

Standards

Tool Chest: Teaching Nonfictions Books Tool Chest (pages 16–19)

Grades K–5

(Discussing the similarities and differences in the displayed titles addresses the CCSS Reading Standards for Informational Text K.9., 1.9,2.9 and 3.9)

Applicable CC RL.2.1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.)

STEM: Solve the Mystery: What Makes Black Holes? (pages 22–24)

Grades 3–5

Next Generation Science Standards

Grade 3

3-PS2 Motion and Stability: Forces and Interactions
PS2.A: Forces and Motion

- Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative addition of forces are used at this level.) (3-PS2-1)
- The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. (Boundary: Technical terms, such as magnitude, velocity, momentum, and vector quantity, are not introduced at this level, but the concept that some quantities need both size and direction to be described is developed.) (3-PS2-2)

Grade 4

4-PS4 Waves and their Applications in Technologies for Information Transfer
PS4.B: Electromagnetic Radiation

- An object can be seen when light reflected from its surface enters the eyes. (4-PS4-2)

Grade 5

5-PS2 Motion and Stability: Forces and Interaction
PS2.B: Types of Interactions

- The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center. (5-PS2-1)

5-ESS1 Earth's Place in the Universe
ESS1.A: The Universe and its Stars

- The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth. (5-ESS1-1)

ESS1.B: Earth and the Solar System

- The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year. (5-ESS1-2)