Name: Reynolds, Moon	Grading Quarter: 2	Week Beginning: Week 3 10/28/24-11/1/24
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. Lesson Overview: • Assess Prior Knowledge ○ Page 5- Page Keeley Science Probe: *Forces and Motion* ▪ Students discuss what options are examples of forces. ▪ Students write down what they already know about forces and/or friction. • Engage ○ Page 6-7- Encounter the Phenomenon: Why are some of the skydivers falling faster than others? ▪ Video: *Skydive* ▪ Sample Answers for p. 7 • What does it feel like to skydive? • How can you control your speed and direction as you fall? • How do parachutes allow you to slow down?	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. • Students will investigate how mass affects the rate at which an object falls. Lesson Overview: • Explore ○ Pages 8-9- Inquiry Activity: *An Objects Motion* ▪ Materials: • Golf ball • Table tennis ball ▪ Make a Prediction: Will the heavier ball fall faster if dropped straight down from shoulder height? Explain. ▪ Carry Out an Investigation • Record Data on chart ▪ Communicate Information • Do the results support your prediction? • What other variables might affect how fast an object falls? ▪ Talk About It • What do you think affects how fast an object falls?	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.

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.
		
		Lesson Overview:
		• Explain
		  ○ Academic Vocabulary
		  ▪ Motion- a change in an object's position.
		  ▪ Speed- how fast an object's position changes over time.
		  ▪ Velocity- the speed and direction of an object.
		  ▪ Acceleration- a change in velocity over time.
		  ▪ Direction- a course or path along which something moves.
		  ○ Pages 10-11- Position and Motion
		  ▪ Materials:
		  • 2 paper cups
		  • pencil
		  • water
		  • bucket
		  ▪ Make a Prediction: What will happen if I drop a container while water is pouring out of it?
		  ▪ Carry Out an Investigation
		  • Record Data on chart on p. 17
		  ▪ Communicate Information
		  • Draw a diagram of gravity's pull from opposite sides of the earth.
		  • How does Earth's gravity effect the moon?
			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.

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:
		• Explain
		  ○ Academic Vocabulary
		  ▪ Force- any push or pull.
		  ▪ Inertia- the tendency of an object in motion to stay in motion, or an object at rest to stay at rest.
		  ○ Page 12- Forces Change Motion
		  ▪ Have students read and answer questions.
		  ▪ Label a Diagram
		  • Students draw examples of acceleration.
		  ○ Page 13- Balanced and Unbalanced Forces
		  ▪ Students take turns reading.
		  ▪ Talk About It
		  • What other sports or activities can you think of that involve balanced forces?
			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:
	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:
		• Explain
		  ○ Academic Vocabulary
		  ▪ Friction- a force between surfaces that slows objects or stops them from moving.
		  ○ Pages 14-15- Gravity and Friction
		  ▪ Students read and answer questions.
		  ▪ Talk About It
		  • How did gravity and air resistance affect the motion of the falling balls in the Inquiry Activity: *An Object's Motion*?
			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.