

6.PS3 Energy

- 6.PS3.1 Analyze the properties and compare sources of kinetic, elastic potential, gravitational potential, electric potential, chemical, and thermal energy.
- 6.PS3.2 Construct a scientific explanation of the transformations between potential and kinetic energy.
- 6.PS3.3 Analyze and interpret data to show the relationship between kinetic energy and the mass of an object in motion and its speed.
- 6.PS3.4 Conduct an investigation to demonstrate the way that heat (thermal energy) moves among objects through radiation, conduction, or convection.

6.ETS1 Engineering Design

- 6.ETS1.2 Design and test different solutions that impact energy transfer.

Key Ideas and Details:

- CCSS.ELA-LITERACY.RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts.
- CCSS.ELA-LITERACY.RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
- CCSS.ELA-LITERACY.RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

Craft and Structure:

- CCSS.ELA-LITERACY.RST.6-8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.
- CCSS.ELA-LITERACY.RST.6-8.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.
- CCSS.ELA-LITERACY.RST.6-8.6 Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.

Integration of Knowledge and Ideas:

- CCSS.ELA-LITERACY.RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
- CCSS.ELA-LITERACY.RST.6-8.8 Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
- CCSS.ELA-LITERACY.RST.6-8.9 Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

Range of Reading and Level of Text Complexity:

- CCSS.ELA-LITERACY.RST.6-8.10 By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.