

INTRODUCTION

Science A-Z Storylines are designed to address all three dimensions of the Next Generation Science Standards* (NGSS). Students develop an understanding of the Disciplinary Core Ideas and Crosscutting Concepts by engaging in Science and Engineering Practices. Each Storyline targets a set of Performance Expectations through a coherent series of lessons. The Storyline Question relates to all of the Performance Expectations bundled within an NGSS topic. Before starting the lessons, an Anchoring Phenomenon is presented to get students thinking about the Storyline Question.

In each lesson, a Supporting Phenomenon and a Guiding Question frame either a science investigation or an engineering design challenge. Through the investigation or challenge, students work to answer the Guiding Question. In the process, they generate new questions that segue into the next lesson. Performance-based assessments embedded within each lesson help teachers gauge student comprehension before proceeding. A final assessment measures students' mastery of the content as well as the Science and Engineering Practices.

STORYLINE SUMMARY

Each lesson requires at least one class period. Lessons noted as "Multiday" will require additional time. To view the Evidence Statements for each Performance Expectation listed below, visit www.nextgenscience.org/evidence-statements and select Grade 3.

<p>Lesson 1</p>	<p>(p. 4)—Students discover that the sum of the forces acting on an object determines whether and how the object moves. 3-PS2-1. <i>Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</i></p>
<p>Lesson 2</p>	<p>(p. 8)—Students discover that some objects move in repeating patterns that can be used to predict how those objects will move in the future. 3-PS2-2. <i>Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.</i></p>
<p>Lesson 3</p>	<p>(p. 10)—Students discover that magnets can affect objects from a distance and that the magnitude of those effects depends on variables such as distance and polarity. 3-PS2-3. <i>Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.</i></p>
<p>Lesson 4</p>	<p>(p. 13)—Students discover that electricity and magnetism interact in electromagnets, which allows them to be turned on and off. 3-PS2-3. <i>Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.</i></p>
<p>Lesson 5</p>	<p>(p. 16)—Students use the unique properties of magnets to solve design challenges. 3-PS2-4. <i>Define a simple design problem that can be solved by applying scientific ideas about magnets.</i></p>

Week of 9-3-19