



# ARROW OF LIGHT YO-YO ADVENTURE



## RATIONALE FOR ADVENTURE

This preview adventure gives Scouts the opportunity to learn the concepts that make a yo-yo work and the basic physics of a pendulum. It will introduce the history of the toy and give Scouts the skills needed to get started with basic yo-yo tricks. The popularity of this adventure will determine if it will become a new adventure in the *Webelos Scout Handbook*.

This adventure should be completed in one den meeting.

## TAKEAWAYS FOR CUB SCOUTS

- Understand how gravity and friction affect a yo-yo
- Learn the safety rules for using a yo-yo
- Develop the eye-hand coordination needed to perform a basic yo-yo trick

## ADVENTURE REQUIREMENTS

Complete the following requirements.

1. Learn the safety rules of using a yo-yo and follow them at all times.
2. Using a real yo-yo string, a regular string, or a piece of yarn, show how to find the proper yo-yo string length for you.
3. Explain why it is important to have the correct string length and to be in the right location before throwing a yo-yo.
4. Demonstrate how to properly string a yo-yo and how to create a slip knot.
5. In an area where there are no hazards or other people, conduct the pendulum experiment with a yo-yo. Explain what happens to the yo-yo when the string is longer.
6. Show that you can properly wind a yo-yo.
7. Demonstrate TWO of the following:
  - a. Gravity pull
  - b. Sleeper
  - c. Breakaway
  - d. Elevator

## NOTES TO DEN LEADER

Preview adventures will count as elective adventures for Cub Scouts. During the preview period for an adventure, the requirements, den meeting plans, and other resources to deliver the program can be found at [www.scouting.org/programs/cub-scouts/preview-adventures/](http://www.scouting.org/programs/cub-scouts/preview-adventures/).

When the adventure is completed, record the completion in ScoutBook. ScoutBook will be used to evaluate the success of a preview adventure and will assist in determining its viability.

The adventure loop for this adventure can only be purchased online, through [www.scoutshop.org](http://www.scoutshop.org). The adventure loops for preview adventures will have a single style, and all of them will be purple in color.

Your feedback is necessary to help us evaluate and make improvements. Requirements and den meeting plans for preview adventures may change based on feedback. After your den has completed this adventure, please share any thoughts with us at [previewadventures@scouting.org](mailto:previewadventures@scouting.org). Let us know what you liked, what you did not like, what worked with the youth, what you would like to see added, and any other thoughts you would like to share about the adventure.

A sponsorship with Duncan Toys has provided the resources to create the yo-yo preview adventure. If a permanent adventure is eventually created, the sponsorship will not be part of that adventure.

This adventure is best done outside on a surface that allows for using chalk, such as a sidewalk, driveway, or parking lot.

**To help prepare for this adventure, check out the instructional videos at [www.scouting.org/programs/cub-scouts/preview-adventures/yo-yo/](http://www.scouting.org/programs/cub-scouts/preview-adventures/yo-yo/).**

# MEETING 1 PLAN

## PREPARATION AND MATERIALS NEEDED

- U.S. and den flags
- 1 yo-yo per Scout that is not attached to a string
- 1 yo-yo string per Scout
- 1 regular string or piece of yarn about 3-feet long for each Scout
- 1 pair of scissors
- 1 permanent marker
- 1 piece of sidewalk chalk
- 1 smartphone for watching the activity videos

## GATHERING

- As Cub Scouts arrive, hand each of them a yo-yo and a 3-foot piece of regular string or yarn. If they will be keeping the yo-yos, each one should be marked with the Scout's name or initials.
- Using the sidewalk chalk, each Scout will draw a circle on the ground. The Scout will hold the chalk and one end of the string in the same hand and draw the circle while an assistant den leader, den chief, parent, or buddy holds the other end of the string. When finished, each Scout will have drawn a "safe circle" in which to use the yo-yo.

## OPENING

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

## TALK TIME

- Introduce the Arrow of Light Yo-Yo Adventure to the den. Build interest by describing the goals of the adventure and some of the planned activities.
- Carry out any business items for the den.
- Allow time for sharing among Webelos Scouts.

## ACTIVITIES

### ◆ Activity 1: Safety Rules (Requirement 1)

Discuss with the Webelos Scouts these basic safety rules for using a yo-yo:

- Only use a yo-yo in a safe area where there are no hazards or other people. Say, "Drawing your circle on the ground is one way to do this."
- Before you throw, always make sure your yo-yo is attached to the string and the string is securely attached to your finger.
- Be careful not to hit anyone or anything with your yo-yo.

### ◆ Activity 2: String Length (Requirements 2, 3, and 4)

- Use the tutorial video on the yo-yo preview adventure website for assistance with these requirements.
- Give each Webelos Scout a yo-yo and a yo-yo string. One end of the yo-yo string is twisted and the other end has a loop. Have each Scout untwist the twisted end so that it can slide over the yo-yo and attach to the axle.
- The next step is to make sure each Scout's yo-yo string is the right length. This will prevent the yo-yo from hitting the floor when performing tricks while also allowing enough distance to throw it and enough energy for it to come back.
- Have each Scout hold on to the string and let the yo-yo go all the way down to the floor. With the yo-yo on the floor and the string in hand, they should put the string where their belly button is; this will be the proper length for each Scout's string.
- Keeping one finger on their belly button, have them loop the string around that finger. Then have them tie an overhand knot on a bite to form a loop. Use the scissors to cut off any extra string.

- Now, have each Scout use the overhand knot on a bite to create a slip knot and place the string over their middle finger just above the middle knuckle.
- Tell the Scouts not to do anything else yet, and wait for instructions.

### ◆ **Activity 3: Pendulum (Requirement 5)**

- Use the tutorial video on the yo-yo preview adventure website for assistance with this requirement.
- Tell each Scout to hold the string about a foot up from the yo-yo and gently swing it from side to side. Explain that a pendulum can accurately measure time, and the amount of time the yo-yo takes to swing from left to right and back again is known as a *period*.
- Now, have the Scouts return to gently swinging their yo-yos from side to side, but this time, have them hold the string farther from the yo-yo—or closer to it, if they want.
- Ask the Scouts who held the string farther from the yo-yo what happened. (The result should be a longer period.)
- Ask the Scouts who held the string closer to the yo-yo what happened. (The result should be a shorter period.)

### ◆ **Activity 4: Tricks (Requirements 6 and 7)**

- Use the tutorial videos on the yo-yo preview adventure website for assistance with these requirements.
- Have each Scout stand in the middle of the circle they made during the Gathering with the yo-yo properly attached to their middle finger. Now, keeping the yo-yo in that hand, they should use the other hand to wind the string around the yo-yo. Make sure that the string is coming from over the top of the yo-yo when it is completely wound and still in the hand.
- Demonstrate the gravity pull, sleeper, breakaway, and elevator tricks to the Scouts.
- Have the Scouts practice until each of them can demonstrate two of the four tricks.

## **CLOSING**

Have all the Scouts gather in a circle. Each one will then put their right hand in the middle of the circle. Together, have them pump their collected hands up and down while saying, at the same time, “Do Your Best!”

## **AFTER THE MEETING**

- Serve refreshments, if desired.
- If the Scouts will be keeping their yo-yos, be sure to inform their parents.
- Record completion of requirements 1, 2, 3, 4, 5, 6, and 7.
- Work together to clean up the meeting place.