The second one, which you'll make with your den, should actually work.

Here's how to make a Rube Goldberg machine:

1. Choose a simple task like drying your face, putting on a hat, or opening a door.
2. Decide what working elements you want to include. These could include chain reactions, pulleys, levers, ramps, and more.
3. Add your imagination! How could you use those elements in fun ways? How could you include building blocks, toy cars, string,

or other items in your design?

4. Draw your first machine on paper. You'll build your second machine with the other members of your den for requirement 4B.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4B | Construct a Rube Goldberg-type machine to complete a task assigned by your den leader. Use at least two simple machines and include at least four steps.

Here are some tips for making a machine with your den:

- ◆ Keep the task simple. The machine is supposed to be complicated, not the task!
- ◆ Work together and listen to everyone's ideas.
- ◆ A Scout is thrifty. Look for things around you that you can use, like craft sticks, marbles, dominos, building blocks, cereal boxes, mailing tubes, yogurt cups, and water bottles.
- ◆ Avoid anything dangerous (fire, chemicals, mousetraps, etc.).
- ◆ Build the machine on a drop cloth in case things get messy.

- ◆ It's OK if your machine doesn't work the first time. A lot of what inventors do is figure out what won't work.



Akela's OK

Date

Den Leader's OK

I hope you had fun with this adventure. What did you build? Did it work? Our den built a machine to blow smoke away from us at a campfire. It really did work! Now, we just need to invent a machine to wash our dishes on campouts.

Hmmm...



MARBLE MADNESS





Snapshot of Adventure

Long before there were board games and video games, kids played with marbles. Those little balls of glass are just as fun to play with now as they were back then. In this adventure, you'll get to play several different marble games, including one you make up yourself. You'll also learn some special words only marble players know and discover how to use marbles in mazes, obstacle courses, and more. Are you ready? Then grab your taws, aggies, and cat's eyes, and let's play marbles!

REQUIREMENT 1 | Discuss with your family and den the history of marbles, such as where and when the game began. Talk about the different sizes of marbles and what they are made of and used for.

Did you know that marbles have been around for a long time? Your grandparents may have played marbles. Their grandparents may have played marbles. And their grandparents may have played marbles. In fact, marbles have been found in Egyptian tombs and in pueblo ruins in the southwestern United States.

No one knows for sure where and when people started playing

marbles. They may have started at different times and places by playing with stones, nuts, fruit pits, and other smooth, round objects.

Here are some fun facts about marbles:

- ◆ When he was young, the Roman emperor Augustus played with marbles made of nuts.
- ◆ In 1503, the town of Nuremberg, Germany, passed a law that marbles had to be played outside the town limits.
- ◆ In the 1700s, people played using chips of marble, which is where the game got its name.
- ◆ In the early 1900s, marbles were made by machine for the first time.
- ◆ The British and World Marbles Championship has been played in Tinsley Green, England, every year since 1932, but the tradition began there in 1588.

Marbles come in many different sizes and colors, and they are used for different things. Larger marbles are used as shooters, while smaller marbles are used as targets.

Here are some types of marbles:

- ◆ **Cat's eye** marbles have a swirl of color inside.
- ◆ **Taw marbles** are between one-half inch and three-fourths of

an inch in diameter. They are used as shooters.



- ◆ **Alley marbles** are made of alabaster or marble. (Some are made of glass that looks like alabaster or marble.)
- ◆ **Aggie marbles** are made of the mineral agate. (Some are made of glass but look like agate.) True aggies are good shooters because they are harder than other marbles.
- ◆ **Commie or common marbles** were originally made out of clay. They are the plainest looking marbles.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Learn about three different marble games, and learn to play the marble game “ringer.” Learn how to keep score. Learn and follow the rules of the game. Play the game with your family, friends, or your den.

There are many different games of marbles, and each game has its own set of rules and directions. Here are three games to try.

Ringer

Any number of players can play this game.

- ◆ Draw a ring on the ground about 10 feet across.
- ◆ Put 13 marbles in the middle of the ring arranged in an X shape. They should be about 3 inches apart.



- ◆ The first player kneels outside the ring and uses his shooter to try to shoot a marble out of the ring. If he misses, his turn is over and he picks up his shooter. If he has a hit and his shooter stays in the ring, he can shoot again from where the shooter stopped. If he has a hit and his shooter goes out of the ring, his turn is over. He keeps any marbles that go out of the ring.

- ◆ When the first player's turn is over, the second player takes his turn, etc.
- ◆ Keep playing until time is up or most of the marbles have been knocked out. The player with the most marbles is the winner.

Plums

This game is for a small number of players.

- ◆ Draw two parallel lines about 6 feet apart.
- ◆ Each player puts the same number of marbles (called plums in this game) on one line a few inches apart. The players stand behind the second line.
- ◆ Players take turns shooting at the plums from behind the second line. They keep any plums they knock off the line.
- ◆ Keep playing until time is up, if a time limit has been set, or until all the plums have been picked. The player with the most marbles is the winner.



A Scout is friendly. Everyone will have more fun when you play by the rules and keep the game friendly.

Dropsies

This game is good for two, three, or four players.

- ◆ Draw a square on the ground about 2 feet long by 2 feet wide.
- ◆ Each player places five marbles inside the square.
- ◆ The first player stands on one side of the square with his feet outside the line. He drops a shooter from above waist height onto one of the other players' marbles to try to knock it out of the square. If he does that and his shooter stays in the square, he keeps the marble that rolled out, and he gets another turn. If he does that but his shooter also

rolls out, he keeps the marble that rolled out and loses his turn.

- ◆ Keep playing until time is up or most of the marbles have been knocked out. The player with the most marbles is the winner.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Learn four or five words that are used when talking about marbles. Tell what each of the words means and how it relates to playing marbles. Share this information with your den.

Like many games and sports, the game of marbles uses some special words. You have already learned some of them, like shooter and alley marbles.

Here are some more:

- ◆ **Bombies** is when you drop your marble onto another marble.
- ◆ **Dubs** is when you knock two or more marbles out of the ring with one shot.

- ◆ **Keepsies** is when you get to keep the marbles you win in a game. Don't play for "keepsies" if you don't want to lose your marbles!
- ◆ **Friendlyies** is when you give back the marbles you've won at the end of a game.



- ◆ **Knuckle down** is when you put one knuckle of your shooting hand on the ground as you shoot.
- ◆ **Histing** is when you lift your knuckle as you shoot.

What marbles words do you and your friends use?



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | With the help of an adult, make a marble bag to hold marbles.

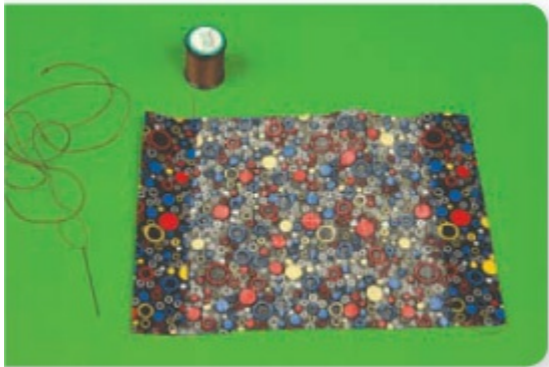
To keep track of your marbles, it helps to have a good container for them. For this requirement, you will make a drawstring bag to hold your marbles. Here's one way to make a bag.

You will need:

- ◆ A piece of fabric about 5 inches by 9 inches
- ◆ Needle and thread, for sewing by hand, or a sewing machine (and an adult to help operate it)
- ◆ A safety pin
- ◆ A shoestring or piece of cord about 3 feet long
- ◆ Scissors

Procedure

Fold the long ends of the cloth over about 1 inch, and make a crease. Sew along the cut edges of the fabric to form two pockets.



Fold the fabric in half so the printed side is on the inside. Sew along both edges—but not over the pockets you formed in step 1.



Attach the safety pin to one end of the shoestring or cord.
Put the safety pin in the end of one of the pockets, and
push it through to the other end.



Next, put the pin in the closest end of the other pocket, and push it through to the other end. Remove the safety pin, and tie the ends of the shoestring or cord in an overhand knot.



Turn the bag right side out. Fill the bag with marbles. To close it, scrunch the fabric at the top together, and tie another overhand knot where the shoestring or cord comes out.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | With your den or family, make a marble obstacle course or marble golf course. Share what you create. Invite everyone to go through your course.

Shooting marbles in a straight line and at a target is a lot of fun. Shooting around or between objects helps make the game more challenging.

Marble Obstacle Course

Gather some objects from around your house like blocks, paper-towel tubes, yardsticks, and pillows. Use them to form an obstacle course for you and your friend to shoot marbles through.

For extra fun, have your course go down steps or over obstacles. See who can be the first to reach the end of the course.

Marble Golf Course

Marble golf is like regular golf. Shoot from one hole to another, counting the number of shots it takes. The object is to get to the last hole with the lowest number of shots. Try to improve your score each time you play.

For an outdoor marble golf course, make indentations in the dirt for your holes. For an indoor marble golf course, use pieces of

paper on the floor as holes. A marble is “in” the hole if it stops on the paper.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 6 | Create your own game using marbles, and design rules for playing the game. Share the game you created with your den, family, or friends. Explain the rules and how to play the game.

Some of the best games are the ones you make up yourself. Think up a brand-new game that uses marbles. Decide what the rules are and what the object of the game is. Test it out with one or two friends to make sure it works the way you want it to. If it doesn't, change your game until you are happy with it.



Once your game is ready, teach it to the other members of your den. Who knows? You might invent the next great marbles game!



Akela's OK

Date

Den Leader's OK

REQUIREMENT 7 | With your den or family, create a marble race track. Have at least two lanes so you can race your favorite marbles against each other.

See whose marbles are the fastest by creating a marble race track. You can make the lanes out of many materials, including felt board, cardboard, PVC pipe, or swimming noodles cut down the

middle. For lane separators, use straws or small dowels. Don't forget to mark the start and finish lines.



Akela's OK

Date

Den Leader's OK



REQUIREMENT 8 | Make a marble maze.

A maze is a game where you try to get from start to finish by navigating around a series of twists and turns. The more corners and dead ends the maze has, the more challenging it will be.

Start with a flat surface. A box top works well because the lip

around the edge will keep your marble from rolling away. Sketch your maze on the surface, and then glue straws or other dividers on the lines you've drawn. Once the glue has dried, you'll be ready to challenge the maze. How fast can you get through it?



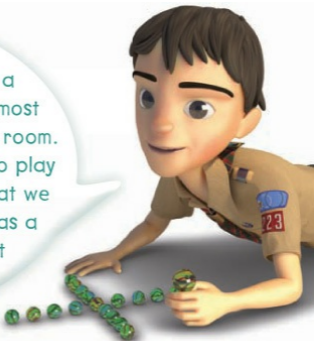


Akela's OK

Date

Den Leader's OK

Last year, our den worked together to make a marble maze that covered almost the whole floor of our meeting room. It was really fun to build and to play with. The only problem was that we forgot to make sure there was a path to get from the start to the finish. Oops!



**ROARING
LAUGHTER**





Snapshot of Adventure

Do you like to laugh? Of course you do! Laughing makes you feel good, and it spreads faster than a cold. With just a smile, you can meet a new friend, make someone else smile, and create a happy feeling in yourself and other people. In this adventure, you'll find lots of ways to smile and laugh.

REQUIREMENT 1 | Think about what makes you laugh. Write down three things that make you laugh.

Everybody likes to laugh, but not everybody laughs at the same things. Think about what makes you laugh, and make some notes.

THINGS THAT MAKE ME LAUGH

Did you know that laughing actually helps your body? It relaxes your muscles and makes your body and mind feel peaceful

and calm. It helps your body fight off germs that could make you sick. It even improves blood flow in your blood vessels, which helps keep your heart functioning well. So laughter is just what the doctor ordered!



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Practice reading tongue twisters.

Tongue twisters are silly statements that trick your tongue. Some are easy to read, and others are really tricky—especially when you say them fast or repeat them. Tongue twisters can give you the giggles when the words that come out of your mouth are not exactly what you were trying to say.

Here are some examples of tongue twisters.

- A big black bug bit a big black bear. But where is the big black bear that the big black bug bit?
- How many yaks could a yak pack pack if a yak pack could pack yaks?
- How much wood could a woodchuck chuck if a woodchuck could chuck wood?



- How many cans can a canner can if a canner can can cans?

■ Peter Piper picked a peck of pickled peppers.

A peck of pickled peppers Peter Piper picked.

If Peter Piper picked a peck of pickled peppers, How many pickled peppers did Peter Piper pick?

■ She sells seashells by the seashore.

What other tongue twisters do you know that you could share with your fellow Bear Scouts?



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Create your own short story.

Remove some nouns, verbs, adjectives, and adverbs from the story, leaving blanks. Without telling the story, have a friend insert his or her own nouns, verbs, adjectives, and adverbs in the story you created.

A silly short story is one where you have replaced some of the words with words that don't fit—or maybe they do! Here's how to create a silly short story.

First, write your own short story. This could be a story about something that happened to you or a letter you might write to a friend or relative.

Next, go through your story and take out some of the nouns, verbs, adjectives, and adverbs.

Finally, without letting your buddy read your story, ask him to give you nouns, verbs, adjectives, and adverbs to go in the blanks (the sillier the better). Write the words he gave you.

Silly Short Story Example

ORIGINAL STORY

What I Did at Cub Scout Camp

This year at Cub Scout camp, I hiked all the way around the lake with my den. During the hike, we saw some deer, a frog, and a lot of butterflies. We also ate trail mix and beef sticks. It was a fun and tiring day.

STORY WITH BLANKS

What I Did at (Event) _____

This year at _____ camp, I _____
(type of person) (action verb)

all the way around the _____ with my
(noun)

_____. During the _____, we saw
(group of people) (activity)

some _____, a _____, and a lot
(animals) (animal)

of _____. We also ate _____ and
(animals) (noun)

_____. It was a _____ and
(noun) (adjective)

_____ day.
(adjective)

STORY WITH BLANKS FILLED IN

What I Did at the Super Bowl

This year at helicopter pilot camp, I tiptoed all the way around the Empire State Building with my kazoo orchestra. During the fire drill, we saw some wolf spiders, a hippopotamus, and a lot of T. rexes. We also ate marbles and remote controls. It was a round and sparkly day.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | With a partner, play a game that makes you laugh.

All games are fun, but some of them make you laugh out loud! Play a game with a friend that makes you laugh.



Having a sense of humor and being able to laugh at yourself can help you become more creative while keeping you healthy. Sharing laughter with your friends and family will help bring you closer together and build stronger relationships.



A Scout is cheerful. So go ahead—let your silly side show, and laugh a little!

Here's a game that you could try:

Pair up with another Bear Scout and sit face to face. Now, try to make each other laugh. You can make faces or sounds, but no touching is allowed. The last person to laugh wins.

After you play, think about these questions: How hard was it to make your buddy laugh? How hard was it for him to make you laugh? What was the final thing that made each of you let out a giggle?



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | Share a few jokes with a couple of friends to make them laugh.

Everybody knows at least a few jokes. You can find lots of jokes in *Boys' Life* magazine or in joke books at the library or a bookstore. You can even make up your own.

Here are some examples.

Q: What do you call a Cub Scout who carries another Cub Scout on his back?

A: A taxi Cub!



Q: How does a taxi Cub move?

A: Low-Cub motion!

Q: How did the Cub Scout look when he forgot to take his jacket on the mountain hike?

A: Blue and cold! (blue and gold)

Q: What did the Cub Scout bake as den treats?

A: Cub-cakes!

Q: What did the Cub Scout neckerchief say to the Cub Scout hat?

A: You go on ahead; I'll hang around here.

Q: Why did the rubber chicken cross the road?

A: She wanted to stretch her legs.

Q: Why did the horse cross the road?

A: To reach his neigh-berhood.

You'll need a partner to ask the questions for knock-knock jokes.

You: Knock knock.

Your Partner: Who's there?

You: Cows go.

Your Partner: Cows go who?

You: No, silly. Cows go MOOO!



You: Knock knock.

Your Partner: Who's there?

You: Interrupting Cow.

Your Partner: Interrupting C...

You: MOO!



You: Knock knock.

Your Partner: Who's there?

You: Who.

Your Partner: Who who?

You: Is there an owl in here?



You: Knock knock.

Your Partner: Who's there?

You: Woo.

Your Partner: Woo, who?

You: Don't get so excited, it's just a joke.



You: Knock knock.

Your Partner: Who's there?

You: Yodalayhi

Your Partner: Yodalayhi who?

You: Hey, man, why are you yodeling?



You: Knock knock.

Your Partner: Who's there?

You: Cargo

Your Partner: Cargo who?

You: Cargo vroom vroom.



HOW TO BE FUNNY

How can you be funny when you tell jokes? First, start with funny jokes! If you don't find a joke funny, how can you expect your friends to find it funny? Next, think about who you will be telling it to. A younger brother or sister might not understand a joke about math class, for example. Finally, practice the joke, including any facial expressions, body movements, or hand gestures that will help make it funnier. And remember: practice makes perfect!



Akela's OK

Date

Den Leader's OK

REQUIREMENT 6 | Practice at least two run-ons with your den, and perform them at a pack meeting or campfire program.

Run-ons are quick gags that are used during downtime at a campfire program or pack meeting. They can involve one person or many. When performing your run-on, remember to speak loudly and clearly so the audience can hear what you are saying.

Here are some examples:

Scout 1: Runs out screaming, “They’re on me! They’re on me!”

Scout 2: “What’s on you?”

Scout 1: “My clothes.”

Scout 1: Runs out screaming, “They’re after me! They’re after me!”

Scout 2: “Who’s after you?”

Scout 1: “The squirrels. They think I’m nuts.”

Scout 1: Walks out dragging a rope across the ground

Scout 2: “Why are you dragging that rope?”

Scout 1: “Have you ever tried pushing one?”

Sometimes in our Webelos den, we just sit around the campfire telling one silly joke after another. I think we have so much fun in Cub Scouts because we can all make each other laugh!



Akela's OK

Date

Den Leader's OK

ROBOTICS





Snapshot of Adventure

When we think of robots, we almost always think of humanlike figures that have arms and legs and talk in funny voices. But robots come in many shapes and sizes, from one-armed machines that look like construction cranes to roving navigators that can travel over rocks and sand.

So what exactly is a robot? It's a machine that operates automatically and does jobs humans don't want to do or can't do. In this adventure, you will learn about robots and, even better, you'll get to build your own. Your robot will be simple, but maybe someday you will build a robot to clean up your bedroom or do your homework!



REQUIREMENT 1 | Identify six tasks performed by robots.

What comes to mind when you think about robots? What robots have you seen on TV or in movies? Do you have a robotic

toy at home, or does your parent work with robots on the job? Working with your den leader or another adult, learn more about real robots.

On a separate paper, list at least six tasks of robots.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Learn about some instances where a robot could be used in place of a human for work. Research one robot that does this type of work, and present what you learn to your den.

Do you remember how we said that a robot is a machine that does jobs so humans don't have to? Those jobs usually fall into four categories: dangerous, dirty, dull, and difficult.

Dangerous

Robots often do jobs that are too dangerous for humans to perform. Robots can also go places humans can't, like the bottom of the ocean or the surface of another planet. Law enforcement officers use robots to detonate or defuse bombs. NASA has sent several robots, called rovers, to Mars to study the planet's climate and geology.



Dirty

There are also places humans can go but would rather avoid. For example, robots are used to inspect sewer pipes and storage tanks for cracks or clogs. That's a stinky, dirty job for a human; but for a robot, it's all in a day's work.



Dull

Imagine spending your entire day screwing lids onto juice bottles. Robots are excellent at doing boring jobs quickly and easily. They can cap bottles, glaze doughnuts, paint cars, and even pick things up and move them around. You might even have a robot at home that vacuums the floors!



Difficult

Robots can also do tasks that humans find too complex or difficult. Some robots have the power to lift huge amounts of materials and transport them where they are needed. Other robots help doctors perform delicate surgeries. Some can even travel through your body taking pictures along the way so your doctor can see whether you have any illnesses or diseases.



Choose one of these four categories of tasks. Then, with your parent's or guardian's help, research one specific robot that performs those tasks. Create a visual presentation of what you have learned, and share it with your den at your next meeting.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Build a robot hand. Show how it works like a human hand and how it is different from a human hand.

Most robots are very complicated machines, but you can make a simple robot hand with some materials you probably have at home. That's what you will do for this requirement.

Materials and Tools

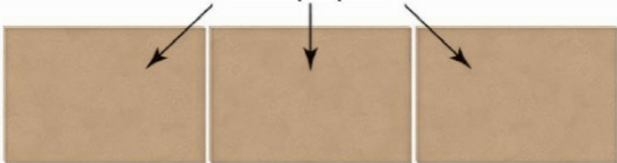
- ◆ Narrow rubber bands
- ◆ Drinking straws
- ◆ Stiff cardboard
- ◆ Tape
- ◆ Scissors
- ◆ Nylon cord
- ◆ Ruler
- ◆ Pen



Instructions

1. Cut a piece of cardboard that measures 10 centimeters by 10 centimeters. This will be the palm of the robot hand. Next, cut three pieces of cardboard that measure 2 centimeters by 9 centimeters each. These will be the fingers.
2. Cut one of the fingers into three equal pieces 2 centimeters by 3 centimeters.

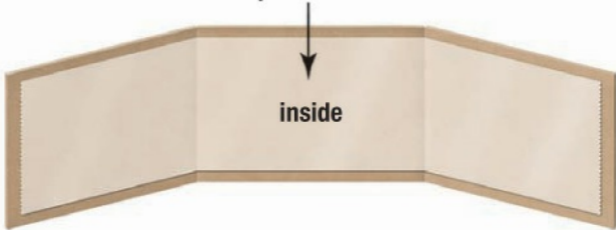
three equal pieces



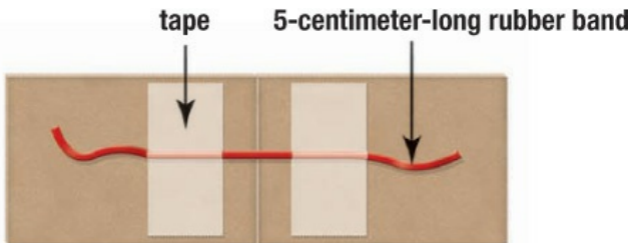
3. Put the pieces back together and reconnect them using tape. Write “inside” on the side of the finger that is facing up. Flip the finger over so the inside is facing down.

tape on inside

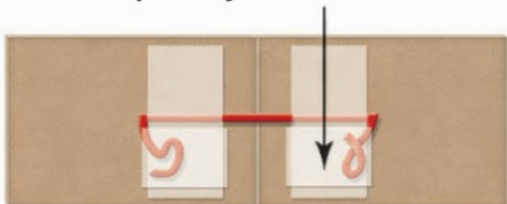
inside



4. Cut a piece of rubber band 5 centimeters long. Lay it across the first joint, and tape it down on both sides of the joint. Fold the ends of the rubber band over the tape, and tape them down; this will keep the rubber band from pulling loose.

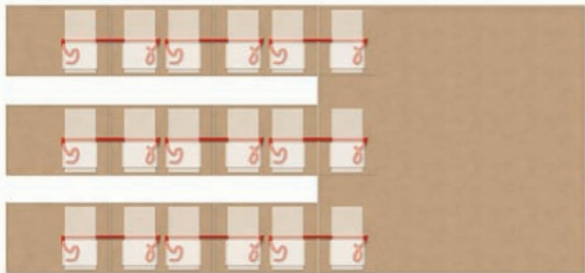


tape firmly over the bent rubber band



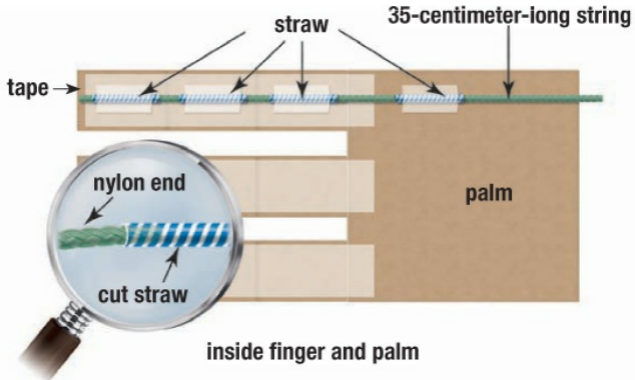
5. Repeat step 4 to make the second joint.
6. Turn the hand over, and tape the finger to the palm. Then, turn the hand back over so the inside is facing down.

7. Cut a piece of rubber band 5 centimeters long. Lay it across the joint between the finger and the palm. Tape the rubber band down as you did in step 4. Turn the hand back over so the inside is facing up.

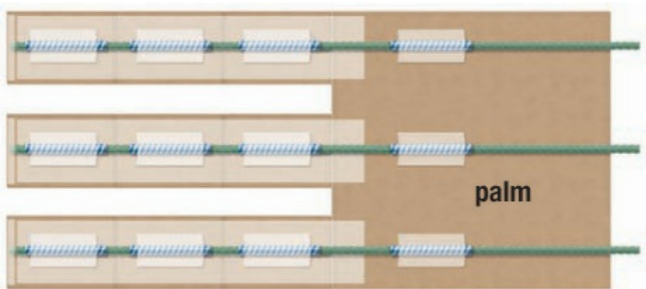


connecting fingers to hand

8. Cut a piece of nylon cord 35 centimeters long, and cut four pieces of straw 2 centimeters long. Tape one end of the cord to the tip of the finger. Thread the straw pieces onto the cord, and tape one to the middle of each section of the finger. Tape the last one to the palm.



9. Repeat steps 2 through 8 to make the other two fingers. You now have a complete robot hand!



Did you notice how these instructions use the metric system? Scientists always use the metric system in their work. It may be different from what you're used to, but it is really easy to understand.



With your robot hand, try to pick up empty water bottles and other lightweight objects. Just hold the robot hand's palm with one

of your own hands, and pull the cords with your other hand.

Talk with your parent or den leader about how your robot hand is similar to a real hand and how it is different. One big difference you may notice is that your robot hand doesn't have a thumb. Why do you think having a thumb is important? How could you add a thumb to your robot hand?



Akela's OK

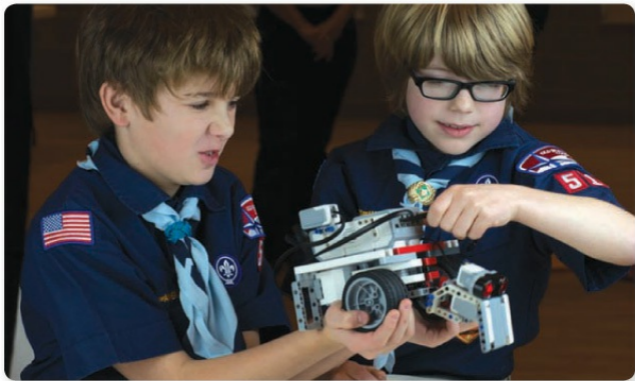
Date

Den Leader's OK

REQUIREMENT 4 | Build your own robot.

With help from your den leader, parent, or another adult, build a robot. You can buy a robot kit or use ordinary household items to create your own.

What is the purpose of your robot? Does it handle one of the jobs you learned about in requirement 3? How well does it do its job? What improvements could you make?



Remember to think about safety before you start building and while you are working. Wear safety glasses while you are building your robot, and ask an adult to help you with tools. Always disconnect the batteries or unplug the power cord while you are working on your robot and after you are done using it.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | Visit a place that uses robots.



Robots don't just exist in science fiction movies. They exist down the street. With the help of your parent or den leader, find a company, school, or organization that uses robots, and make a visit. Find out how and why the robots are used. If possible, watch the robots in action, and talk with the people who operate them.



Akela's OK

Date

Den Leader's OK

I think robots are really fun to build! I like how you get to work with your hands and your brain at the same time. When I get to middle school, I'm going to try to join the robotics team. My mom said they won a state championship last year. Wouldn't it be cool to win prizes for doing something that's fun to do?



SALMON RUN





Snapshot of Adventure

Did you know that nearly three-fourths of the earth is covered by water? It is! If you want to explore a lot of the world, you have to go by boat or know how to swim.

Grizzly bears are animals that know how to swim. Even though they live in the forest, they go swimming in ice-cold rivers to catch the salmon they eat. As a Bear Scout, you will get to go swimming, too—not to catch fish but to have fun. In this adventure, you'll learn about swimming and boating and how to stay safe around the water. But most of all, you'll learn how much fun the water can be.

REQUIREMENT 1 | Explain the safety rules that you need to follow before participating in boating.

Boating is a fun way to explore a lake or get to your favorite fishing spot.

Before you leave shore, be sure you know—and follow—these safety rules:

- ◆ **Always wear a life jacket when you go boating.** Be sure the life jacket fits well and is snugly buckled.

- ◆ **Check the weather before departing.** If it looks bad, keep your boat at the dock. You don't want to be in the middle of a lake during a lightning storm!
- ◆ **Keep the boat balanced and weight spread evenly.** This will help keep the boat from tipping over.
- ◆ **Don't overload the boat.** Too much weight could sink it.
- ◆ **Stay low and in the center of the boat.** Step into the center of the boat when you get in or change seats. Don't stand up in the boat; crouch down instead.



- ◆ **If the boat tips over, hang on to it until help comes.** Even a boat that is full of water can still float.
- ◆ **Keep a lookout for swimmers and other boaters.** Be careful not to get too close to other people on or in the water.
- ◆ **Always have a buddy.** When you are boating or swimming, use the buddy system. Watch out for your buddy, and he will watch out for you.
- ◆ **Only go boating with adult supervision.** The Boy Scouts

of America has Safety Afloat rules that adult leaders follow to keep you safe.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Identify the equipment needed when going boating.

No matter what kind of boating you do, you will need to have a properly fitted life jacket. The best kind is a Type III life jacket that has been approved by the U.S. Coast Guard.



NO



YES

To make sure your life jacket fits, do this:

- ◆ Check the label to see if it is designed for your size and weight.
- ◆ Put the jacket on, buckle it, and tighten the straps.
- ◆ Hold your arms over your head. Have a friend pull up on the tops of the arm openings.
- ◆ If the jacket rides up over your chin or face, it is too loose.



NO



YES

Paddles and oars also come in different sizes. Ask an adult to help you choose the right size for you.

What else should you take?

The Cub Scout Six Essentials are always a good idea.

CUB SCOUT SIX ESSENTIALS



First-aid kit



Flashlight



Trail food



Filled water bottle



Sun protection



Emergency whistle



REQUIREMENT 3 | Demonstrate correct rowing or paddling form. Explain how rowing and canoeing are good exercise.

Rowing and canoeing are good exercise. They help build strong muscles, especially in your upper body. They are also good aerobic exercise because they make your heart and lungs work harder.

If you have never been rowing or canoeing before, you will need to learn and practice the strokes that make the boat go.

Rowing Strokes

When you row, you actually face the back of the boat. (Your buddy can help you steer.) Hold the oar handles firmly with your knuckles up and wrists and arms straight. Bend forward a little bit.

Each stroke has four parts:

- ◆ **Catch.** Lower the oar blades edgewise into the water behind you, not too deep.



- ◆ **Pull.** Lean backward, pulling on the oars and bending your arms until your elbows come in against your ribs.

Pull



- ◆ **Feather.** Lift the oars slightly out of the water, and turn your knuckles up toward your face so the blades are flat above the water's surface.



- ◆ **Recover.** Bend forward and straighten your wrists and arms, ready to begin another stroke.



To do the backstroke, push on the oars instead of pulling. To turn, pull on one oar while you push on the other.

Canoeing Strokes

With canoeing, both people in the canoe paddle, usually on opposite sides and stroking at the same time. The person in the back steers and gives direction. The person in the front adds power and helps the canoe go straight.

Hold the paddle firmly with both hands—one hand on the top of the handle and the other hand just above the throat (where the paddle starts to get wide). Bend forward a little, and let your upper body rotate as you paddle.

The forward stroke has four parts:

- ◆ **Catch.** Lower the paddle blade edgewise into the water in front of you, not too deep.
- ◆ **Power.** Pull backward to your hip, keeping the paddle straight up and down.
- ◆ **Feather.** Lift the paddle slightly out of the water, with the blade flat above the water's surface.
- ◆ **Recover.** Rotate the paddle forward and straighten your wrists and arms, ready to begin another stroke.

Catch



Power



Feather and Recover



Sweep



To do the backstroke, push on the paddle instead of pulling.

Use sweeps to turn a canoe. Reach out with the paddle and move it in a quarter circle, either forward or backward. Or use draw and pry strokes, pulling or pushing the paddle straight toward or away from the canoe.

Now it's your chance to demonstrate these steps. Using a real oar or paddle, show your den leader the correct form for rowing or paddling. Explain why rowing and canoeing are good exercise. When you're ready to head out in a real boat, you'll know what to do!



Akela's OK

Date

Den Leader's OK

REQUIREMENT 4 | Explain the importance of response personnel or lifeguards in a swimming area.

When you go swimming, three people can help you stay safe. The first is you! You stay safe when you follow the rules of the lake or pool. Stay in the designated swimming area, don't run or engage in horseplay, and don't dive in shallow water.

The second person who can help you stay safe is your buddy—and you can do the same for him. Always enter and leave the

swimming area with your buddy, and always swim near him. When someone calls “Buddy check,” you and your buddy should grab each other’s hands and hold them high.

The third person who can help you stay safe is the lifeguard. Lifeguards are specially trained to help swimmers who get into trouble. They constantly watch the swimming area, looking for swimmers who need help. They know how to rescue swimmers who are in trouble without putting themselves in danger.



Akela's OK

Date

Den Leader's OK



REQUIREMENT 5 | Show how to do both a reach rescue and a throw rescue.

Whenever you go swimming, there should be a lifeguard on duty. He or she will help any swimmers who get into trouble.

What if someone needs help and no lifeguard is around? As a Bear Scout, you are not expected to do the rescue work of a trained adult. However, there are some things you can do.



First, send a friend to call for help. Next, if no adult is there, try to help from shore. If the person is close to shore, lie down and reach with your hand. Otherwise, use whatever is available, like a towel, a tree branch, a fishing pole, or a canoe paddle. Be careful not to let the person pull you into the water. If possible, anchor yourself to another person or to a solid object like the edge of a

dock.

You can practice reach rescues in the shallow end of a swimming pool. If you are inside, you can pretend that a rug on the floor is the water.



A Scout is brave. Learning safe ways to rescue someone can help you feel brave in an emergency.

If you can't reach the person, you can throw a rope, a life ring, or anything that will float. The object will give the person support. If it is tied to a rope, you can pull the person to shore.



To practice throw rescues, you can create your own throw line at home. Just attach a rope to a plastic milk jug with a little water in it. Go outside and have a friend stand about 20 feet from you. Practice throwing the jug to your friend—but don't hit him with it!



Akela's OK

Date

Den Leader's OK



The lifeguard at the pool where I learned to swim helped me practice rescues. She said that when you throw a life ring, you should throw it just past the victim. Then you can use the rope to pull it back toward him.

REQUIREMENT 6 | Visit a local pool or swimming area with your den or family, and go swimming.

Whether you live in the city or the country, there is probably a place nearby where you can go swimming. There may even be an indoor pool that is open year-round. For this requirement, visit a pool or swimming area with your den or family. Follow the rules below to help keep you and your den or family safe.

BASIC RULES OF SAFE SWIMMING

- 1. Be physically fit.**
- 2. Have a qualified adult present whenever you swim.**
- 3. Swim in areas that have already been checked and have no deep holes, stumps, rocks, cans, or glass.**
- 4. If you can't swim, don't go in water more than chest deep. If you can swim 50 feet, it's safe to go in water up to the top of your head. Go in deep water only if you are a good swimmer.**
- 5. Swim with a buddy—someone to help you if you get into trouble, and someone you can help if he needs it.**
- 6. Obey the rules. Have a good time in the water, and learn to swim a little better each time you go in.**



A Scout is obedient. Listen to the adults in charge so you know the rules at the swimming area you are visiting.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 7 | Demonstrate the front crawl swim stroke to your den or family.

The front crawl is one of many strokes that you will learn in swimming. It is one of the best strokes to use when you take your Boy Scout swim test. A good way to learn the front crawl is to practice with your legs first and then with your arms.

Your legs will do a flutter kick. Your legs go up and down in

the water, pressing down on the water with the top of your foot. Practice by holding onto a kickboard or the side of the pool.



Next, practice with your arms. Float on your stomach, and

practice reaching out as far as you can in front of you, one arm at a time. Cup each hand, and scoop water down and back toward your body as your arm goes around in a circle.



Now, try using your arms and legs at the same time. Relax, and don't hurry. As you get better, you will be able to swim farther with less effort.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 8 | Name the three swimming ability groups for the Boy Scouts of America.

Before you go swimming or boating at a Scouting activity, you must demonstrate your swimming ability. (You must repeat this

test each year.) Depending on how well you can swim, you will be classified as a nonswimmer, a beginner, or a swimmer. That classification allows you into different swimming areas.

Swimmer



Don't worry if you can't do all the swimmer requirements. Instead, make it your goal to become a swimmer! You can improve your swimming ability by asking an adult for help and by practicing. As you get better, you can ask to retake the swim test at another time.



Beginner



Nonswimmer



Akela's OK

Date

Den Leader's OK

REQUIREMENT 9 | Attempt to earn the BSA beginner swim classification.

To be classified as a beginner, you must:

- ◆ Jump feetfirst into water over your head in depth.
- ◆ Level off, and swim 25 feet on the surface.
- ◆ Stop, turn sharply, and resume swimming.

Try that test under the supervision of a lifeguard. If you pass it, you'll be well on your way to swimming like a bear!



Akela's OK

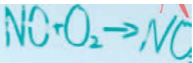
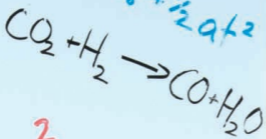
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Den Leader's OK



SUPER SCIENCE





$$X = kX^2$$

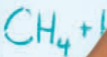
$$A = \pi r^2$$

$$\sum_{k=0}^n \binom{n}{k} X^k a^{n-k} \quad A = \pi r^2$$

$$\sin \alpha \pm \sin \beta = 2 \sin \frac{\alpha \pm \beta}{2} \cos \frac{\alpha \mp \beta}{2}$$

$$P = \frac{F}{A}$$

$$a^2 + b^2 = c^2$$



Snapshot of Adventure

Have you ever wondered why the sky is blue or how gravity works or what makes a rainbow? Scientists wonder about those things, too. Then, they figure out the answers using experiments. Some of those experiments are really fun because they use stuff that is gooey, oozy, splishy, and splashy—just the kind of stuff Bear Scouts enjoy! In this adventure, you'll get to do some science projects that are a little bit messy and really amazing. So put on your lab coat, and get ready to do some super science!

Ask Questions



Do Background Research



Construct Hypothesis



Test With an Experiment



Was the Hypothesis Supported?

Yes

No

Report Results

Report Results

ANSWERING SCIENTIFIC QUESTIONS

Scientists try to create a fair test when they want to answer a question. The steps below can help you answer questions like a scientist:

- 1. Ask a question. (What do you want to discover?)**
- 2. Do research. (What have other scientists already learned?)**
- 3. Make a good guess at the answer. (This guess is called a hypothesis.)**
- 4. Test your hypothesis with an experiment. (This is the fun part!)**
- 5. Decide whether your hypothesis was supported by the information you collected.**
- 6. Share what you discovered.**



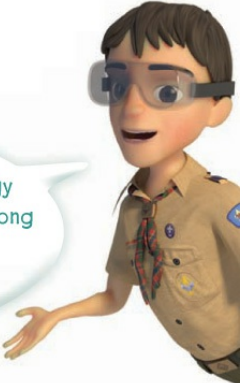
REQUIREMENT 1 | Make static electricity by rubbing a balloon or a plastic or rubber comb on a fleece blanket or wool sweater. Explain what you learned.

You may have walked across a carpeted floor to pet your dog and gotten a shock. You may have taken off your winter hat and found that your hair was standing straight up in the air. Those things happen because of static electricity.

To understand static electricity, you have to understand atoms. Everything around us is made up of very small things called atoms. Those atoms are made up of even smaller things, including protons and electrons. Protons have a positive charge, and electrons have a negative charge. Each atom usually has the same number of protons and electrons, but if two atoms bump into each other, electrons from one atom can get rubbed off onto the other atom.

As you walk across a carpeted floor (especially if you drag your feet), extra electrons build up on your body. When you touch your dog, those electrons jump onto the dog, causing a little spark of static electricity.

Why does your hair stand up when you pull off your winter hat? That happens because all your individual hairs now have a positive charge and are repelling each other. (This is like trying to hold the positive sides of two magnets together.)



Did you know that lightning is the same kind of energy as static electricity? I wonder how long you would have to rub a balloon your sweater to create that much energy!

Static electricity also makes some things stick together, such as hiking socks and dryer sheets. For this requirement, try to make objects stick to an electrically charged balloon or comb. Blow up a balloon or take a comb and rub it against a fleece blanket or wool sweater. See what objects will stick to it. Discuss your findings with your den.

Testing Static Electricity

Which of these objects will stick to a balloon or comb? Write down your prediction and then write down what actually happened.

Object	Prediction	Result of investigation
Tissue paper		
Aluminum foil		
Cardboard scrap		
Paper scrap		
Yarn or string		
Pompom		
Chenille stem		
Ribbon		
Cloth		
Foam		
Coin		



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Conduct a balloon or other static electricity investigation that demonstrates properties of static electricity. Explain what you learned.

For this requirement, find out which objects will follow a balloon and which objects will be repelled by it. Charge your balloon with static electricity by rubbing it on a fleece blanket or a wool sweater. Then, hold it close to the objects listed on this page. Discuss the results with your den.



More Static Electricity Tests

Which objects are attracted to a balloon? Which objects are repelled by a balloon? Write down your prediction, and then write down what actually happened.

Object	Prediction	Result of investigation
Ping-pong ball		
Full aluminum can		
Empty aluminum can		
Gentle stream of water from a faucet		



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Conduct one other static electricity investigation. Explain what you learned.

For this requirement, fill a dry, empty plastic bottle with small foam beads (like the kind in beanbag chairs). Stand in front of a mirror, and rub the bottle on your head. What happens to the beads?



Now, touch your other hand to the bottle. Do the beads move toward your hand or away from it? Experiment with other objects to check the reaction of the foam beads.



Akela's OK

Date

Den Leader's OK

**REQUIREMENT 4 | Do a sink-or-float investigation.
Explain what you learned.**

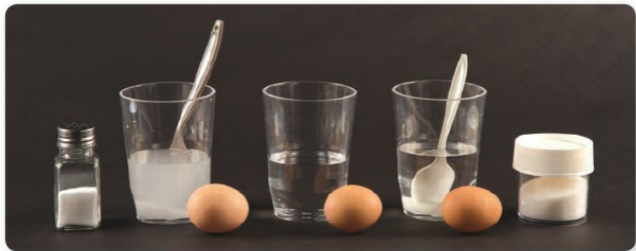
Have you ever wondered if an egg will sink or float? Do you think adding anything to the water would change the outcome? Let's find out!

Materials

- ◆ Three large cups, about 8 ounces, all the same size
- ◆ Three fresh eggs
- ◆ 2 tablespoons of salt
- ◆ 2 tablespoons of sugar
- ◆ Water
- ◆ A spoon

Instructions

1. Fill all three cups half full with water.
2. Stir the salt into the first cup and the sugar into the second cup.
3. Leave the third cup alone.
4. In the chart on the next page, write down what you think will happen when you add an egg to each cup.
5. Add an egg to each cup. Observe what happens to each egg, and write down the results.



Sink or Float

Will salt or sugar affect whether an egg floats? Write down your prediction, and then write down what actually happened.

Cup	Prediction	Result of experiment
Cup 1 — Salt added		
Cup 2 — Sugar added		
Cup 3 — Nothing added		



How did your predictions compare to what you observed?
Why do you think the eggs did different things?

This investigation shows how scientists use variables. A variable is something that changes. By changing just one variable at a time, you proved how sugar and salt affect how eggs float. The plain water is called the control because it doesn't change. Since the control is the same in each cup, we can use it to compare the results with the salt and the sugar.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 5 | Do a color-morphing investigation. Explain what you learned.

You may have heard that oil and water do not mix. In fact, they

will actually push away from each other if they are in the same space! To investigate this principle, you will mix some food coloring into oil.

Materials

- ◆ A large jar or clear vase
- ◆ Water to fill the jar half-way
- ◆ A measuring cup
- ◆ A spoon
- ◆ 2 tablespoons of cooking oil
- ◆ 3 drops each of red, blue, and yellow liquid food coloring



Instructions

1. Fill the jar or vase halfway with water.
2. In the measuring cup, mix the oil and the food coloring together.
3. Pour this mixture slowly into the water, and watch what happens.

What is happening? Since food coloring is water-based, it will separate from the oil and float through the water in amazing color

morphs. If you have time, try different color combinations.



Akela's OK

Date

Den Leader's OK

**REQUIREMENT 6 | Do a color-layering investigation.
Explain what you learned.**

For this requirement, you will create a rainbow in a cup using sugar, water, and food coloring.

Materials

- ◆ 15 tablespoons of sugar
- ◆ 15 tablespoons of warm water
- ◆ Red, green, blue, and yellow liquid food coloring
- ◆ Six clear cups
- ◆ A spoon

Instructions

1. Put five cups in a row on the table.



2. Add one tablespoon of sugar to the first cup, two tablespoons to the second cup, three to the third, four to the fourth, and five to the fifth.



3. Add three tablespoons of lukewarm water to each cup. Stir until most of the sugar dissolves.



4. Add a drop or two of food coloring to the first four cups, one color per cup. In the fifth cup, mix two colors.



5. Take the fifth cup (the one with the most sugar) and pour half of

its contents into the sixth cup (the one that's empty).



6. Hold the spoon, bowl side up, against the inside of the sixth cup. Slowly and gently pour half the contents of the fourth cup onto the spoon. (Pouring onto the spoon keeps the two liquids from mixing in the cup.) Do the same thing with the third, second, and first cups.



What is happening? Adding sugar to the water causes it to become denser as the sugar molecules take over the space. The more sugar you add, the denser the water becomes. That's why you can "stack" the colored water as long as you pour it gently.

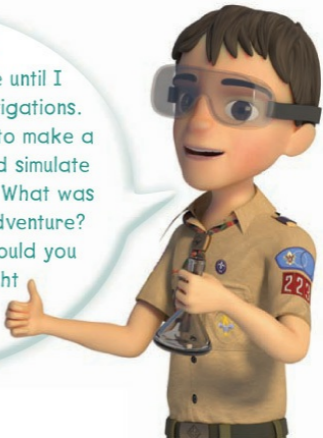


Akela's OK

Date

Den Leader's OK

I never knew how much fun science could be until I started doing science investigations. With my dad, I learned how to make a tornado in a soda bottle and simulate an earthquake using gelatin. What was your favorite part of this adventure? What scientific questions would you like to figure out? You might be a science superstar someday!



A WORLD OF SOUND





Snapshot of Adventure

What do Zimbabwe, Egypt, and Chile have in common? Amazing music! The native peoples of those countries have been making musical instruments for thousands of years. We're not talking guitars, pianos, and trumpets, however. We're talking instruments like the mbira, the sistrum, and the rain stick.

In this adventure, you'll use your imagination to travel to these distant lands and learn how to make your own musical instruments. By the time your journey is over, you'll have enough instruments to start your own band. Ready to go? Our first stop is Zimbabwe, home of the magnificent mbira. Let's get this musical adventure started!

Before you start using tools to make an instrument, check out the Baloo the Builder adventure. You'll find some important safety tips there.



REQUIREMENT 1 | Make an mbira.

Welcome to Zimbabwe, a country in southern Africa! People have lived here for thousands and thousands of years, including the Shona people, who make up most of the population. If you go to a party called a mabira in Zimbabwe, you'll probably hear people playing the mbira (pronounced em-BEE-ra), or thumb piano.



Traditional mbiras have 22 to 28 keys made of forged metal. Your mbira will use bobby pins instead, but you'll still get a good idea of what an mbira sounds like.



Materials and Tools

- ◆ A board about 6 inches wide and 8 inches long
- ◆ Four craft sticks
- ◆ Four bobby pins
- ◆ Safety glasses
- ◆ Brads or wire nails and a hammer
- ◆ Adhesive tape
- ◆ Wire cutters
- ◆ Hot glue gun

Instructions

1. Glue two craft sticks side by side across the middle of the board.



2. While wearing safety glasses, cut each bobby pin in half. Trim the eight pieces you end up with so each one is a little shorter than the one before it.



- 3.** Lay the bobby pin pieces on top of the craft sticks from shortest to longest. Align their ends with the craft sticks. At the other end, they will stick out different lengths.



4. Tape the bobby pin pieces down so they don't move.



5. Glue the last two craft sticks on top of the first two. To make the mbira sturdier, use the hammer to drive brads through the ends of the craft sticks and between each pair of bobby pin pieces.



6. Bend the bobby pin pieces up at about a 45 degree angle from the board. Get ready to play!



How to Play

To play your mbira, just pluck the metal “keys” with your thumbs. Since they are different lengths, they’ll make different sounds. See if you can play a simple tune like “Happy Birthday” or “Twinkle, Twinkle, Little Star.” How would you describe the sound the mbira makes?

You can also try some investigations with your mbira. Instead of using your thumbs, use a spoon or a craft stick to pluck the keys. Does that make a difference? What if you put the mbira inside a box and play it? Does the sound change?



Akela's OK

Date

Den Leader's OK

REQUIREMENT 2 | Make a sistrum.

For our next instrument, we will travel 3,000 miles north to Egypt and 3,000 years back in time. Here in ancient Egypt, musicians used an instrument called the sistrum to play songs for the pharaohs (the kings of Egypt). Many wall paintings from royal tombs show sistrums being played.



The original sistrums were made out of bone, wood, and strong plant fibers. We'll use materials that you can find around your home or get at a craft store.

Materials and Tools

- ◆ Wire clothes hanger
- ◆ Electrical tape
- ◆ Two craft sticks
- ◆ Some fishing line or thin wire (the kind florists or picture-framers use is great)
- ◆ Buttons, jingle bells, metal washers, and other small items that have holes in them
- ◆ Wire cutters



Instructions

1. Straighten out the curved part of the clothes hanger (the part

that goes over the closet rod). This will form your sistrum's handle.

2. Put the craft sticks on either side of the handle. Tightly wrap electrical tape around the handle and both sticks. Start your wrapping just below the craft sticks and end it just above the craft sticks so they won't slide up and down. The sticks will make the handle more comfortable to hold.
3. With the help of an adult, cut the long side of the clothes hanger in half using the wire cutters. Bend each side down so you have what looks like a big letter Y.



4. On each side of the Y, wrap electrical tape around the pieces to hold them together. Do this at the top and the bottom and two or three times in the middle. Be sure to leave spaces for the next step.
5. Attach a piece of fishing line or thin wire to one side of the Y. String some buttons, bells, washers, or other items on the line

or wire. Then tie the other end to the other side of the Y. Do this again in one or two other places like the picture shows.

How to Play

It's easy to play the sistrum. Just shake the instrument or flip it from side to side to make the items in the middle swish, jingle, or clang together. Try to match the rhythm in a song. Was it easier to match the beat by shaking the sistrum or by sliding it back and forth?

What sound from nature does your sistrum make? See if you can make it sound like the wind in the reeds (a type of plant that grows in low marshy ground) or like the gentle running water of the Nile River.



Akela's OK

Date

Den Leader's OK

REQUIREMENT 3 | Make a rain stick.

For our last stop, we'll travel to Chile, a long, narrow country on the western side of South America where we learn how to make a rain stick. People in the Diaguita (pronounced DEE-uh-GEE-tuh, where the G sound is like in the word "geese") tribe here have been making rain sticks for many years. Rain sticks have also been made by tribes in Panama, Ecuador, Peru, and other countries in Central

and South America.



The original rain sticks were made out of pieces of hollow cactus. People cut the spikes off and drove them into the cactus like nails. These spikes caught seeds and pebbles as they fell from one end to the other, making an amazing rain-like sound.

For your rain stick, you'll use a cardboard mailing tube. A "maze" of wire and chenille stems will take the place of the spikes.



One really fun thing about rain sticks is that each one is different. If you and a friend both make rain sticks, each one will have its own special sound.

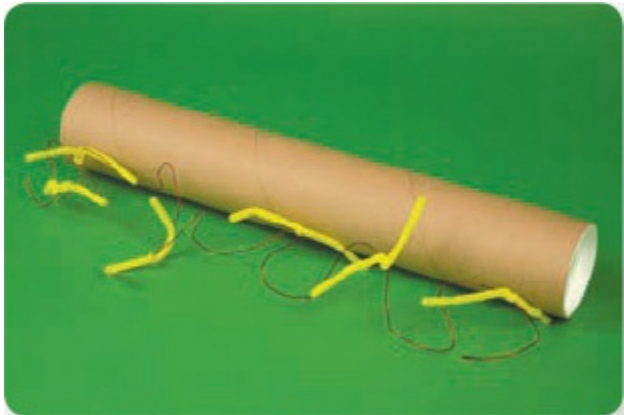
Materials and Tools

- ◆ Cardboard mailing tube (try to find one with plastic end caps)

- ◆ Crayons, markers, and other art supplies
- ◆ Paper
- ◆ Packaging tape
- ◆ Thin wire (the kind florists or picture-framers use is great)
- ◆ Four or five chenille stems
- ◆ A variety of small objects like uncooked rice, beans, small beads, dry macaroni, small pebbles, and buttons
- ◆ Wire cutters

Instructions

1. With the help of an adult, use the wire cutters to cut a piece of wire two or three times as long as the tube. Put tape over the ends so you don't poke yourself. Twist and tangle the wire so it is the same length as the tube and will fit inside.



2. Cut the chenille stems in half and twist them around the wire every 6 inches or so like the picture shows. If your mailing tube is extra wide, use whole chenille stems so that they stretch across the tube.
3. Carefully slide the wire inside the tube. Tape each end to the inside of the tube so it won't slide up and down.
4. Put the cap on one end of the tube or tape a piece of paper over the opening.
5. Now comes the fun part. Pour a handful of rice, beans, or other small objects into the tube. Hold your hand over the open end and slowly turn the tube upside down.



6. If you like the sound you hear, put the cap on the other end of the tube or tape paper over the opening. Otherwise, pour the objects into a bowl and try again. You will discover that different objects make different sounds. If you want a quiet rain stick, use birdseed, rice, or small pasta like orzo. For a louder rain stick, use beans, buttons, elbow macaroni, or pebbles.
7. Once you like your rain stick's sound, cap or tape over the open

end. If you're using a tube with plastic end caps, put tape over both caps so nothing can spill out.

8. Decorate the outside of the mailing tube with symbols, your name, or anything else you like.



How to Play

You can play your rain stick lots of different ways. Turn it over slowly to make a rain-like sound. Shake it gently to create a beat. Tap on it to make a sound like a drum. See who in your den can make the coolest sound with his rain stick! Better yet, you can

bring all of your new instruments together and put on a show!



Akela's OK

Date

Den Leader's OK

At a campfire program last year, our den played all the instruments we learned about in this adventure. A few of us even made other instruments, including drums, a water-glass xylophone, and a PVC-pipe didgeridoo. We had a blast!

What kinds of instruments can you make with materials you find around your home? Who knows? You may become the world's best shampoo-bottle trumpet player some day!



SPECIAL AWARDS YOU CAN EARN

The following awards can be earned while you are a Cub Scout. Check with your pack leaders or go online (with a parent's or guardian's permission) to learn more.

Conservation Good Turn Award

The Conservation Good Turn is an award packs may earn by partnering with a conservation or environmental organization to choose and carry out a Good Turn in their home communities.



Outdoor Activity Award

Tiger, Wolf, Bear, and Webelos Scouts have the opportunity to earn the Cub Scout Outdoor Activity Award. Scouts may earn the award in each of the program years as long as the requirements are completed again each year. Cub Scouts complete specific requirements for each rank, including a number of different outdoor activities.



National Summertime Pack Award

The National Summertime Pack Award encourages packs to be active when school is out for the summer. Youth and adult pack members can earn the award by taking part in one activity per month in June, July, and August.



Outdoor Ethics Awareness Award

Outdoor Ethics Action Award

Cub Scouts who are interested in learning more about outdoor ethics and Leave No Trace may earn the Outdoor Ethics Awareness Award. The Outdoor Ethics Action Award asks Scouts to use their new knowledge to take steps to improve their outdoor skills.



STEM/Nova Awards

The Nova awards for Cub Scouts are for Wolf, Bear, and Webelos Scouts who are interested in learning more about science, technology, engineering, and mathematics. These awards may not be earned by Tiger Scouts.



For their first Nova awards, Scouts have the opportunity to earn the Nova award patch, followed by three more π pin-on devices. The patch and the three devices represent each of the four STEM topics. The Supernova awards have more challenging requirements and recognize more in-depth, advanced achievement in STEM-related activities.



World Conservation Award

The World Conservation Award for Cub Scouts provides an opportunity for individual Wolf, Bear, and Webelos Scouts to “think globally” and “act locally” to preserve and improve our environment. This program is designed to make youth members aware that all nations are closely related through natural resources, and that we are interdependent with our world environment.



Requirements for this award must be completed *in addition to* any similar requirements completed for rank. This award may not be earned by Tigers.

Bobcat Trail

Your name _____


Fill in seven tracks to earn the Bobcat badge.



1 The Scout Oath




2 The Scout Law



3 The Cub Scout sign




4 The Cub Scout handshake



5 The Cub Scout motto



6 The Cub Scout salute



7 Exercises in *How to Protect Your Children From Child Abuse: A Parent's Guide*

Bear Adventure Tracking

1. Complete each of the following Bear required adventures with your den or family:

Required Adventures

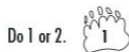
Bear Claws



Bear Necessities



Fellowship and
Duty to God



Fur, Feathers, and Ferns



Grin and Bear It



Paws for Action



2. Complete one Bear elective adventure of your den or family's choosing.

My elective adventure: _____



3. With your parent or guardian, complete the exercises in the pamphlet *How to Protect Your Children From Child Abuse: A Parent's Guide*, and earn the Cyber Chip award for your age.*



*See full requirements on page [28](#).

Elective Adventures

Baloo the Builder



A Bear Goes Fishing



Bear Picnic Basket



Beat of the Drum



Critter Care



Forensics



Make It Move



Marble Madness



Roaring Laughter



Robotics



Salmon Run



Super Science



A World of Sound



Get Set For the Webelos Adventures!



Way to go!
You completed the Bear adventures, and I'm sure you had a great time doing it. I tried to pick a favorite—from cooking to pocketknives to learning about the flag—and I just couldn't! So what's next? Well, if you have finished the third grade or are now 10 years old, you can begin to work on the Webelos adventures! Keep on Cub Scouting!

CREDITS

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THE OUTDOOR CODE

As an American, I will do my best to—

- ◆ **Be clean in my outdoor manners,**
- ◆ **Be careful with fire,**
- ◆ **Be considerate in the outdoors, and**
- ◆ **Be conservation minded.**

LEAVE NO TRACE* PRINCIPLES FOR KIDS

Know Before You Go

Choose the Right Path

Trash Your Trash

Leave What You Find

Be Careful With Fire

Respect Wildlife

Be Kind to Other Visitors

** The member-driven Leave No Trace Center for Outdoor Ethics teaches people how to enjoy the outdoors responsibly. This copyrighted information has been reprinted with permission from the Leave No Trace Center for Outdoor Ethics: www.LNT.org.*



SCOUT OATH

ON MY HONOR I WILL DO MY BEST
TO DO MY DUTY TO GOD AND MY COUNTRY
AND TO OBEY THE SCOUT LAW;
TO HELP OTHER PEOPLE AT ALL TIMES;
TO KEEP MYSELF PHYSICALLY STRONG,
MENTALLY AWAKE, AND MORALLY STRAIGHT.

SCOUT LAW

TRUSTWORTHY

LOYAL

HELPFUL

FRIENDLY

COURTEOUS

KIND

OBEDIENT

CHEERFUL

THRIFTY

BRAVE

CLEAN

REVERENT



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