

**Learning Targets / Success Criteria:**

Unit 2: Introduction to Design. Data Team: Exploratory PLTW Activity 1: Instant Design Challenge

Priority Standard:	LO2.1D: Create a physical model or prototype.
Overarching Skills:	KS2.1D1: Construct a prototype based on design documentation. KS2.1D2: Conduct prototype testing to identify design flaws or additional needs. KS2.1D3: Analyze and interpret testing data collected and make modifications to optimize the design or process.
WALT:	Construct a prototype based on design documentation. (Review task, assign roles, document: AFO)
Success Criteria:	I can...describe the components of the design document. I can...explain the purpose of a design document. I can...document the prototype process.
WALT:	Conduct prototype testing to identify design flaws or additional needs. (Build and test AFO.)
Success Criteria:	I can...analyze prototype function. I can...identify prototype features that need improvement..
WALT:	Analyze and interpret testing data collected and make modifications to optimize the design or process. (Improve AFO.)
Success Criteria:	I can propose solutions to improve a prototype. I can revise and rebuild a prototype to implement improvements.

Priority Standard:	LO3.2A: Communicate effectively for specific purposes and settings.
Overarching Skills:	KS3.2A4: Communicate to meet the needs of the audience and be appropriate to the situation.
WALT:	Communicate to meet the needs of the audience and be appropriate to the situation. (Informally present AFO design and process.)
Success Criteria:	I can clearly explain the team's prototyping process to the class: ideas generated, problems encountered, changes made, and successes achieved.

Priority Standard:	LO3.1A: Collaborate effectively on a diverse and multi-disciplinary team.
Overarching Skills:	KS3.1A5: Identify and evaluate positive and negative behaviors that impact the team's effectiveness.
WALT:	Identify and evaluate positive and negative behaviors that impact the team's effectiveness. (Create norms.)
Success Criteria:	I can identify my personal preferences for working effectively in a group, and combine these with the group and the class to identify best practices for selecting group norms.

Priority Standard:	LO1.1A: Describe and/or analyze moments within a problem solving process where persistence, iteration, and the positive aspect of failure played an important role in gaining understanding about a problem or unexpected observation.
Overarching Skills:	<p>KS1.1A1: Understand that problem solving and experimentation are cyclical, meaning steps are repeated as many times as needed.</p> <p>KS1.1A2: Recognize that identifying complex problems, defining them clearly, and proposing solutions can be difficult and requires persistence and iteration.</p> <p>KS1.1A3: Describe how failure can produce positive outcomes by improving understanding.</p>

WALT:	Understand that problem solving and experimentation are cyclical, meaning steps are repeated as many times as needed. (Group Design Process Reflection)
Success Criteria:	I can identify examples from the recent design challenge demonstrating the cyclical nature of design.
WALT:	Recognize that identifying complex problems, defining them clearly, and proposing solutions can be difficult and requires persistence and iteration. (Group Design Process Reflection)
Success Criteria:	I can identify examples from the recent design challenge of difficulties and problems different groups experienced.
WALT:	Describe how failure can produce positive outcomes by improving understanding. (Group Design Process Reflection)
Success Criteria:	I can give a clearly written example of what was learned in the design challenge when failures occurred.

**Learning Targets / Success Criteria:**

**Unit 2: Introduction to Design. Data Team: Exploratory PLTW Activity 2: A Picture is Worth 1000 Words**

Priority Standard:	LO2.3B: Sketch and/or interpret perspective, isometric, and multiview drawings with adequate attention to standards and critical annotations.
Overarching Skills:	KS2.3B1: Recognize perspective, thumbnail, isometric, and multiview sketches. KS2.3B2: Recognize that isometric drawings of an object are used to provide information that a perspective drawing may not be able to show. KS2.3B5: Create a rapid, accurate sketch to communicate ideas.
WALT:	Recognize perspective, thumbnail, isometric, and multiview sketches and that isometric drawings of an object are used to provide information that a perspective drawing may not be able to show. (Thumbnail, isometric and multiview sketches. 2 Days.)
Success Criteria:	I can identify and create the different types of sketches.

	I can analyze and explain the uses for the different sketch types.
WALT:	Create a rapid, accurate sketch to communicate ideas.
Success Criteria:	I can select and the appropriate sketch type to communicate important information about an object. I can use a sketch to recreate or describe the features of an object.