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

<table>
<thead>
<tr>
<th>I chose option:</th>
<th>☐ A</th>
<th>☐ B</th>
<th>☐ C</th>
</tr>
</thead>
</table>

Name(s) of things I watched and/or read: _________________________________________

☐ i. I made a list of at least two questions or ideas from what I read and watched.

☐ 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)

<table>
<thead>
<tr>
<th>Wolf Cub Scouts</th>
<th>Bear Cub Scouts</th>
<th>Webelos Scouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Away</td>
<td>Baloo the Builder</td>
<td>Adventures in Science</td>
</tr>
<tr>
<td>Paws of Skill</td>
<td>A Bear Goes Fishing</td>
<td>Engineer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sportsman</td>
</tr>
</tbody>
</table>

☐ I discussed what kind of science, technology, engineering, or math was used in the Adventure

_________________________________________  ____________
Counselor’s okay  Date
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)

| ☐ A. i) Three types of levers | ☐ | ☐ | ☐ |
| ☐ iia) How the lever works | ☐ | ☐ | ☐ |
| ☐ iib) How it moves something | ☐ | ☐ | ☐ |
| ☐ iic) Lever class | ☐ | ☐ | ☐ |
| ☐ iid) Why we use | ☐ | ☐ | ☐ |
| ☐ B. I designed a: playground fixture | ☐ | ☐ | ☐ |
| ☐ game | ☐ | ☐ | ☐ |
| ☐ invention | ☐ | ☐ | ☐ |
| ☐ (circle one) |
| ☐ C. I discussed my findings with my Counselor |

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 (complete A and B)

☐ A. I visited a site __________________________________________________________

☐ B. I discussed the visit with my Counselor

_________________________________________________________  Date

Counselor’s okay

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.

_________________________________________________________  Date

Counselor’s okay