TEKS 1.6 Force, motion, and energy. The student knows that force, motion, and energy are related and are a part of everyday life. The student is expected to:
(C) describe the change in the location of an object such as closer to, nearer to, and farther from; and
(D) demonstrate and record 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.

Background Knowledge

Objects can move in different ways such as in a straight line, zigzag, up and down, back and forth, round and round, and fast and slow. We can record these patterns of movement. Animals can move in different ways too. The location of an object can be described as closer to, nearer to, and farther from. Position is the location of an object at the time. Motion is the change in position. Speed is how fast or slow an object is moving.

Essential Questions

How do objects and organisms move?
(Straight line, zigzag, up and down, back and forth, round and round, fast and slow)

How can you record the way an object or an organism moves?
(Tracing the path, using yarn or tape.)

How can you change the way an object or an organism moves?
(By pushing or pulling.)

How can motion cause a change in location?
(By moving, objects and organisms change location in various ways, such as closer to nearer to, and farther from other objects.)

I Can Move In Different Ways

A class activity.

Objective:

Children are given turns to move and show different movements, and describe their location in the classroom.

Materials:

Drawing material

How to Conduct:

Call out a type of movement—round and round, back and forth, fast/slow, zigzag, straight line, up and down.
Have students take turns moving in different ways.

Extended Activity:

A. Draw or tape different patterns on the floor. Make sure the drawings are big enough for the students to stand around.
B. Mark one end as your "Start" point and the other one as your "End" point. Ask one student to stand somewhere on the line and say, "Look around the room, and tell me your location compared to the door. What is your location compared to the door? Are you close to the door or far away from it?" The student should say, "I'm far away/close to or near to the door."
C. Then ask the student to move on the lines forming the patterns on the floor. Play music or clap as the students move along the line. When the music or clapping stops, ask the students, "Are you closer to the door or farther away from it?"

    - What caused your position to change?
      (I moved.)

Movements Around Me – At Home And At School

Objective:

Exploring the environment to observe different kinds of movements.

Materials:

Construction paper, pictures of different objects moving in various ways and actual objects that move.

How to Conduct:

Use construction paper to make cards labeled with the names of the different types of movement. Label each card with one type of movement. Separate the labeled cards and place them where they are visible to the students.

Using pictures or actual objects, ask students how the pictured object or actual object moves. Have students match the picture or object with its identified type of movement, and place it with the labeled card. Examples of suggested pictures of objects or actual objects to use includes a fan, a yo-yo, a slinky, a marble, a jack-in-the-box, windup toys that move in different ways, push/pull cars, a clock with a pendulum, a bouncy ball, a toy train that follows a circular track, a pull toy on a string that can be made to follow a zigzag pattern of movement, etc. Students may also bring objects from home that move in different ways. When all the pictures and objects have been placed into groups based on type of movement, revisit each group.

A Way Of Moving

Objective:

To familiarize students with more movements around them.

Materials:

Writing material
Construction paper

How to Conduct:

A. Have a big chart with the names of the different types of movement at the top. It can be put up in the class at a level where entries can be made. Name a type of movement, E.g. Round and round.

   Examples
   - Round and round – Fan, washing machine, mixer, hand waxing or polishing a surface, water in toilet bowl.
   - Back and forth – Vacuum cleaner on carpet or furniture, fish in bowl, handsaw, hand grating, hand with knife buttering a toast, hand holding an iron on a dress on ironing board, shower curtain.
   - Up and down – Hand with pestle pounding with a mortar, hand with knife chopping vegetables, light switch, seesaw, window blinds, car/bus windows.

B. Ask the students what things around the house or school move in this particular way. Also, ask the students about the different hand movements used to do a particular task—e.g. using your hand and a fork to beat an egg. Encourage students to give other examples of objects that move in this way.

C. To help students to come up with examples, take the class around the school for a "movement scavenger hunt"; ask the students to record how objects and animals move.

D. As the students share their ideas, record each object or activity named under the respective heading in the chart. Ask the students to watch for examples of objects that move in different ways over the next few days. Provide time for students to share their observations. Add these new examples to the chart.