

Subject	Grade	Standard	Objective
<b>Science</b>	<b>K</b>	<b>3. Physical Science</b>	<b>1. Identify how non-living things move.</b>
<b>Content Big Ideas</b>			
(F) Things move in many different ways, such as straight, zig zag, round and round, back and forth, and fast and slow.	(PoS) People can often learn about things around them by just observing those things carefully (raise questions about the world around them, be willing to seek answers to some of those questions by making careful observations). (NoS) People are more likely to believe your ideas if you can give reasons for them (ask "How do you know?" in appropriate situations and attempt reasonable answers when others ask them the same questions). (CoS) When doing science activities, it is often helpful to work with a team and to share findings with others.	Standard 1 Big Ideas – Intended Learning Outcomes	
<b>Indicator 1. Observe and record how objects move in different ways, e.g., fast, slow, zigzag, round and round, up and down, straight line, back, forth, slide, bounce, spin, swing, roll, bounce, spin, swing, float, and glide.</b>			
<b>Indicator 2. Compare and contrast how physical properties of objects affect their movement, e.g., hard, soft, feathered, round, square, cone, geometric shapes.</b>			
<b>Science language students should be able to use correctly: fast, slow, zigzag, round and round, up, down, straight line, back, forth, slide, roll, bounce, spin, swing, float, glide, push, pull.</b>			
<b>Guidance for Combining Content and Process</b>			
<b>Suggested Strategies</b>			
Have students build an incline ramp, have them place different items on the ramp and observe the movement as the objects go down the ramp. Use different shaped items, such as marbles, potatoes, geometric shapes, and cars. Ask the students to investigate the following questions (and others that you or your students choose): (PoS)			
<ul style="list-style-type: none"> <li>• What are some of the ways that we can describe the movement of the objects? Can you predict which way an object will move? Have the students write their predictions in a journal. (L)</li> <li>• Which objects move faster down an incline ramp? Why do you think this? Predict which object would 'win' in a 'race' down the ramp.</li> <li>• How can you integrate measurement into these activities? Have students count how long it takes an object to move down the ramp and then make a graph for comparison. (M) (CoS)</li> </ul>	<ul style="list-style-type: none"> <li>• Have the students observe different objects moving through different mediums in the sensory table, as well as through the air. (Suggested mediums: water, rice, sand, clay) Ask the students to observe and record the movements of the objects. Ask them to investigate the following questions (and others that you or your students choose): (PoS)</li> <li>• How can objects (e.g., boats, balls, manipulatives) move in your sensory table (e.g., water, sand, rice)? Are some objects easier than others to move?</li> <li>• Does the shape of the object change the way it moves? Why do you think this?(FA)</li> </ul>	<p>(T) Discuss the use of technology in the process of science by pointing out the various tools used while learning this objective. Examples of tools are simple machines (ramp), rulers, stopwatches, Frisbee.</p> <p>(A) Explain the application of science by discussing how investigation into objects has led us to invent technology such as airplanes, cars, and bicycles.</p> <p>(S) Show that society has benefited from the use of science in studying how objects move in aerospace programs, athletics, and satellite technology.</p>	
<b>Guidance for Combining Science, Technology, and Society</b>			
<p>(T) People use appropriate tools and models to investigate the world.</p> <p>(A) People working alone or in groups, often invent new ways to solve problems and get work done.</p> <p>(S) The tools and ways of doing things that people have invented affect all aspects of life.</p>			
<b>Indicator 1. Observe and record how objects move in different ways, e.g., fast, slow, zigzag, round and round, up and down, straight line, back and forth, slide, roll, bounce, spin, swing, float, and glide.</b>			
<b>Indicator 2. Compare and contrast how physical properties of objects affect their movement, e.g., hard, soft, feathered, round, square, cone, geometric shapes.</b>			
<b>Science language students should be able to use correctly: fast, slow, zigzag, round and round, up, down, straight line, back, forth, slide, roll, bounce, spin, swing, float, glide, push, pull.</b>			
<b>Guidance for Combining Science, Technology, and Society</b>			
<p>(T) Discuss the use of technology in the process of science by pointing out the various tools used while learning this objective. Examples of tools are simple machines (ramp), rulers, stopwatches, Frisbee.</p> <p>(A) Explain the application of science by discussing how investigation into objects has led us to invent technology such as airplanes, cars, and bicycles.</p> <p>(S) Show that society has benefited from the use of science in studying how objects move in aerospace programs, athletics, and satellite technology.</p>			
<b>Physical Science</b>			
(A) Atomic/Molecular (F) Force and Motion	(M) Mathematics (L) Language Arts	(FA) Fine Arts (SS) Social Studies	(PoS) Processes of science (CoS) Communication of science (NoS) Nature of science
<b>Applications: Science, Technology, and Society</b>			
(T) Tools of science			
(A) Applications of science			
(S) Implications of science for people			