



Cub Scout STEM 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 made a list of at least two questions or ideas from what I read and watched.	
<input type="checkbox"/> I discussed the ideas and questions with my Counselor.	
_____	_____
Counselor's Okay	Date

2. Complete ONE belt loop or pin from the following list. (Choose one that you have not not already earned).

- | | | |
|-----------------|-------------|--------------|
| Badminton | Golf | Table Tennis |
| Baseball | Hockey | Tennis |
| BB-Gun Shooting | Mathematics | Ultimate |
| Fishing | Softball | |

Requirement 2

I completed the: <input type="checkbox"/> belt loop <input type="checkbox"/> pin in _____	

Counselor's Okay	Date



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3. Levers

- A. Make a list or drawing of three types of levers. (A lever is one kind of a simple machine.)
- B. Be able to tell your Counselor:
 - i. the class of each lever
 - ii. how each lever works
- C. With your Counselor, discuss:
 - i. the type of lever that is involved with the motion for the belt loop or pin you chose for requirement 2.
 - ii. what you learned about levers and motion from earning your belt loop or pin
 - iii. why we use levers

Requirement 3

<input type="checkbox"/> A. I made a list or drawing of three types of levers.
<input type="checkbox"/> B. I told my Counselor the class of each lever and how each lever works.
<input type="checkbox"/> C. I discussed my Counselor the type of lever involved in the motion of the _____ belt loop/pin I earned for requirement 2, as well as what I learned about levers and motion and why we use levers.

Counselor's Okay

Date

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

<input type="checkbox"/> A. I visited: _____ on date: _____
<input type="checkbox"/> B. I discussed with my Counselor the equipment or tools that use levers in the place I visited.

Counselor's Okay

Date



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5. Do EACH of the following:

- A. On your own, design, including a drawing, sketch or model, ONE of the following:
- a playground fixture that uses a lever
 - a game or sport that uses a lever
 - an invention that uses a lever
- B. Discuss with your Counselor how the lever in your design will move something.

Requirement 5

A. I designed a/an: _____ that uses a class ____ lever and showed my Counselor a drawing sketch model of it.

B. I discussed with my Counselor how the lever in my design will move something.

Counselor's Okay Date

6. Discuss with your Counselor how levers affect your everyday life.

Requirement 6

I discussed with my Counselor how levers affect my everyday life.

Counselor's Okay Date