ADVANCED LEARNING LABS

Collaboration between NC Department of Public Instruction and AIG Teachers across the state

TO ENGAGE, ACTIVATE, AND GROW OUR STUDENTS

GRADES K–1

Movement

ENGLISH LANGUAGE ARTS

A variety of words in a language can be used to describe similar actions. Words have nuances that describe shades of meaning and help the reader or listener to better understand the action or description.

Read these words and act them out.
jump | hop | skip | leap | spring | bound

- How are these actions similar? different?
- Which word best describes a frog, a kangaroo, a gymnast, a basketball player?

Now, brainstorm a list of words that have similar meanings to each of these actions:

- dance
- run
- laugh

Pick one word from each list to use in a sentence and act out.

SOCIAL STUDIES

Migration can be defined as movement from one place to another. Physical features, such as mountains, rivers, and roads affect the way people move.

Pretend you are moving to a new location. Consider how each of the following might impact movement: a mountain, a river, a lake, a road.

- How might the feature slow down your travel?
- How might the feature assist you in your travel?
- What will you need to use the feature to your advantage?

Draw a map that includes a mountain, river, lake, and road. Mark a starting and ending point on the map. Describe the route you will travel, using cardinal directions (north, south, east, and west).

SCIENCE

A force (push or pull) can be applied to an object without touching the object. With a friend or family member, make a rocket move without touching it:

1. Create a rocket using an empty toilet paper tube.
2. Cut two pieces of 5-foot yarn and put them through the rocket tube.
3. Each person holds one end of each piece of yarn so the yarn stretches between them. Start with hands together, then one person spreads their hands so that the two pieces of yarn separate.
4. Use various speeds (open your arms slowly, then quickly) and heights (raise and lower your arms).

What makes the rocket move? Describe the motions of the rocket. How did varying the speed and height impact the movement?

MINDFULNESS

Sometimes our stressful energy can be hard to manage. Using our imaginations to focus on calming movements can help our bodies to feel more grounded. Use this short video to learn an exercise that can help calm stressful energy: https://www.youtube.com/watch?v=bRkILioT_NA

- How did you feel before practicing the activity in the video?
- How did you feel after the activity?
- Are there similar activities that might also help you to calm your body when you feel stressed?

Discuss with a friend or family member what you have learned and identify when you would use this technique. Make a poster or other visual to help remind you of this technique when you feel stressed.

LOGIC PUZZLE

Six drinking glasses stand in a row; the first three are full of juice and the next three are empty.

By moving only one glass, how can you arrange them so that the empty and full glasses are alternating?

FIELD STUDIES

Gravity is a force that affects movement on Earth and in space. Watch this video to learn more about gravity: https://www.pbs.org/video/gravity-m3swlv/

Experience gravity on Earth. Collect some items from around your house like pencils, balls, or books. Carefully release each one from above your head. What happens? That's gravity!

- What would life be like if gravity did not exist? How could we adapt to objects and ourselves floating?
- Would you like to experience weightlessness in space? Why or why not?

Record your information and thoughts in your science notebook.

RESEARCH EXPLORATIONS

Objects move when force is applied to them. Explore motion using a toy car and an inclined plane. Create a ramp (inclined plane) using a board and a stack of books or a long piece of cardboard and a box. Hold a toy car at the top of the ramp and release it. Record your data and conclusions in a science notebook:

- What do you notice?
- Describe the car's movement using words like zig-zag, fast, slow, and straight.
- Describe where the car stops using position words like below, beside, and between.
- How is the movement of the car affected if you push it before releasing it?

Extension: Use different materials (bubble wrap, foil, sticks, etc) on the ramp you built. How did adding these materials affect the movement of the car?

MATH

Engineers consider how movement will impact things they build. For example, will a design withstand strong winds or a crash? Look at the slide show to learn about geometry and design: https://bit.ly/30qcC8K

Using toothpicks and gumdrops, create a structure that can hold a plastic egg. Use triangles, squares, rectangles, or hexagons in the design. There must be an opening large enough for the egg to enter and exit. The structure must contain the egg when dropped.

- Did your design protect the egg when it was in motion?
- Which geometric shape did you use in your design?
- Revise your design using fewer supplies.
- Make a new design with different shapes.

North Carolina Department of
PUBLIC INSTRUCTION

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www.dpi.nc.gov/students-families/enhanced-opportunities/advanced-learning-and-gifted-education

Movement

Reference Guide

K-1 Logic Puzzle:

Solution: Pick up the 2nd glass and pour its contents into the 5th class and set it back down in its place empty.

6-7 Logic Puzzle:

Solution example:

1. Start trip with 1000 bananas
2. Travel 200 miles and have 800 left. Leave 600 at 200 mile point, keep 200 for 200 mile trip back to start.
3. Pick up another 1000 bananas
4. Travel 200 miles and have 800 left. Pick up 200 from stashed and carry 1000 and have 400 more stashed.
5. Travel an additional 333 1/3 miles, you're left with 666 2/3, stash 333 1/3 there (533 1/3 mile point), you have 333 1/3 left
6. Travel back 333 1/3 miles to 200 mile point and pick up 200 stashed (leaving 200 still at 200 mile point), go back the other 200 miles.
7. Pick up another 1000
8. Travel to 200 mile point, leaving 800 bananas, pick up remaining 200 stashed
9. Pick up 1000 bananas travel 333 1/3 miles to 533 1/3 mile point, you're left with 666 2/3 bananas.
10. Pick up all 333 1/3 that were stashed
11. You are back at 10
12. Make remaining 466 2/3 mile trip,

1000-466 2/3 = 533 1/3 bananas left at the end.

10-12 Logic Puzzle:

Solution: 40 minutes https://www.mathsisfun.com/puzzles/baffling-bath-water-solution.html

Movement

NC Standards Alignment

Grade Span	English/ Language Arts	Social Studies	Science	Math
K-1	L.1.5	K.G.1.3 K.G.1.2 1.G.1.3 K.G.2.2 K.G.2.2 1.G.1.2	1.P.1.2 1.P.1.3	NC.1.G.1
2-3	RL.3.3	3.G.1.4 3.G.1.3	3.P.1.1	NC.3.NBT.2
4-5	SL.5.4	5.C.1.3 5.B.1.2	4.L.2.2	NC.5.NBT.1
6-7	6-8 Grammar Skill	6.G.1.2 6.E.1.1	6.P.1	NC.6.NS.5 NC.6.NS.6
8-9	RL.9-10.10	8.H.3.1 8.G.1.4	8.L.1.2	NC.M1.F-IF.7 NC.M2.-CED.2 NC.M2.-CED.3 NC.M2.A-REI.1
10-12	W.9-10.2	AH1.H.6.2	EEn.2.5.5	NC.M1.A-REI.1