1. Choose A or B or C and complete ALL the requirements.
   A. Watch about three hours total of technology-related shows or documentaries that involve transportation or transportation 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 transportation or transportation 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.

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.)

   Automotive Maintenance  Electricity  Railroading
   Aviation               Energy       Small-Boat Sailing
   Canoeing                Farm Mechanics Space Exploration
   Cycling                 Motor Boating Truck Transportation
   Drafting                Nuclear Science

I chose option:  ☐ A  ☐ B  ☐ C

I made a list of at least two questions from what I read and watched.

I discussed the ideas and questions with my Counselor

Counselor’s okay                      Date

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

Counselor’s okay                      Date
3. Do ALL of the following:
   A. Use the requirements from the above list of STEM Explorations:
      i. Tell your counselor the energy source(s) used in these STEM Explorations.
      ii. Discuss the pros and cons of each energy source with your counselor.
   B. Make a list of sources of energy that may be possible to use in transportation.
   C. With your counselor:
      i. Discuss alternative sources of energy.
      ii. Discuss the pros and cons of using alternative energy sources.

   **Requirement 3**

   | A. | i. I told my counselor about the energy sources used in these STEM Explorations. |
   |    | ii. I discussed the pros and cons of each energy source. |
   | B. | I made a list of sources of energy used in transportation. |
   | C. | i. I discussed alternative sources of energy. |
   |    | ii. I discussed the pros and cons of using alternative energy sources. |

   Counselor’s okay ___________________________ Date ________
4. Design and build a working model vehicle (not from a kit).
   A. Make drawings and specifications of your model vehicle before you begin to build.
   
   B. Include one of the following energy sources to power your vehicle (do not use gasoline or other combustible fuel source): solar power, wind power, or battery power.
   
   C. Test your model. Then answer the following questions:
      i. How well did it perform?
      ii. Did it move as well as you thought it would?
      iii. Did you encounter problems? How can these problems be corrected?
   
   D. Discuss with your counselor:
      i. Any difficulties you encountered in designing and building your model.
      ii. Why you chose a particular energy source.
      iii. Whether your model met your specifications.
      iv. How you would modify your design to make it better.

   .failure

   Requirement 4

   ☐ A. I made drawings and specifications of my model before I began building it.
   ☐ B. I included ______________________ power in my model.
   ☐ C. I tested my model.
       ☐ i. I evaluated how it performed.
       ☐ ii. It moved ☐ better than ☐ as good as ☐ not as good as I thought it would.
       ☐ iii. I ☐ did ☐ did not encounter problems.
       Explain: ____________________________________________
   ☐ D. I discussed with my Counselor:
       ☐ i. Difficulties encountered in designing and building my model.
       ☐ ii. Why I chose that particular energy source.
       ☐ iii. If my model met my specifications.
       ☐ iv. How I would modify my design to make it better.

   Counselor’s okay ___________________________ Date __________

5. Discuss with your counselor how technology affects your everyday life.

   Requirement 5

   I discussed with my Counselor how technology affects my everyday life.

   Counselor’s okay ___________________________ Date __________