

Grade 9

Energy

1 Predict the resulting motion of a system after applying external forces on the system, including friction (e.g., a book on a table, an object being pushed across a floor, an accelerating car). [SCI.AAS.PS.HS.1](#)

1a Identify the transformation of potential energy to kinetic energy as an object moves. [SCI.AAS.PS.HS.1A](#)

Waves and Their Applications in Technologies for Information

2c Identify different types of waves and the media through which they travel (sound waves traveling through air and water, seismic waves traveling through Earth). [SCI.AAS.PS.HS.2C](#)

2e Identify common devices that use light or sound waves to transmit information. [SCI.AAS.PS.HS.2E](#)

3 Recognize how magnets and electricity are used in modern products (e.g., speakers, wireless chargers). [SCI.AAS.PS.HS.3](#)

3c Using an illustration, identify the differences between a simple series circuit and a parallel circuit. [SCI.AAS.PS.HS.3C](#)

Matter and Its Interactions

4a Using physical properties, differentiate between metals and nonmetals. [SCI.AAS.PS.HS.4A](#)

5b Recognize that temperature affects the pressure and volume of a confined gas (e.g., placing a balloon on ice, reducing tire pressure on a cold day). [SCI.AAS.PS.HS.5B](#)

6 Identify the properties of various types of solutions and how they are useful in real-world applications. [SCI.AAS.PS.HS.6](#)

6c Identify common acids and bases (e.g., bleach, salt, lemon, soap). [SCI.AAS.PS.HS.6C](#)

6d Differentiate between reactants and products. [SCI.AAS.PS.HS.6D](#)