**THE ADVENTURE:**
Design your very own rocket and launch it into space! Use household ingredients to fuel your rocket.

**PLAN:**
- Do you want to do this adventure indoors, outdoors or at camp?
- Rocket launching can get messy. Where can you launch your rockets outside?
- Have you or any other Beavers in your Colony built rockets before? If not, how can you learn how they’re made? What features does a rocket have?
- What containers will you use for your rockets? Make sure the lids will pop off.
- How will you build your launch pad for your rocket?

**DO:**

**Activity #1: Fuel Engineering**
- In your Lodge, experiment with different combinations of baking soda, vinegar, Alka-Seltzer and water. What do you notice? How will these combinations fuel your rocket?
- Choose the fuel you think will work best.
- Remember that all of the fuel has to fit inside your rocket.

**Activity #2: Rocket Building**
- Use the film canister or plastic bottle as a base model, then upgrade it! Use construction paper, glue and tape to add different features to your rocket.
- What will your rocket look like? How will you make it go higher? Fly straighter? Launch more quickly?

**Activity #3: Launch**
- Set up your launch pad.
- Prepare your rockets for launch, and let them fly!
REVIEW:
• What do you know now that you did not know before?
• What fuels worked the best? Which rockets flew the highest? Which rockets launched fastest?
• What designs worked the best? What shapes do they have?
• What did you like about this Adventure? What did you not like about it? How would you do this Adventure differently?

SAFETY TIP:
• Film canister rockets can be unpredictable and it is impossible to tell when the rocket will launch. Whoever is launching their rocket should be wearing safety goggles. Be sure to stand back during launch.

MATERIALS:
• Alka-Seltzer tablets
• Tap water
• Baking soda
• Vinegar
• 35mm film canister or small plastic container with a pop on lid, like a liquid yoghurt bottle (one each)
• Safety goggles
• Construction paper
• Scissors
• Cardboard
• Tape and glue

ONLINE RESOURCES:
• Ellen and Steve Spangler launch 3000 rockets
• Make a film canister rocket
• Science behind film canister rockets