
TEKS K.6 Force, motion, and energy. The student knows that energy, force, and motion are related and are a part of their everyday life. The student is expected to:

(D) observe and describe the ways that objects can move such as in a straight line, zigzag, up and down, back and forth, round and round, and fast and slow.

Incorporate process skills, such as relative measurement and identifying physical properties of objects, as appropriate. Students in K–2 use nonstandard units of measurement that approximates metric units.

Background Knowledge

Just about everything moves. Whether it moves on its own, like a snail crawling across the ground, or an outside force pushes or pulls it, like when a ball is kicked, things move. This is called motion. Motion is what happens when something changes its position. Motion can be observed and measured. Pointing out objects and how they move can be an amazing chance to bring daily activities to life.

All motion, or change in location, takes time to happen. Some things change position in very little time. For example, when students toss a ball to each other, the ball changes position in only a few seconds. Some things move so fast you can barely see them move, like a sky rocket. Other things move so slowly that they seem to be sitting still. For example, clouds and plants do not seem to move very fast, but they do move. Things can move in different ways, such as in a straight line, zigzag, up and down, back and forth, and round and round.

Essential Questions

How do objects move?

(When pushed or pulled, objects move in different ways, such as zigzag, up and down, back and forth, and round and round.)

How do objects move when you push them?

(They move away from you.)

How do objects move when you pull them?

(They move toward you.)

What is zigzag?

(Zigzag is a back and forth movement that is not in a straight line so it forms a “Z” pattern.)

You've Got To Move It!

Objectives:

To observe and describe the way objects move.

To improve motor coordination and allow students to gauge their own movement.

Materials:

Sand, gallon-sized ziptop bag
Ribbon or thread (optional)
Small ziptop bags (optional)
Empty cardboard lids (optional)

How to Conduct:

Provide a student with a gallon-sized ziptop bag of sand, which has a hole in one corner large enough to leave a thick trail of sand on the ground or sidewalk. Choose a place to start and a place to finish.

As the student moves from the “Start” to the “Finish”, ask the student to hold the bag of sand, so it will leave a trail to record the different ways they moved. Give the student directions on how to move and how quickly or slowly to move.

Once done, ask the other students to examine the sand line and identify when the student was moving in a straight line, back and forth, round and round, zigzag and also when the student walked quickly and when the student walked more slowly. A thicker line is produced if the student moves more slowly.

Extended Activity:

Draw the path on paper and label areas where the student was moving straight, back and forth, round and round, and zigzag. The sand can be replaced with a long ball of thread or ribbon for indoor activity, or it can be done using smaller bags of colored sand and empty cardboard box lids, drawing the different types of movement in sand.

Touch And Go

Objectives:

To observe and describe the types of movements plants make as they grow.

To observe that plants are living things that respond to some changes in their environment by moving.

To observe that some changes in movement occur very slowly, such as patterns of plant growth.

Materials:

Morning Glory plant, a pot with a trellis, potting soil, watering can, a light source, ruler or meterstick for recording relative height, a digital camera

How to Conduct:

Plant the Morning Glory plant in the pot with a trellis in a spot that provides light. Water weekly. Morning Glory is a vine that responds to touch by winding around and climbing structures. Observe the plant daily, have students to keep an observation journal that records the direction of its growth through the month. Using a digital camera will help students be able to better observe changes in movement/location. Integrate the types of movement and directions of movement (i.e., left and right and up and down with round and round and back and forth, etc.). Remind students that some movements happen very quickly while others happen very slowly.

What's Your 20?

(This is a code, used by police officers and others, for what's your location.)

Objective:

To observe and describe the location of an object in relation to another such as above, below, behind, in front of, and beside.

Materials:

5–5 × 7 index cards per group with one of the following written on each card:
“above”, “below”, “behind”, “in front of”, and “beside”

How to Conduct:

Ask students to place an index card on objects in the room so they can use the word on the card in a sentence to describe the location of the object. Model this for them. Let each group move around the room placing their cards and discussing the sentence they will say.

Walk around the room, choose an object with a card and hold the card up so students can see what is written on it. Have a member of the group speak the sentence they created that uses the word to describe the location of the object.