



Venturer Nova Award Hang On!



Venturer Nova Award for Engineering

1. Choose A or B or C and complete ALL the requirements.
 - A. Watch about three hours total of engineering-related shows or documentaries that involve motion or motion-inspired technology. 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 three hours total) about motion or motion-inspired technology. 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 three hours total). 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 from what I read and watched.	
<input type="checkbox"/> ii. I discussed the ideas and questions with my Counselor	
_____	_____
Counselor's okay	Date

2. Choose ONE STEM field of interest from the following list. Complete ALL the requirements for a Venturing STEM Exploration in that field. See pages 27-29 of the Nova Awards Guidebook for the requirements. (If you have already completed a Venturing STEM Exploration in one of these fields, please choose a different field for this award.)

- | | | |
|---------------------|---------------------------|------------------|
| Archery | Electronics | Railroading |
| Aviation | Engineering | Rifle Shooting |
| Composite Materials | Inventing | Robotics |
| Drafting | Model Design and Building | Shotgun Shooting |

Requirement 2

I completed a Venturing STEM Exploration in the field of _____.	

_____	_____
Counselor's okay	Date



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3. Do ALL of the following:
- A. Make a list or drawing of the six simple machines.
 - B. Be able to tell your counselor the name of each machine and how each machine works.
 - C. Discuss the following with your counselor:
 - i. The simple machines that were involved with the motion in your chosen STEM Exploration. (Hint: Look at the moving parts of an engine to find simple machines.)
 - ii. The energy source causing the motion for the subject of your STEM Exploration.
 - iii. What you learned about motion from doing the STEM Exploration.

Requirement 3

- A. I made a list or drawing of the six simple machines
 - B. I told my counselor the name of each simple machine and how it works.
 - C. I discussed with my Counselor:
 - i. The simple machine(s) involved with my STEM Exploration.
 - ii. The energy source for my STEM Exploration.
 - iii. What I learned about motion from my STEM Exploration..

Counselor's okay

Date

4. Choose A or B and complete ALL the requirements.
- A. Visit an amusement park. Then discuss the following with your counselor:
 - i. The simple machines present in at least two of the rides
 - ii. The forces involved in the motion of any two rides
 - B. Visit a playground. Then discuss the following with your counselor:
 - i. The simple machines present in the playground equipment
 - ii. The forces involved in the motion of any two playground fixtures

Requirement 4

- I chose option: A B

I visited an amusement park or playground and:

 - i. I discussed the simple machines present
 - ii. I discussed the forces involved in the motion

Counselor's okay

Date



Venturer Nova Award Hang On!



5. Do the following:
- A. On your own, design one of the following and include a drawing or sketch: an amusement park ride OR a playground fixture OR a method of transportation.
 - B. Discuss with your counselor:
 - i. The simple machines present in your design
 - ii. The energy source powering the motion of your creation

Requirement 5

<p>A. I designed and made a drawing of:</p> <ul style="list-style-type: none"><input type="checkbox"/> Amusement park ride OR<input type="checkbox"/> Playground fixture OR<input type="checkbox"/> Method of Transportation <p>B. I discussed with my counselor</p> <ul style="list-style-type: none"><input type="checkbox"/> i. The simple machine(s) in my design<input type="checkbox"/> ii. The energy source powering my design <p>_____</p> <p>Counselor's okay _____ Date _____</p>

6. Discuss with your counselor how engineering affects your everyday life.

Requirement 6

<p>I discussed with my Counselor how engineering affects my everyday life.</p> <p>_____</p> <p>Counselor's okay _____ Date _____</p>
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