

Scientific Achievement Badge

Activity Packet

Girl Scout Daisies

To get your special Lancaster Science Factory badge:

Complete all 4 required experiments
at these exhibits:

1. Roller Coaster
2. Dam the Creek
3. Electrical Circuits
4. Puzzles & Brain Teasers

Plus complete 3 out of the 5 experiments
at these exhibits:

1. Earthquake
2. Magnetic Sculpture
3. Light & Vision Room
4. Mechanical Advantage
5. Parachute Launch



You must get a signature from your troop leader for each experiment that you do!

Turn the page and read on to find out what you have to do!

REQUIRED EXPERIMENTS



1. Roller Coaster

Build a roller coaster that has at least six pieces of track. Be sure that the ball reaches the end!

What happens if the ball goes too fast?

Leader's Initials _____

2. Dam the Creek

Build a dam that keeps back almost all of the water using as few bricks as possible.

Can you hold back all of the water?

Leader's Initials _____

3. Electrical Circuits

Plug in the wires so that two lights shine brightly.

Leader's Initials _____

4. Puzzles and Brain Teasers

Try to solve 2 puzzles! The important thing is to try!

Leader's Initials _____

ELECTIVE EXPERIMENTS



1. Earthquake

Build something that won't fall down when you turn on the earthquake!

Does it help to use both the blocks and the sticks?

Leader's Initials _____

2. Magnetic Sculpture

See how many nuts you can get to stick together.

Leader's Initials _____

3. Light & Vision Room

Find out what a red image looks like under blue light. Create a purple shadow. Bend some light.

What are the primary colors of light?

Leader's Initials _____

4. Mechanical Advantage

Try to lift each 100 pound stack of weights.

Which is the easiest to lift— the one with more pulley wheels or the one with less?

Leader's Initials _____

ELECTIVE EXPERIMENTS



5. Parachute Launch

Propel a paratrooper up to the ceiling.

How do parachutes slow down the fall?

Leader's Initials _____

BONUS QUESTIONS!

1. What was your favorite exhibit or experiment?

2. Which exhibit or experiment was the most difficult?
