5 WAYS to bring the NOVA Engineering Design Challenge to your Classroom Spring 2022

Are you looking for something new for your classroom? Try the NOVA Design Challenge, where students are tasked to design a product to improve their school life!

Here are 5 ways to integrate the challenge into your classroom:

1. Extra Credit Assignment

Simply send your students to the Fab Lab website and follow all instructions for participation and submission about the Design Challenge! They receive extra credit by showing their submission.

2. Complete the Challenge with CAD

Submissions for our Design Challenge are open ended, but if you are a STEM teacher you may want to require the use of Computer Aided Design (CAD) for submissions. Follow the Design Challenge instructions, but require students to submit their design as a CAD file.

3. Short-Term Project (1-3 weeks)

a) Introduce students to the Design Thinking Process and document all of their steps, including research, brainstorming and how they chose their solution.

b) Students sketch their final design, physically build it, test and iterate their design with consumable materials, and send in their submission to the Fab Lab!

4. Long-Term Project (1 month or longer)

a) Students create a timeline, calendar, or Gantt Chart and assign due dates for:
- Documenting each step in the Design Thinking Process.
- Testing and iterating their design.
- Completing their final design in CAD and/or making physical product.
- Submitting to Fab Lab website.

b) Students set daily goals for classwork & homework based on their calendar.

c) Hold bi-monthly meetings with students to present individual or team progress.

d) Students present final product to class along with all documentation.

5. Engineering Design Process vs. Design Thinking

Research, discuss, present the differences between each of the processes.