CUB SCOUT NOVA AWARD - SWING (ENGINEERING)

Additional checkoff sheets and helps are available from ScouterMom.com.

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.										
1A. Watch an episode or episodes (about one hour total) of a show about anything related to motion or machines. Then do the following:										
1A-1. Make a list of at least two questions or ideas from what you watched.										
1A-2. Discuss two of the questions or ideas with your counselor.										
1B. Read (about one hour total) about anything related to motion or machines. Then do the following:										
1B-1. Make a list of at least two questions or ideas from what you read.										
1B-2. Discuss two of the questions or ideas with your counselor.										
1C. Do a combination of reading and watching (about one hour total) about anything related to motion or machines. Then do the following:										
1C-1. Make a list of at least two questions or ideas from what you read and watched.										
1C-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.										
2-Adventure 1. Motor Away (Wolf)										
2-Adventure 2. Paws of Skill (Wolf)										
2-Adventure 3. Baloo the Builder (Bear)										
2-Adventure 4. A Bear Goes Fishing (Bear)										
2-Adventure 5. Adventures in Science (Webelos)										
2-Adventure 6. Engineer (Webelos)										
2-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.										
2-Option B: Participate in two sports, either as an individual or part of a team, and identify the levers used in each sport.										
3. Explore EACH of the following:										
3A. Levers										

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3A-1. Make a list or drawing of the three types of levers. (A lever is one kind of simple machine.)										
3A-2. Show										
3A-2a. How each lever works										
3A-2b. How the lever in your design will move something										
3A-2c. The class of each lever										
3A-2d. Why we use levers										
3B. On your own, design, including a drawing, sketch, or model, ONE of the following. Be sure to show how the lever in your design will move something.										
3B-1. A playground fixture that uses a lever										
3B-2. A game or sport that uses a lever										
3B-3. An invention that uses a lever										
4. Do the following:										
4A. Visit a place that uses levers, such as a playground, carpentry shop, construction site, restaurant kitchen, or any other location that uses levers.										
4B. 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.										
Completed										
Presented										