

Name: Reynolds, Moon		Grading Quarter: 2	Week Beginning: Week 4 11/4/24-11/8/24
School Year: 2024-2025		Subject: Science	
Monday	Notes: Grade 4 Unit 1: Forces and Energy Lesson 1: Forces and Motion Essential Question: How do forces affect motion?	Objective: - Students will construct an explanation to describe the cause-and-effect relationship between forces and motion. - Students will consider how the surface area of an object affects the rate at which that object falls. - Students will understand that energy can be transferred between objects. Lesson Overview: - Explain - Pages 16-17- Inquiry Activity: <i>An Object's Surface Area</i> - Materials: 2 sheets of notebook paper - State the Claim - Make a claim about how the surface area of an object affects its speed as it falls. - Carry Out Investigation - Record findings. - Communicate Information - Do your results support your prediction? - What evidence could an engineer use to construct an explanation about the energy of airplanes? - Explain how engineers design vehicles to move efficiently through the air. - Talk About It - How could a skydiver change his or her surface area to fall faster or slower?	Academic Standards: 5.P3U1.4 Obtain, analyze, and communicate evidence of the effects that balanced and unbalanced forces have on the motion of objects. 5.P3U2.5 Define problems and design solutions pertaining to force and motion. 5.P4U1.6 Analyze and interpret data to determine how and where energy is transferred when objects move.

Tuesday	Notes: Grade 4 Unit 1: Forces and Energy Lesson 1: Forces and Motion Essential Question: How do forces affect motion?	Objective: - Students will construct an explanation to describe the cause-and-effect relationship between forces and motion. Lesson Overview: - Elaborate - Page 18- What Does a Robotics Engineer Do? - Have students read and answer questions. - Talk About It - As a mechanical engineer, what information used by a robotics engineer would help you in planning to design your roller coaster? - Page 19- Soft Landing <i>Beagle 2 Mars</i> article by Fiona Bayrock. - Have students read and answer questions.	Academic Standards: 5.P3U1.4 Obtain, analyze, and communicate evidence of the effects that balanced and unbalanced forces have on the motion of objects. 5.P3U2.5 Define problems and design solutions pertaining to force and motion. 5.P4U1.6 Analyze and interpret data to determine how and where energy is transferred when objects move.
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Wednesday	Notes: Grade 4 Unit 1: Forces and Energy Lesson 1: Forces and Motion Essential Question: How do forces affect motion?	Objective: • Students will construct an explanation to describe the cause-and-effect relationship between forces and motion. • Use evidence to construct an explanation relating the speed of an object to the energy of that object. • Ask questions and predict outcomes about the changes in energy that occur when objects collide. Lesson Overview: • Evaluate ○ Pages 20-22- Lesson 1 Review ▪ Summarize It • Explain how forces affect the motion of the skydiver. ▪ Three-Dimensional Thinking • If a race car traveled a distance of 500 kilometers in 2 hours, what was the car's average speed? • How can you best describe an object's motion? • If the drag forces are increased, then how will an object fall? ▪ Extend It • Students will work with their groups to collaborate on a design for a parachute that will land a boiled egg as slowly and as softly as possible. ▪ Open Inquiry • What questions do you still have about how objects move?	Academic Standards: 5.P3U1.4 Obtain, analyze, and communicate evidence of the effects that balanced and unbalanced forces have on the motion of objects. 5.P3U2.5 Define problems and design solutions pertaining to force and motion. 5.P4U1.6 Analyze and interpret data to determine how and where energy is transferred when objects move.
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Thursday	Notes: Grade 4 Unit 1: Forces and Energy Lesson 1: Forces and Motion Essential Question: How do forces affect motion?	Objective: - Students will construct an explanation to describe the cause-and-effect relationship between forces and motion. Lesson Overview: - Unit 1 Lesson 1: Forces and Motion Test	Academic Standards: 5.P3U1.4 Obtain, analyze, and communicate evidence of the effects that balanced and unbalanced forces have on the motion of objects. 5.P3U2.5 Define problems and design solutions pertaining to force and motion. 5.P4U1.6 Analyze and interpret data to determine how and where energy is transferred when objects move.
Friday	Notes: No School	Objective: - No School Lesson Overview: - No School	Academic Standards: No School