

Subject Science	Grade First	Standard 3. Physical Science	Objective 1. Analyze changes in the movement of non-living things.
Content Big Ideas			
(F) Things move in many different ways, such as straight, zigzag, 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, but sometimes they can learn more by doing something to the things and noting what happens (raise questions about the world around them, be willing to seek answers to some of those questions by making careful observations and trying things out).	(PoS) People can often learn about things around them by just observing those things carefully, but sometimes they can learn more by doing something to the things and noting what happens (raise questions about the world around them, be willing to seek answers to some of those questions by making careful observations and trying things out).	(T) People use appropriate tools and models to investigate the world. (A) People working alone or in groups often invent new ways to solve problems and get work done. (S) The tools and ways of doing things that people have invented affect all aspects of life.
(F) The way to change how something is moving is to give it a push or pull.	(CoS) When doing science activities, it is often helpful to work with a team and to share findings with others. In this sharing, describing things as accurately as possible is important in science because it enables people to compare their observations with those of others (draw pictures that correctly portray at least some features of the thing being described, describe and compare things in terms of number, shape, texture, size, weight, color, and motion). (NoS) When people give different descriptions of the same thing, it is usually a good idea to make some fresh observations instead of just arguing about who is right.	(CoS) When doing science activities, it is often helpful to work with a team and to share findings with others. In this sharing, describing things as accurately as possible is important in science because it enables people to compare their observations with those of others (draw pictures that correctly portray at least some features of the thing being described, describe and compare things in terms of number, shape, texture, size, weight, color, and motion). (NoS) When people give different descriptions of the same thing, it is usually a good idea to make some fresh observations instead of just arguing about who is right.	
Indicators: Measureable Outcomes framed by Standard 1 Big Ideas			
Indicator 1. Describe, classify, and communicate observations about the motion of objects, e.g, straight, zigzag, circular, curved, back-and-forth, and fast or slow.			
Indicator 2. Compare and contrast the movement of objects using drawings, graphs, and numbers.			
Indicator 3. Explain how a push or pull can affect how an object moves.			
Science language students should be able to use correctly: motion, zigzag, bar graph, observe, describe.			
Guidance for Combining Content and Process			
Suggested Strategies			
Teachers can guide students in brainstorming the ways to describe the motion of objects. Generate a list of the different ways objects move, use that list as a data collection sheet for each student. Teacher and students can locate and describe the movement of objects in and around the school and record on the data sheet. In groups students discuss their findings with peers. Any differences in observations can be resolved as the teacher helps student consolidate class data and bar graph the number of each of the different motions observed (e.g., 15 windows moving up and down, 10 doors moving back-and-forth, 2 fans moving in circular motion). (L) (M) (PoS) (CoS) (NoS)			
Guidance for Combining Science, Technology, and Society			
(T) Students can use age-appropriate tools to learn more about movement. (A) Students can explain that motions can be predictable and useful in daily life or when creating tools. (S) Students understand that these principles affect many functions in day-to-day living, including transportation, how water gets to the home, etc.			
Physical Science (A) Atomic/Molecular (F) Force and Motion	Curriculum Connections (M) Mathematics (L) Language Arts	Processes, Communication, and Nature of Science (PoS) Processes of science (CoS) Communication of science (NoS) Nature of science	Applications: Science, Technology, and Society (T) Tools of science (A) Applications of science (S) Implications of science for people