



Great Lakes Field Service Council – STEM Committee
Michigan Crossroads Council

Name:

Nova Cub Scout Engineering
Swing!

Pack:

Date:

This module is designed to help you explore how engineering and simple machines called levers affect your life each day.

1. Choose A or B or C and complete ALL the requirements:

A,B,C. Watch an episode or episodes, read or do a combination of both watching and reading (about one hour total) about anything related to motion or machines. Then do the following:

1. Make a list of at least two questions or ideas from what you watched or researched.

2. Discuss two of the questions or ideas with your counselor.

2. Complete ONE adventure from the following list for your current rank or complete option A or B.

(If you choose an Adventure, choose one you have not already earned.) Discuss with your counselor what kind of science, technology, engineering, and math was used in the adventure or option.

Wolf Cub Scouts

Motor Away
Paws of Skill

Bear Cub Scouts

Baloo the Builder
A Bear Goes Fishing

Webelos Scouts

Adventures in Science
Engineer

Option A: With your parent’s permission, take an old or broken household or mechanical item, break it down into its component pieces, and identify the purpose of five parts. Suggested items include a keyboard, floppy disk, telephone, VCR, tape deck, bicycle, people counter, printer or similar item. Make sure to use appropriate safety precautions.

Option B: Participate in two sports, either as an individual or part of a team, and identify the levers used in each sport.



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3. Explore EACH of the following:

A. Levers.

1. Make a list or drawing of the three types of levers. (A lever is one kind of simple machine.)

2. Show:

a. How each lever works

b. How the lever in your design will move something

c. The class of each lever

d. Why we use levers

B. On your own, design, including a drawing, sketch, or model, ONE of the following:

1. A playground fixture that uses a lever; 2. A game or sport that uses a lever; 3. An invention that uses a lever.
Be sure to show how the lever in your design will move something.

C. Discuss your findings with your counselor.



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4. Do the following:

- A. Visit a place that uses levers, such as a playground, carpentry shop, construction site, restaurant kitchen, or any other location that uses levers.

- B. Discuss with your counselor the equipment or tools that use levers in the place you visited.

5. Discuss with your counselor how engineering and simple machines affect your everyday life.
