

Design Thinking Protocol

Unit of study:

Background/ context of lesson:

Content Standard Alignment:

The focus of Design Thinking is for students to create a product that meets the “end users” unique needs. In order to determine these needs the student must empathize with the end user to really think about what matters to them.

The protocol emphasizes process over product and requires students to reflect!

Design Thinking Protocol

Problem: Students/ class brainstorm a list of potential problems the end user faces.

Empathy: Students must empathize with the end user by putting themselves in their shoes, collecting information through interviews, and seeking input from other classmates.

Problem statement: Student selects 1 problem they want to focus on and creates a Problem Statement to help them stay focused.

Problem Statement:

(Who are you helping?)

needs a way to _____

(What do they need?)

because _____

(Why do they need it?)

It is important to note the focus here is the problem, not identifying a solution!

Ideate: Students generate at least 5 possible solutions for their selected problem. Starting with the worst idea, then 4 “real” ideas.

After about 10 minutes they select which solution they want to use as their prototype.

Prototype Design: On the back of their problem state page, students write a list of materials they might want to use and draw a sketch of their solution idea.

Note- prototypes can be anything! Songs, posters, box builds, anything that would address the problem of the end user.

Prototype Build: Students need at least 1 hour of dedicated build time. This is the time to encourage failure and perseverance! As students struggle the teacher should encourage them to reflect on what is not working and come up with alternative solutions.

Test:

This is when the prototypes are shared with the class or an authentic audience. Oftentimes prototypes are designed for hypothetical end users, class presentations are a great way to share their thinking. Presentations should include:

- 1) Introducing themselves
- 2) Sharing their Problem Statement (Who they were helping? What was the problem they were trying to solve?)
- 3) What did they design to solve the problem?
- 4) Did they have any failures? If so, how did they persevere?

Reflect:

Students complete the Design Thinking Reflection page. Try to get your students to critically think about "whether they would like to do a design cycle again". "It was fun" is not a real answer!

Assessment:

Have your students evaluate themselves on the rubric first! They are often more critical than their teachers. Make sure students understand what they need to work on next time if they did not score proficient.