RATIONAL FOR ADVENTURE

This adventure helps Tigers explore how things work. Tigers and their adult partners will learn about cracking codes and solving mysteries, as well as discover how science helps us solve problems and understand why things work in certain ways.

TAKEAWAYS FOR CUB SCOUTS

• Cooperating with others
• Completing simple tasks
• Practicing listening
• Practicing communicating
• Practicing teamwork in games
• A Scout is helpful, friendly.

ADVENTURE REQUIREMENTS

1. Learn a magic trick. Practice your magic trick so you can perform it in front of an audience.
2. Create an invitation to a magic show.
3. With your den or with your family, put on a magic show for an audience.
4. Create a secret code.
5. With the other Scouts in your den or with your family, crack a code that you did not create.
6. Spell your name using sign language, and spell your name in Braille.
7. With the help of your adult partner, conduct a science demonstration that shows how magic works.
8. Share what you learned from your science demonstration.

NOTES TO DEN LEADER

Meeting 3 will be a magic show for Tigers to perform the tricks they have learned and practiced during this adventure. Tigers will prepare invitations during Meeting 1, so the details of the magic show should be in place by that time (date, time, location, etc.). During Meeting 2, find out the number of attendees expected, as well as any audience members’ special needs, in order to plan for seating and refreshments. The magic show may take place in the home of a den member (with additional siblings and family members for an audience), at your regular meeting place, or with any audience that would enjoy viewing a Cub Scout magic show.

See the Appendix for optional den meeting activities, including openings, gatherings, and closings.
**MEETING 1 PLAN**

**PREPARATION AND MATERIALS NEEDED**
- U.S. and den flags
- Items for selected magic tricks: Choose the magic trick you would like to teach your den, and be sure you gather the appropriate materials.
- *Cub Scout Magic* book for reference or a book from the library about magic tricks for children
- Samples of secret codes, paper, pencils (See Meeting 1 Resources for examples of codes.)
- Read the Curiosity, Intrigue, and Magical Mysteries adventure in the *Tiger Handbook*.

**GATHERING**
Provide Tigers with samples of secret codes, and have them practice writing codes. Then get each member of the den to decipher a message that he didn’t help create, as in requirements 4 and 5.

**OPENING**
- Conduct a flag ceremony of your choosing that includes the Pledge of Allegiance and, as appropriate, the Scout Oath and Scout Law.

**TALK TIME**
- Carry out business items for the den.
- Have the Tigers share what they have been doing since the last meeting. Has any one of them participated in an activity that might seem “mysterious” to others? Talk about the fact that magic usually consists of a distraction or an illusion—tricking the minds of the audience members into seeing things the way you intend. Science helps us understand why things work the way they do.

**NOTE TO DEN LEADER**
Share with adult partners that, depending on their Tiger’s skill level, he may need additional support in composing, coding, and decoding secret messages. Keep in mind that the performance standard for Cub Scouts is that they do their best, and that they may do so with help. The messages they send may be as simple as the Cub Scout motto, “Do Your Best.”

**ACTIVITIES**

**Activity 1: Learn a Magic Trick (Requirement 1)**

The *Tiger Handbook* has one example of a trick Tigers can try, and you can also refer to *Cub Scout Magic* for ideas.

Another trick you might choose to teach Tigers is the Freezing Water Trick. In this trick, Tigers will pour water into a mug; when the mug is turned upside down, the water will have magically turned into an ice cube.

Prepare for the trick by doing the following:

1. Gather several mugs, sponges, ice cubes, scissors, and water.
2. Cut the sponges to snugly fill the bottoms of the mugs.
3. Place an ice cube in each mug.
Then, when the audience is watching, the Tiger announces that he will magically freeze water. He pours a small amount of water into the mug and covers it with a cloth. After saying the magic words, he carefully turns the mug over without showing the inside to the audience, and the ice cube will fall out on the table.

Practice the trick in advance to discover the amount of water the sponge will absorb, and encourage Tigers to add fun and excitement to their presentation.

Have Tigers practice their tricks so they will be able to perform them in front of an audience. Remind Tigers to demonstrate showmanship by using magicians’ words like “hocus pocus,” “abracadabra,” “shazam,” and “presto” to enhance their tricks. Props such as a magic wand or top hat can also encourage showmanship.

◆ Activity 2: Codes (Requirements 4, 5, and 6) (See Meeting 1 Resources for code charts)

1. Guide Tigers in creating their own codes using symbols, shapes, or numbers to represent letters.
2. Next have the boys write messages using their codes and ask other members of the den to try to decipher them.
3. Each Tiger should also decipher a code created by another member of the den.
4. Show Tigers the American Sign Language alphabet in their handbooks. Help them learn to sign their names using ASL.

◆ Activity 3: Create Invitations (Requirement 2)

1. Make and decorate invitations for the Tigers’ families to attend the den magic show.
2. Confirm the details of the performance time and location with each Tiger.

CLOSING

Discuss the ways that perfecting a magic trick or deciphering another person’s secret message can sometimes be frustrating. Which points of the Scout Law will be the focus of this adventure? Congratulate the Tigers on a job well done.

AFTER THE MEETING

- Work together to clean up the meeting place.
- Serve refreshments, if desired.
- Record completion of requirements 1, 2, 4, 5, and 6.
## ACTIVITY 2

**Secret Code Language**

There are several examples of codes here.

**Code 1:** Code 1 can be created using a set of simple word processing symbols to represent letters.

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**Code 2:** Code 2 uses the standard alphabet but makes letter substitutions.

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**Code 3:** Code 3 has spaces for a Cub Scout to insert symbols to create his own code.

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**American Sign Language**

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- **J**
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- **W**
- **X**
- **Y**
- **Z**
MEETING 2 PLAN

PREPARATION AND MATERIALS NEEDED

- U.S. and den flags
- Gathering: poster paper or card stock for writing in Braille; items for spelling out names (e.g., buttons, split peas); glue
- Items for science investigations (will vary depending on investigations chosen)
- Assemble “genius kits” before the meeting. (See Meeting 2 Resources for examples of materials.)

GATHERING

Have Scouts use the materials provided (such as split peas) to try spelling their names in Braille.

OPENING

- Conduct a flag ceremony of your choosing that includes the Pledge of Allegiance and, as appropriate, the Scout Oath and Scout Law.

TALK TIME

- Carry out business items for the den. Have Tigers show their names they made during the Gathering. Review the information in their handbooks about Braille (requirement 6).

ACTIVITIES

◆ Activity 1: Science Investigation (Requirement 7)

1. Discuss with the den the science investigation you’ve chosen for them to conduct. Have each Tiger and his adult partner write down what they think the result will be. (See Meeting 2 Resources for investigation ideas.)
2. Conduct the science investigation with your den.
3. Compare notes on the outcome of the investigation. How many were right in their predictions? How many guessed incorrectly?

◆ Activity 2

- Provide “genius kits” for each Tiger and his partner, and let them create something from the items provided. It is helpful to provide the boys with a simple task to complete using the materials in the kit. That task might be to create a work of art or a toy, such as a car.
- You may adapt the materials in the kit to ensure they are inexpensive and will provide Cub Scouts with what they need to complete their tasks. (See Meeting 2 Resources for sample items that could be put in the kits.)
- Be sure to make each kit identical so all Tigers will start out with the same materials. At least some part of each item in the kit must be used in some way.

◆ Activity 3

Decide which magic tricks will be performed at the pack meeting, and practice. If the den is large, it may be necessary to select three or four tricks and have groups of boys work together so that everyone can perform.

CLOSING: WHAT DID YOU LEARN?

Here are some simple questions for parents to ask that can help boys reflect and grow from this activity:

- What happened during your science investigation?
- Was there anything mysterious?
- Was there something in the investigation that you’re curious to learn more about?

Make sure all Tigers and their families know the plans for the den magic show in Meeting 3.
AFTER THE MEETING

- Make sure everyone helps to clean up the meeting place.
- Serve refreshments, if desired.
- Record completion of requirement 7.

MEETING 2 RESOURCES

Gathering: Braille Alphabet

The Signs, Signals, and Codes Merit Badge Braille Supplement (No. 621366) includes a Braille alphabet in raised dots and several phrases in Braille that Cub Scouts could use to practice. Contact your local council Scout shop for more information about this resource.
**Activity 1: Sample Science Investigations**

**Celery Stalk:** Provide each Tiger and his adult partner with a stalk of celery (including leaves) and two paper cups filled halfway with water. Have them add 20 drops of food coloring to the water, using a different color for each cup. Ask each boy to bite off the end of his celery stalk. His adult partner should then slice the stalk with a knife, about halfway up from the wide bottom but leaving the top of the stalk intact. Push the two cups together and put each leg of the stalk into a different color of water. Set the celery aside until the end of the meeting, and record what happens. If possible, continue to observe the celery during the next day or two, and record additional changes.

**Bending Light Rays:** First, shine a flashlight against a wall and note the direction the beam of light goes in when it hits the surface. Then shine the flashlight into a mirror at an angle. Note what happens. Now see if you can make the light shine from the flashlight into a mirror, and from there into another mirror at an angle.

**Color Magic:** Each Tiger will need a black marker (not permanent), a white paper coffee filter, water, and a clear plastic cup. Have each Tiger cut a circle about as big as his hand out of the filter. Draw a line across the middle of the circle. Put some water in the cup—enough to cover the bottom. Curl the paper slightly so it fits inside the cup, making sure the bottom is in the water. Ask Tigers what they think will happen. Watch as the water flows up the paper. Record what you see.

**Spoon on the Nose:** Provide each Tiger with a metal spoon—the lighter the spoon, the better. Rub your thumb into the bowl of the spoon. This releases oils from your skin onto the spoon. Next, breathe on the spoon to create fog. Holding the spoon high on the handle, cover the tip of your nose gently with the bowl of the spoon. (Do not press hard.) Now slide the spoon lightly and gently until the tip of the spoon is on the tip of your nose, and let go. Record your results.

**Mobius Strip:** Take a long, fairly wide strip of paper. Twist the paper once and tape it into a loop. Snip the loop up the center. When you're done cutting, you'll have one big loop.

**Activity 2: Sample Genius Kit Items (Items in kits may vary.)**

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<td>strip of mailing labels</td>
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<td>cotton swabs</td>
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<td>plastic milk or juice caps</td>
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<td>small squares of construction paper</td>
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<td>pieces of yarn or string</td>
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MEETING PLAN

PREPARATION AND MATERIALS NEEDED
• U.S. and den flags
• Chairs for magic show audience
• Items for each magic trick being performed
• Refreshments to be served after the performance
• A display of science investigations for the audience members to view

GATHERING (REQUIREMENT 8)
Prepare a display of the science investigations from the previous meeting to show the guests.

OPENING
• Say the Pledge of Allegiance and, as appropriate, the Scout Oath and Scout Law. If the den does not have a United States flag on the outing, ask one Scout to display the flag on his uniform for the group.

TALK TIME
• Carry out business items for the den.

ACTIVITIES
◆ Activity 1: Magic Show (Requirement 3)
1. Conduct the magic show as rehearsed.
2. Share refreshments with the audience.
3. Thank everyone for attending.

CLOSING
• Congratulate the Tigers on their show, and note positive moments you observed.

AFTER THE OUTING
• Ensure cleanup takes place.
• Send thank-you notes to those who helped.
• Record completion of requirements 3 and 8.

Upon completion of the Curiosity, Intrigue, and Magical Mysteries adventure, your Tigers will have earned the adventure loop shown here. Make sure they are recognized for their completion by presenting the adventure loops, to be worn on their belts, as soon as possible according to your pack’s tradition.