



Second Grade Curriculum Pacing Guide

Crosscutting Concepts: Cause and Effect, Structure and Function, Scale, Proportion and Quantity

Topics: Matter & Push/Pull

Estimated Time Instructional Segment: 10 Weeks

| Anchoring Phenomenon | Standard | Instructional Segment | Disciplinary Core Ideas | Science and Engineering Practices | Instructional Notes |
|--|--------------|-----------------------|--|--|---|
| Athletes use pushes and pulls during sports games. | S2P2 a, b, c | Forces at Work | <p>From A Framework for K-12 Science Education: <i>By the end of grade 2</i></p> <p>PS2A: Forces and Motions</p> <ul style="list-style-type: none"> • Objects pull or push each other when they collide or are connected. • Pushes and pulls can have different strengths and directions. • Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. • An object sliding on a surface or sitting on a slope experiences a pull due to friction on the object due to the surface that opposes the object's motion. <p>PS2B: Types of Interactions</p> <ul style="list-style-type: none"> • When objects touch or collide, they push on one another and can change motion or shape. <p>PS2C: Stability and Instability in Physical Systems</p> <ul style="list-style-type: none"> • Whether an object stays still or moves often depends on the effects of multiple pushes and pulls on it (e.g., multiple players trying to pull an object in different directions). It is useful to investigate what pushes and pulls keep something in place (e.g., a ball on a slope, a ladder leaning on a wall) as well as what makes something change or move. <p>PS3C: Relationship between Energy and Forces</p> <ul style="list-style-type: none"> • A bigger push or pull makes things go faster. | <ul style="list-style-type: none"> • Planning and carrying out investigations • Analyzing and interpreting data • Constructing explanations and designing solutions • Obtaining, evaluating, and communicating information | <p>Background: By the end of this unit, students are using the following language in their speaking and writing during EXPLAIN or ELABORATE.</p> <ul style="list-style-type: none"> • Push • Pull • Direction • Motion • Fast • Slow • Speed |

This instructional segment will connect to What is Matter and How Does it Change?