



# Unit/Lesson Plan Template

**Unit/Lesson Plan Title:** Forces & Motion

**Subject:** Science

**Grade Level:** 1      **Length of Unit/Lesson:** 1 Week

**Unit/Lesson Summary:** Students will identify forces that makes thing move.

**Key Vocabulary:** Push, Pull, Motion, Force, Keyboard, Digital Camera, Compare, Tally, Graph

**Essential Question(s):** What makes things move?

**NCSCOS Essential Standards/ESOL objectives Addressed in Unit/Lesson:**

**Science:**

Objective 4.01 - Describe different ways in which objects can be moved.

Objective 4.02 - Observe that movement of an object can be affected by pushing or pulling.

Objective 4.03 - Investigate and observe that objects can move steadily or change direction.

**Math:**

Objective 4.01 - Collect, organize, describe and display data using line plots and tallies.

**Language Arts**

Objective 2.02 - Demonstrate familiarity with a variety of texts (storybooks, short chapter books, newspapers, telephone books, and everyday print such as signs and labels, poems, word plays using alliteration and rhyme, skits and short plays).

Objective 2.03 - Read and comprehend both fiction and nonfiction text appropriate for grade one using: prior knowledge, summary, questions, graphic organizers.

Objective 4.04 - Extend skills in using oral and written language: clarifying purposes for engaging in communication, using clear and precise language to paraphrase messages, engaging in more extended oral discussions, producing written products, completing graphic organizers.

### **Technology**

Objective 1.05 - Identify graphing as a tool for organizing information. Strand - Spreadsheet

Objective 1.06 - Identify and discuss graphing software terms/concepts (e.g., graph, patterns, display). Strand - Spreadsheet

Objective 2.02 - Observe, discuss, and use software to enter, calculate, display data, and interpret results as a class/group. Strand - Spreadsheet

Objective 2.03 - Identify, discuss, and use word processing as a tool to enter numbers, words, and phrases. Strand - Keyboard Utilization/Word Processing/Desk Top Publishing

Objective 2.04 - Identify and use basic word processing terms (e.g., file, open, close, menu bar, save, print). Strand - Keyboard Utilization/Word Processing/Desk Top Publishing

Objective 2.05 - Locate and use letters, numbers, and special keys (e.g., arrow keys, space bar, insert Enter/Return, Backspace, Delete) on the keyboard. Strand - Keyboard Utilization/Word Processing/Desk Top Publishing

Objective 2.06 - Identify, discuss, and use menu/tool bar functions in word processing applications. Strand - Keyboard Utilization/Word Processing/Desk Top Publishing

### **Information:**

Objective 1.01 - Participate in read-aloud, storytelling, book-talking, silent and voluntary reading experiences.

Objective 1.03 - Demonstrate appropriate care of resources.

Objective 5.01 - Respond to reading, listening, viewing experiences orally, artistically, dramatically through various formats.

Find related resources

Objective 5.02 - Produce media in various formats (e.g., pictorial, multimedia).

**Materials/ Resources** (also list web resources, technology tools and safety requirements):

Digital Cameras, Kidspiration, iPhoto, Templates, Promethean Board, Rookie Readers, paper clips, paper, cardboard, string, Safari, Science Books, See list for Photo Opportunities

[http://www.bbc.co.uk/schools/scienceclips/ages/6\\_7/forces\\_movement.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/6_7/forces_movement.shtml)

[http://www.bbc.co.uk/schools/scienceclips/ages/5\\_6/pushes\\_pulls.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/5_6/pushes_pulls.shtml)

forces.flp - Downloaded from Promethean Planet

### **Cross Curricular Extension / Activities:**

Media - Will lead students around the school on a search for things that move. Students will take turns taking digital photos.

Photo Opportunities: swings, rocking animals, push down slide, door hinge, click pen, rollers on trash can, paper towel button, soap button, keys on keyboard, push chair in / pull chair out, (books on shelves too), bus wheels, drums, saxophone, cafeteria tray along bar, push pencil into sharpener, pull top off marker, blinds, water fountain, pull wagon, etc.

Kidspiration - Kids will complete a Venn Diagram comparing their images and sorting them into Push / Pull Categories. Selected Photos will be used on a template. Could be done in the classroom on Promethean Board and as an Individual Assessment in the computer lab. *To make it easier, we will already create a template using photos that we take and tell the kids that we are just going to use some of those that they take.* Template will be in Resources folder.

Internet BBC Sites - demonstrate Push / Pull

Promethean Flipcharts videos included - used to instruct and reinforce understanding

Language Arts / Reading - Rookie Readers in Science Kit for Guided Reading Groups. Selection in Science Book for Non-Fiction text.

Math - Balance paper clips on a paper. Tally the number of paper clips and create a Numbers bar graph. Template in Resources folder.

Additional Hands-On - 1 - Create a pendulum by tying a string to a block or small eraser. Experiment swinging it with soft pushes, etc. 2 - Cut out a card board circle, punch a hole in the center, thread yarn through the hole. Work in partners to pull the string to get it to spin and unwind.

Art - Optical Art - Create Art on Disc and spin them to see how that changes the image

Music - Talk about using the instruments to push / pull and create sounds

PE - Parachute Activity

## **Unit/Lesson Accommodations for Differentiated Instruction**

**Enrichment:** Horizon's "Circus Life" field trip to introduce Forces & Motion

**ESOL:** Make Pin-Wheels and show them windmills. Discuss using wind push power to make energy.

**Assessments:** Allow students to do the Kidspiration Sorting Activity independantly to assess comprehension.

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