

Topic: Physical Science

Days: 80

Subject(s): Science

Grade(s): 6th

Key Learning:

Matter can be grouped according to its unique characteristics and properties. Forces and energy exist in nature.



Unit Essential Question(s):

How do scientists describe the structure and properties of matter?
What relationship exists between energy and motion?



Concept:

The Nature of Matter

3.1.7.B, 3.2.7.A, 3.2.7.B, 3.2.7.C, 3.4.7.A

Concept:

Forces and Motion

3.1.7.B, 3.2.7.A, 3.2.7.B, 3.2.7.C, 3.4.7.C, 3.7.7.B

Concept:

Energy

3.1.7.B, 3.2.7.A, 3.2.7.B, 3.2.7.C, 3.4.7.B, 3.7.7.B



Lesson Essential Question(s):

What are the basic building blocks of matter? (A)

What are the characteristics of solids, liquids, and gases? (A)

How are physical and chemical changes different? (A)

How do we classify matter? (A)

How was the periodic table developed and how is it organized today? (ET)

Lesson Essential Question(s):

How can you relate, calculate, and interpret the following graphs individually: speed, velocity, and acceleration? (A)

How are gravity, mass, and weight related? (A)

What is the relationship between force and motion in a machine? (ET)

How do simple machines make work easier? (A)

What is the relationship between the forces that objects exert on each other? (ET)

Lesson Essential Question(s):

What are the major forms of energy and how are they used? (A)

How are kinetic and potential energy related? (A)

What factors influence kinetic and potential energy? (A)

How is energy transferred and conserved? (A)



Vocabulary:

matter, proton, neutron, electron, nucleus, molecule, chemical bond, compound, element, particle, viscosity, melting point, boiling point, physical change, chemical change, solution, weight, mass, volume, density, metal, nonmetals, metalloids

Vocabulary:

speed, velocity, acceleration, Newton, gravity, , air resistance, balanced and unbalanced forces, inertia, work, weight, motion, reference point, force, net force, friction, freefall, terminal velocity, momentum, joule, inclined plane, , wedge, screw, lever, fulcrum, wheel and axle, , pulley, compound machine, gears

Vocabulary:

potential energy, kinetic energy, voltage, potential difference, mechanical energy, thermal energy, chemical energy, electrical energy, nuclear energy, law of conservation of energy, energy conservation, renewable and nonrenewable resources

Additional Information:

Attached Document(s):

Vocab Report for Topic: Physical Science

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Concept:

The Nature of Matter

- matter -
- proton -
- neutron -
- electron -
- nucleus -
- molecule -
- chemical bond -
- compound -
- element -
- particle -
- viscosity -
- melting point -
- boiling point -
- physical change -
- chemical change -
- solution -
- weight -
- mass -
- volume -
- density -
- metal -
- nonmetals -
- metalloids -

Concept: Forces and Motion

- speed -
- velocity -
- acceleration -
- Newton -
- gravity -
-
- air resistance -
- balanced and unbalanced forces -
- inertia -
- work -
- weight -
- motion -
- reference point -
- force -
- net force -
- friction -
- freefall -
- terminal velocity -
- momentum -
- joule -

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inclined plane -

-

wedge -

screw -

lever -

fulcrum -

wheel and axle -

-

pulley -

compound machine -

gears -

Concept: Energy

potential energy -

kinetic energy -

voltage -

potential difference -

mechanical energy -

thermal energy -

chemical energy -

electrical energy -

nuclear energy -

law of conservation of energy -

energy conservation -

renewable and nonrenewable resources -