



## **2021 Challenge**

Over the past 6 months, we have all spent a lot of time in our home. You may have discovered that some products or appliances in your home could be safer or more environmentally friendly. Thermo Fisher Scientific is working to make the world healthier, cleaner and safer so they are asking you to rethink a product that you would find in your home, or create one that you should find in your home. This product could be (but not limited to) a new or different way to power your home, a new or updated appliance, or a new gadget for home entertainment. Be creative!

### **Rules:**

- A team of 2-4 students will work together on the project.
- This year we are asking students to create their project using recyclable materials or K'Nex.
- Each team will need to create and submit a design notebook and a blueprint prior to their regional competition.
- Each team will need to prepare a presentation (max 2 minutes) on their model and how they answered the challenge.

### **Judging Criteria:**

- Creativity
- Teamwork
- Challenge Success
- Design
- Presentation

### **Awards:**

- Awards will be given to top three teams in grades 4-5 and grades 6-8
- Additional prizes may be awarded (best blueprint, most creative, etc.)
- Top team in each division at each regional competition will advance to the state competition

### **Competitions**

This year's competitions will be held virtually. Please check with your Intermediate Unit on the specifics of their regional competition. Information on the virtual state competition will be sent to the winning teams at each regional competition.



## Parts of the competition:

### Design Notebook

- This should be a journal of the team's progress from start to finish.
- The Notebook should include elements of the Engineering Design Process.
- [Resources for Design Notebooks](#)

### Blueprint

- A blueprint is a technical drawing or design plan for a project. It is used to represent the final product.
- Blueprints for the STEM Design Challenge can be a photo, drawing, cad drawing, online sketch, etc. Be creative!
- [Resources for blueprint ideas](#)

### Prototype

- Teams will answer the challenge by creating a prototype of their idea. This year teams may use recyclable materials or K'Nex pieces.
- Teams may include a backdrop or artwork but judges will not consider this in their scoring.

### Presentation

- Teams are asked to share their ideas in a presentation for the judges.
- Each presentation will be 2 minutes or less.
- Every student on the team should present.
- Judges may ask questions of the team after the presentation.
- Teams may be required to submit a video of their presentation for the competition.
- [Resources for presentation videos](#)