

## Cub Scout Roundtable Breakout – February 9, 2017 – STEM activities

### Lions and Tigers

Lions elective adventure: Build It Up, Knock It Down

- Requirements
  - 1 – Discuss with other Lions that things that can be built and things that can be knocked down.
    - Meeting Plan 1 – Activity 2: Cub Stack Relay
  - 3 – Build structures using available materials
    - Meeting Plan 1 – Activity 1: Building Imagination

Tigers elective adventure: Curiosity, Intrigue, and Magical Mysteries (Science)

- Requirement 5
  - Materials: Candle, matches, clear glass jar
    - Light the candle. Place the jar over the lit candle and the flame dies. This is a demonstration that even nonliving things need air to survive. Air exerts, or uses, its strength in all directions: up, down, and all around. Air is important for everything we do.

### Wolf

Elective adventure: Motor Away (Science, Engineering)

- Requirement 1A
  - Materials: Paper
    - This wolf adventure demonstrates that the structure of the plane can influence its properties of flight. This provides an opportunity to see how Bernoulli's principle works in practice.
    - An idea for this adventure to make it more fun and instructive is to create an airplane obstacle course. For each station in the course, choose a different paper airplane design, create your predictions, then fly the planes. Next, adjust the planes and fly again to get it closer to the initial prediction.
      - The course could include
        - Setting up a folding chair that the airplane must be thrown under
        - A helper holding a hula hoop at a station for the leaders to fly their airplanes through
        - A hula hoop on the ground as a landing circle station; leaders could try to land their airplanes within the circle. Predictions for this station are how far the airplane needs to fly to land in the circle
        - Create an airplane launching station with several pool noodles (instructions in handouts)
      - Helpful hint: Use a piece of painter's tape or masking tape to mark the launch line for each of these obstacle stations

Nova: Out of This World

- Requirement 3D
  - Materials: Paper, colored pencils, crayons, markers

## Bear

### Elective adventure: Super Science (Science)

- Requirements 1 and 2
  - Materials: Balloons, fleece blanket, tissue paper, aluminum foil, cardboard, paper, yarn, ribbon
    - Using the Balloon Electricity Prediction Sheet (handout), have the leaders conduct the investigation using items from the pages 270-271 of the Bear Handbook.
    - To begin the prediction part of the investigation, ask: “What will happen when we touch the balloon to these objects?” Have the leaders write down their predictions for each item
    - After all the items have been tested, debrief the investigation with these questions:
      - Did any of these items create a “pop” when touched by the balloon?
      - What object(s) had more protons than electrons when touched to the balloon? What is your evidence?
      - What object(s) had more electrons than protons when touched to the balloon? What is your evidence?
      - What did you learn about charged objects when carrying out this investigation?
    - Have the group brainstorm other items that could be investigated, using the More Static Electricity Tests portion of the prediction card. Ask: “Will these items produce more protons or electrons when touched to a balloon full of static electricity?” Gather predictions from the group for these additional items.

### Nova: Down and Dirty

- Requirement 3A
  - Materials: Paper, colored pencils, crayons, markers

## Webelos and Arrow of Light – Matt

### Elective Adventure: Earth Rocks! (Science)

- Requirements 1, 2, and 3
  - Materials: Rocks, minerals, field guide

### Nova: Science Everywhere

- Requirement 3A, 1 and 2
  - Materials: Arrow, rockets