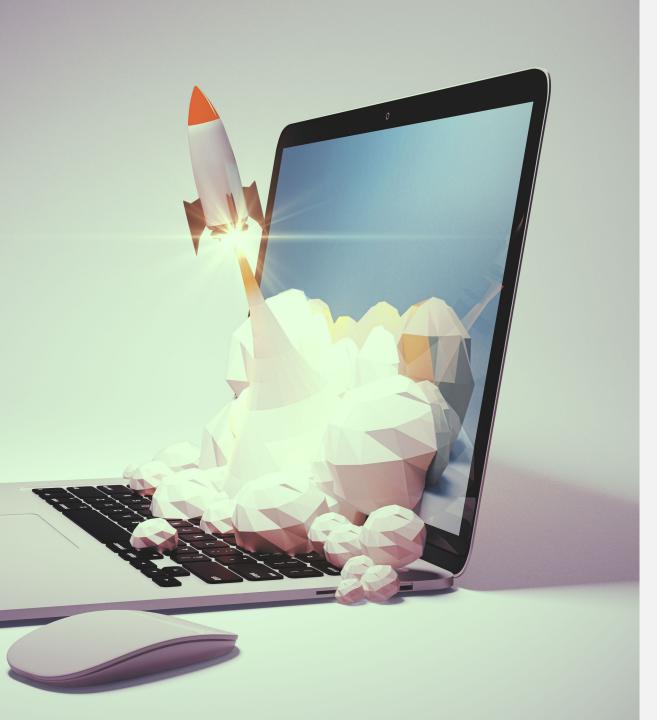# UNMASK THE PROBLEM

Career Interest Development: Level One

Transition to High School

This presentation covers the short version of this activity.

LEARNING OBJECTIVES

Students will

- identify cause-and-effect relationships

- apply problem-solving and troubleshooting steps/methods

- use techniques to support reasoning.

ICEBREAKER

Use the Pre-Activity Process Questions to create a quiz or start a discussion.

5-E MODEL

5E is a progressive approach to instruction with the following stages:

- Engage
- Explore
- Explain
- Elaborate
- Evaluate.

Instructional structure.

FOLLOW THE STEPS IN THE DESIGN THINKING MODEL

Patients in hospitals are frightened. Now that everyone is wearing a mask, it is difficult for medical personnel to show and communicate empathy with patients. Often, patients are not allowed to see family and their support in person due to restrictions. Fear complicates and prolongs patient recovery by adding stress, loneliness, and isolation.

What can be done?

DESIGN THINKING

- **Empathize**: Empathy is the ability to understand and share the feelings of another. In this stage of the process, you learn about the audience and understand the problem.

- **Define**: It's hard to solve the problem without first defining it! In this stage of the process, you determine the objectives and the challenges.

- **Ideate**: In this stage of the process, you brainstorm and create solutions. There are no bad ideas!

DESIGN THINKING

- **Prototype**: In this stage of the process, you build representations of one or more ideas (this will be a sketch or written/verbal description of a solution). Note: This does not need to be a product change, such as a new type of mask. It can be a policy for staff interactions with patients or how patients interact with a family that they cannot see in person. Perhaps show this video as an example of a solution that is not necessarily product based, but service based: https://www.nbcdfw.com/news/health/special-badge-gives-patients-a-look-at-health-care-professionals-behind-the-mask/2430670/

- **Test**: In this stage of the process, you test your ideas, gain user feedback, then start over as many times as needed, refining as you go. The refining process is iterative, NOT linear (because students can't actually perform this step, you might ask if the final sketch of the solution has flaws or other problems and ask how they would address them).

EXAMPLE OF ONE SOLUTION

Watch a news video: "[Special Badge Gives Patients a Look at Health Care Professionals Behind the Mask](#)"

Discuss or have students work in teams to supply their solution. Share.

EVALUATION

Make a quiz or discussion from
the Post-Activity Process Questions

VOCABULARY

Refer to the list in your guide or use the
link in Quizlet.

EXTENSION

Students will walk through the mask design process by using the design thinking model to produce a prototype of a new mask that better serves the hearing-impaired community.

EXTENSION

Watch a 3-minute video: "First Fully Transparent Surgical Mask About to Go into Production"

- Reflect in journal or discuss in small group

- If time allows, encourage students to revisit their brainstorm from the pre-assessment with more ideas to improve masks.

EXTENSION

Watch a 2-minute video: "What is Design Thinking?"

- Reflect in journal or discuss in small group

- Prompt students to relate the design thinking back to the second video in the EXPLORE phase and explain how those engineers used design thinking to solve a problem.

EXTENSION: CAREER CALL-OUT

Students are encouraged to explore a discipline of engineering that interests them. They can share in pairs, or you can do a jig-saw type activity so that each student learns about multiple disciples of engineering.