

Unit 2—Forces and Motion**Essential Question: What Causes Objects to Move?****Major Understandings:**

- PS 5.1a** The position of an object can be described by locating it relative to another object or the background.
- PS 5.1b** The position or motion of an object can be changed by pushing or pulling.
- PS 5.1c** The force of gravity pulls objects towards the center of the Earth.
- PS 5.2a** The forces of gravity and magnetism can affect objects through gases, liquids and solids.

Grade 2

Lesson 1 – Metals and Magnets**Objective(s):**

- To promote scientific inquiry.
- To use a scientific method to plan and conduct a long-term investigation.
- To design an experiment to determine what metals a magnet attracts.

PS 5.1a, b; PS 5.2a

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Science Background TE 95a Preparation TE 95a	Unit 2 Experiment Experiment Lesson Plan TE 95a-95b	Options for Inquiry TE 95a	

Grade 2

Lesson 2 – What Are Ways Things Move?

Objective(s):

- Investigate the ways a ball can move.
- Understand that things move at different speeds.
- Know that objects exhibit different kinds of motion (straight, circular, back and forth).

PS 5.1a, b

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 98a-b Video Segment 2013 When Minutes Count TE 98	Unit 2, 3.1 Assess Prior Knowledge TE 98 Investigate TE 99	Investigate Further TE 99, LM 40 Daily Inquiry TE 98 DI 10 Inquiry Skill Mini-Lesson TE 99, IS 10	

Lesson 3 – What Are Ways Things Move?

Objective(s):

- Investigate the ways a ball can move.
- Understand that things move at different speeds.
- Know that objects exhibit different kinds of motion (straight, circular, back and forth).

PS 5.1a, b

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Unit 2, 3.1 Reading in Science TE 100-103 Insta-Lab TE 102	Reaching All Learners Reteach TE 98 ESL TE 100 Reading Review TE 103 Reading Support and HW 20-21	Curriculum Integration Writing – TE 103 Math – TE 101 Physical Education – TE 102

Grade 2

Lesson 4 – What Makes Things Move?

Objective(s):

- To classify moves as pushes and pulls.
- To know that the direction and amount of the force exerted on an object determine how much and in what direction the object will move.
- To know that the way to change the way something is moving is to push it or pull it.

PS 5.1a, b

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 98a-b Video Segment 2014 When Minutes Count TE 104 Science Background TE 104	Unit 2, 3.2 Assess Prior Knowledge TE 104 Investigate TE 105	Investigate Further TE 105, LM 42 Daily Inquiry TE 104 DI 11 Inquiry Skill Mini-Lesson TE 105, IS 11	

Lesson 5 – What Makes Things Move?

Objective(s):

- To classify moves as pushes and pulls.
- To know that the direction and amount of the force exerted on an object determine how much and in what direction the object will move.
- To know that the way to change the way something is moving is to push it or pull it.

PS 5.1a, b

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Unit 2, 3.2 Reading in Science TE 106-111 Insta-Lab TE 107	Reaching All Learners Challenge TE 110 ESL/ESOL TE 108 Reading Review TE 111 RS and H 22-23	Curriculum Integration Writing – TE 107 Math – TE 111 Social Studies – TE 109

Grade 2

Lesson 6 – How Do Magnets Move Things?

Objective(s):

- To hypothesize how magnets interact with one another.
- To know that one way to change something that is moving is to push it or pull it.
- To know that objects can be moved by being pushed or pulled with magnets.

PS 5.1b, c

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
Plan Ahead for Activities TE 98a-b Video Segment 2015 When Minutes Count TE 112	Unit 2, 3.3 Assess Prior Knowledge TE 112 Investigate TE 113	Investigate Further TE 113, LM 44 Daily Inquiry TE 112 DI 12 Inquiry Skill Mini-Lesson TE 113, IS 12	

Lesson 7 – How Do Magnets Move Things?

Objective(s):

- To hypothesize how magnets interact with one another.
- To know that one way to change something that is moving is to push it or pull it.
- To know that objects can be moved by being pushed or pulled with magnets.

PS 5.1b, c

Advanced Planning/ Notes to Teachers	Core Lesson	Differentiated Support/ Homework	Connections
	Unit 2, 3.3 Reading in Science TE 114-119 Insta-Lab TE 115	Reaching All Learners ESL/ESOL TE 115 Challenge TE 118 Reading Review TE 119 Reading Support & Homework 24-25	Curriculum Integration Art – TE 119 Social Studies – TE 114 Writing – TE 116