



K-2 Physical Science

Southern Nevada Regional Professional Development Program

Making Things Move

INTRODUCTION

You spend almost every moment of each day moving in one way or another. You walk down the school hall. Your eyelids blink and your heart beats. Motion is all around us, too. Our planet is constantly spinning in a spinning Solar System.

WHERE'S THE SCIENCE?

Many objects can change position as a result of motion. We apply force to an object when we push or pull it. When we **push** something, we move it away from us, for example when you push open a door. When we **pull** something we move it towards us, for example pulling open a drawer. There are different sources of force, including people, wind, animals, gravity and so forth.

MATERIALS

The following materials are enough for a group of 3-4 students:

- Toy car (that rolls)
- Ball
- Small block
- Empty toilet paper roll
- Yarn

- Straw
- Craft stick
- Science notebook

PROCEDURES

Lesson One

1. Ask the students to think about the ways they move. Share out and chart responses.
2. Tell the students that today they are going to investigate some objects that you brought in to explore how they can move the objects. Introduce the terms **force**, **push** and **pull**.
3. Hold up one of the objects and ask, “How could you make the car move?”
4. Send groups of students back to their seats instructing them to investigate each object to explore ways they can make the object move. Remind them to record their observations in their science notebooks.
5. Pass out the materials and science notebooks.
6. As students work, move from group to group, checking their observations and making sure they are recording in their science notebooks.
7. When the students are finished, call them back to the group area with their science notebooks and discuss and chart what they observed. **Note:** You could also give each group of students a piece of chart paper and have them organize their data and present their findings to the whole group.
8. Review what the students learned about force today. Conclude the discussion by asking if only people can make things move. Ask: “What else can make things move?”
9. Instruct the students to return to their science notebooks and record what they learned today. Collect materials and science notebooks.

Extension

Tell the students that for homework tonight they need to find 10 ways force was used to move something. Share out tomorrow and add new learning to the class chart.

Vocabulary:

Force: a push or pull that causes an object to move, stop, or change direction.

Push: to use or apply force to move something away from us; press, or shove

Pull: to use or apply force to move something towards us; tug, drag

Additional Resources

Science in Motion (big book) <http://www.newbridgeonline.com>

Students investigate the forces of motion including pushing, pulling, starting, stopping, changing direction, and friction.

http://www.bbc.co.uk/schools/ks2bitesize/teachers/lesson_plans/changing_state.shtml

This site contains a lesson plan for using the following interactive activities to enhance student learning. **Note:** This activity should be completed after students have had the hands-on experience in the classroom.

http://www.bbc.co.uk/school/scienceclips/ages/5_6/pushes_pulls.shtml

Interactive activity for students ages 5-6 to reinforce the concepts of pushes and pulls.

http://www.bbc.co.uk/schools/scienceclips/ages/6_7/forces_movement.shtml

Interactive activity for students ages 6-7 to reinforce the concept of force.

Nevada State Standards

P2B1 Students know the position and motion of an object can be changed by pushing or pulling. E/S

N2A1 Students know how to make observations and give descriptions using words, numbers and drawings. E/S

N2A2 Students know tools can be used safely to gather data and extend the senses. I/L

N2B2 Students know that, in science it is helpful to work in a team and share findings with others. E/L

Safety Reminder: N/A