



Grades 6–8

3.5.6-8.P (ETS) Technology and Engineering: Applying, Maintaining, and Assessing Technological Products and Systems

Students who demonstrate understanding can evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

Clarifying Statement: There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
Engaging in Argument From Evidence Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world. <ul style="list-style-type: none"> Evaluate competing design solutions based on jointly developed and agreed-upon design criteria. 	Developing Possible Solutions <ul style="list-style-type: none"> There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem. 	Critical Thinking Defends technological decisions based on evidence.

Pennsylvania Context: N/A

Pennsylvania Career Ready Skills: Explain how expressive communication strategies can affect others.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.3.5.6-8.A: Cite specific textual evidence to support analysis of science and technical texts. CC.3.5.6-8.I: Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. CC.3.6.6-8.F: Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. CC.3.6.6-8.H: Draw evidence from informational texts to support analysis, reflection, and research.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively.
Integrated Standards for Science, Environment & Ecology, and Technology & Engineering Standards Grades K–12	N/A