



Bear

Requirements:

1. Complete each of the six required adventures:
 - Baloo the Builder
 - Bear Claws
 - Bear Necessities
 - Fellowship and Duty to God
 - Fur, Feathers, and Ferns
 - Paws for Action (Duty to Country)
2. In addition to the six required adventures, complete at least one elective adventure of your den's or family's choosing.
 - a. Bear elective adventure
3. With your parent, guardian, or other caring adult, complete the exercises in the pamphlet entitled How to Protect Your Children From Child Abuse: A Parent's Guide
4. Earn the Cyber Chip award for your age-<https://cubscoutideas.com/2854/bsas-cyber-chip-kids-internet-safety/>. (The Cyber Chip portion of this requirement may be waived by your parent or guardian if you do not have access to the internet.) OR Earn the Protect Yourself Rules Preview Adventure for Bear.
 - a. Cyber Chip Award
 - b. Protect Yourself Rules Preview Adventure for Bear

Leaders Guide: <https://pigeonpost.scouting.org/wp-content/uploads/2019/07/Bear-Leader-Guide.pdf>

Intro Video: <https://www.scouting.org/programs/cub-scouts/den-meeting-resources/den-leader-tips-tricks-video-series/#video-gallery-d5791a3-12>

*signifies preferred Scouting from Home option



Forensics

Complete all the following.

1. Talk with your family or den about forensics and how it is used to help solve crimes.
2. Take your fingerprints and learn how to analyze them.
3. Complete one of the following:
 - (a) 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.
 - (b) Do an analysis of four different substances: salt, sugar, baking soda, and cornstarch.
4. Complete one of the following:
 - (a) Visit the sheriff's office or police station in your town. Find out how officers collect evidence. [Note that this may be during the same visit as "Paws for Action"]
 - (b) 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.
 - (c) Learn how animals are used to gather important evidence. Talk about your findings with your den.

Resources

Bear Den Leader Guide <https://www.sgcbasa.org/files/29284/Bear-Leader-Guide-pdf>

Virtual Police station tour <https://www.youtube.com/watch?v=5bslYrZiotw>

Video on how police use finger prints <https://www.youtube.com/watch?v=7ohDwGPeggE>

Video on chromatography <https://www.youtube.com/watch?v=ZCzgQXGz9Tg>

October, Week 1

◆ Activity: Talk! (Requirement 1)

- Introduce the Forensics elective adventure. Explain what forensics is, how it is helpful to us, and how it is used in the solving of crimes. Talk about the different things at a crime scene that can be used as evidence.
- Discuss fingerprints and how each person's fingerprints are unique. Then compare the use of fingerprints in solving crimes to the use of tree cookies in finding out what happened with a tree. Have the Scouts look at some illustrations of tree cookies and talk about what tree cookies tell us. Then talk about what fingerprints tell us. Show illustrations of the three basic fingerprint patterns.

◆ Activity: Fingerprint Analysis (Requirement 2)

- Let each Bear use a balloon or a plain index card to make a fingerprint. (Note: If you plan to use balloons, be sure there are no latex allergies in the group.) Refer to the Bear Handbook for instructions.

◆ Activity: Chromatography (Requirement 3A)

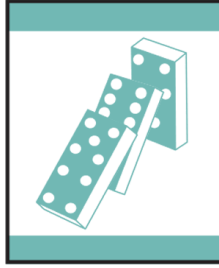
- Chromatography is a method to separate the components of a substance so it can be analyzed. The steps for chromatography can be found in the Bear Handbook. It may be helpful to review the steps and test the process before the conducting the activity.

October, Week 2

◆ Activity: Visit (Requirements 4A, 4B, and 4C)

- Visit a local sheriff or police station or a forensics lab. See Virtual Police Station Tour in Resources above.

- Discuss the role animals can play in forensics.



Make it Move

Complete all the following.

1. Create an "exploding" craft stick reaction.
2. Make two simple pulleys and use them to move objects.
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.
4. Do one of the following:
 - (a) Draw a Rube Goldberg-type machine. Include at least six steps to complete your action.
 - (b) Construct a real 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

Resources

Instructions for different craft stick reactions <https://www.youtube.com/watch?v=GQyGDKkIVPU>

World record craft stick reaction https://www.youtube.com/watch?v=z_X0m-frsZg

Sample Rube Goldberg Machine <https://www.youtube.com/watch?v=WDcWAqjKBic>

October, Week 3

◆ Activity: "Exploding" Craft Stick Reaction (Requirement 1)

- Review the steps for creating this investigation in advance. Perform a small test reaction to get a better understanding of the process and any challenges you may encounter.
- Using the steps in the Bear Handbook, work together to create an "exploding" craft stick reaction

◆ Activity: Pulley Investigations (Requirement 2)

Pulley #1 Materials: • Rolling pin • String • Heavy book Pulley

#2 Materials: • Two large spools • Two pencils or dowels (must be able to fit in the spool hole and move easily) • 30 feet of string or strong yarn

- Follow the steps in the Bear Handbook for the two different types of pulleys. Once the investigation is complete, ask leading questions rather than questions that can be answered with yes or no.

Suggestions include: • For the first pulley, was it easier or harder with the rolling pin? Which pulley do you think takes more strength and why? • Where did you come up against obstacles, and in what ways did you solve them? (If you have a large den, you may want to break Bears into smaller groups to stay within the time frame needed for this activity.)

◆ Activity: Lever Investigations (Requirement 3)

- A lever is a simple machine that has only two parts: a beam (this could be a piece of wood or metal) and a fulcrum (the support that the lever pivots on). You add energy when you use your hands to change the weights on each end. See what actions result.

Materials: • Paint stirrer • Pencil • Spool (edges should be wider than the paint stirrer) • Rubber band • Small weights or other objects

- Follow the instructions in the Bear Handbook to make a first-class lever. Similar levers you might see include a seesaw, a crowbar, a hammer pulling a nail, or a pair of scissors. (This last one uses two first-class levers put together.)

October, Week 4

◆ Activity: Build! (Requirement 4B)

- Build a Rube Goldberg machine using recycled materials from around your home.

- Choose a simple task that the Scouts' machine should complete. Or, if the Scouts already have some ideas, provide feedback and guidance as needed to encourage a positive outcome.

- Remind Scouts that they should use two simple machine types for their Rube Goldberg machine and have at least four steps. They can review the descriptions of pulleys and levers in their handbooks to help them as they build.

- Also remind Scouts that they are likely (almost certain) to experience some failures along the way. The best Rube Goldberg machines require many changes and lots of testing to make them work. The process of working together, sharing ideas, trying things out, and staying positive when changes are needed is far more important than making a successful machine.

- Have the Scouts explain and demonstrate their machine.