



**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)
<p><b>Engaging in Argument From Evidence</b> 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.</p> <ul style="list-style-type: none"> <li>Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.</li> </ul>	<p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.</li> </ul>	<p><b>Critical Thinking</b> Defends technological decisions based on evidence.</p>

**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.



Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Integrated Standards for Science, Environment & Ecology, and Technology & Engineering Standards Grades K-12	N/A