



# Cub Scout Nova Award Swing!

## Cub Scout and Webelos Nova award for Engineering

1. Choose A, B, or C and complete all requirements.
  - A. Watch an episode or episodes (about an hour total) of a show about anything related to motion or machines. Then do the following
    - i. Make a list of at least two questions or ideas from what you watched.
    - ii. Discuss two of the questions or ideas with your Counselor
  - B. Read (about one hour total) about anything related to motion or machines. Then do the following:
    - i. Make a list of at least two questions or ideas from what you read.
    - ii. Discuss two of the questions or ideas with your Counselor
  - C. Do a combination of reading and watching (about one hour total) about anything related to motion or machines. Then do the following:
    - i. Make a list of at least two questions or ideas from what you read and watched.
    - ii. Discuss two of the questions or ideas with your Counselor.

Requirement 1

I chose option: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	
Name(s) of things I watched and/or read: _____	
<input type="checkbox"/> i. I made a list of at least two questions or ideas from what I read and watched.	
<input type="checkbox"/> ii. I discussed the ideas and questions with my Counselor.	
_____	_____
Counselor's okay	Date

2. Complete ONE adventure from the following list. (Choose one that you have not already earned.) Discuss with your counselor what kind of science, technology, engineering, or math was used in the adventure.

Requirement 2 (*circle the Adventure you completed*)

<u>Wolf Cub Scouts</u>	<u>Bear Cub Scouts</u>	<u>Webelos Scouts</u>
Motor Away	Baloo the Builder	Adventures in Science
Paws of Skill	A Bear Goes Fishing	Engineer
		Sportsman
<input type="checkbox"/> I discussed what kind of science, technology, engineering, or math was used in the Adventure		
_____		_____
Counselor's okay		Date



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3. Explore each of the following:

A. Levers

- i. Make a list or drawing of three types of levers. (A lever is one kind of a simple machine.)
- ii. 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:

- i. A playground fixture that uses a lever
- ii. A game or sport that uses a lever
- iii. An invention that uses a lever

C. Discuss your finding with your Counselor.

Requirement 3 (*complete A, B and C*)

<input type="checkbox"/> A. i) Three types of levers	_____	_____	_____
<input type="checkbox"/> iia) How the lever works	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> iib) How it moves something	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> iic) Lever class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> iid) Why we use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> B. I designed a:	playground fixture	game	invention ( <i>circle one</i> )
<input type="checkbox"/> C. I discussed my findings with my Counselor			
_____			_____
Counselor's okay			Date



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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.

Requirement 4 (*complete A and B*)

A. I visited a site \_\_\_\_\_

B. I discussed the visit with my Counselor

\_\_\_\_\_  
Counselor's okay

\_\_\_\_\_  
Date

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

Requirement 5

I discussed with my Counselor how engineering and simple machines affect my everyday life.

\_\_\_\_\_  
Counselor's okay

\_\_\_\_\_  
Date