

(L) draw conclusions related to a hypothesis and support those conclusions using experimental data.

(4) Physical Properties

Project Lead The Way [PLTW] Engineering Essentials

- (M) create or convert electronically stored data or computer models to appropriate formats that can be utilized by other tools or applications, such as rapid prototyping equipment, Global Information Systems, and spreadsheet applications;
- (N) identify the changes that are attributed to an abstraction and what details have been hidden or removed; and
- (O)

- (E) identify and describe contemporary engineering issues of local, regional and cultural significance; and
 - (F) describe the interdisciplinary nature of modern engineering and explain why an interdisciplinary approach to engineering problem solving can result in better, more sustainable solutions.
- (9) Project Management: The student applies project management tools when designing and developing a solution to success.

Project Lead The Way [PLTW] Engineering Essentials

- x Students create maps and layers in a geographic information system.
- x Students use project management tools, like a project schedule, to promote project efficiency.

Suggested methods for evaluating student outcomes:

PLTW offers End-of-Course assessments that measure subject matter knowledge as well as the in-demand, transportable skills. Additional assessment examples include:

- Online Polls
- Whole Class Whiteboarding
- 5x5 Journal -students journal about the five most interesting ideas they discover during a lesson and explain five aspects of that idea that resonate with them.
- Misconception Check teacher states a common idea or misconception about a topic. Students either agree or disagree with the misconception and explain their reasoning.
- KWHLA Chart- Students make a chart answering the questions:
 - K- What do I know?
 - W - What do I want to know?
 - H-How will I find out?
 - L- What have I learned?
 - A- What action will I take?
- Q- What new questions do I have?
- Rubrics
- Student Presentations
- Graphic Organizers
- Engineering Design Notebook
- PLTW End of Course Exam

Teacher qualifications:

- x Legacy Master Science Teacher.
- x Mathematics/Physical Science/Engineering: Grades 6-12.
- x Mathematics/Physical Science/Engineering: Grades 7-12.
- x Physical Science: Grades 7-12.
- x Physical Science: Grades 8-12.
- x Physics/Mathematics: Grades 11-12.
- x Physics/Mathematics: Grades 11-12.
- x Science Grades 7-12.
- x Science: Grades 7-12.
- x Science, Technology, Engineering, and Mathematics: Grades 6-12.
- x Secondary Industrial Arts (Grades 7-12).
- x Secondary Industrial Technology (Grades 7-12).
- x Secondary Physics (Grades 11-12).
- x Secondary Science (Grades 7-12).
- x Secondary Science, Composite (Grades 7-12).
- x Technology Education: Grades 7-12.
- x Legacy Master Mathematics Teacher.
- x Mathematics: Grades 7-12.
- x Mathematics: Grades 8-12.
- x Secondary Mathematics: Grades 7-12.

