



CHILDREN'S
MUSEUM
— OF VIRGINIA —
PORTSMOUTH

Pre and Post-Visit Activities

On a Roll

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Important Information for Teachers

Thank you for choosing *On a Roll* for your students! This program will cover the following aspects of your SOL's:

- 1.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which
 - a) the senses are used to observe differences in physical properties;
 - c) objects or events are classified and arranged according to characteristics or properties;
 - f) inferences are made and conclusions are drawn about familiar objects and events;
 - h) predictions are made based on patterns of observations;
 - j) simple investigations and experiments are conducted to answer questions.

- 1.2 The student will investigate and understand that moving objects exhibit different kinds of motion. Key concepts include
 - a) objects may have straight, circular, and back-and-forth motions;
 - b) objects may vibrate and produce sound; and
 - c) pushes or pulls can change the movement of an object.

Museum Manners

Please review with students and chaperones prior to your visit to the museum.

1. Please plan to arrive 15 minutes before your scheduled time to allow final counts and payment prior to your visit.
2. Remember to use walking feet.
3. Remember to use inside voices.
4. Teachers and chaperones must stay and explore with their students at all times throughout the museum.
5. Remember to share the exhibits and place items back where you found them.
6. Food and drink are not permitted in the museum.

Vocabulary

Acceleration- an increase in speed over time.

Experiment- the act of conducting a controlled test or investigation.

Force- any push or pull that causes objects to move, stop, or change direction or speed.

Friction- the resistance to motion created by two objects moving against each other.

Gravity- the force of attraction by which terrestrial bodies tend to fall toward the center of the earth.

Vibration- a fast back and forth motion.

Motion- the action or process of changing place or position.

Observation- to look at and notice characteristics.

Prediction- statement of what is expected to happen in the future.

Pre Visit Activities

Try this activity before you visit the museum.

See the motions!

Objective: Students will be able to understand what uses motion. Meets SOL 1.2a

Materials: Pencil and paper, an area to investigate.

Investigation: Make observations of motion in the environment around you over one week and keep a journal with your parents or teacher. Answer questions like “What kinds of things move?” and “How are they moving? Fast, slow, back and forth or in a circle?”



Post-visit Activities

Try these activities after you visit the museum.

Transfer of Motion & Energy

Objective: Students will be able to understand the concept of the transfer of motion in marbles.

Materials: Ruler, 5 marbles, 2-3 books, different surfaces for rolling. Meets SOL 1.2a, c.

Investigation: Students will stack 2 books and rest one end of the ruler on the top of the books. At the downward end of the ruler, line up 4 marbles in contact with one another. Can students predict what will happen when one marble is rolled down the groove of the ruler into the stationary marbles? Use more books or fewer books; use different surfaces for rolling marbles. Predict and compare results of using different heights and surfaces.

Balloon Talk

Objective: Student will demonstrate the motion of vibration, the repetitive back and forth motion. Meets SOLs 1.2a, b.

Materials: Balloon and student partners

Investigation: Students will hold an inflated balloon in front of their face and with a student's hand on the opposite side of the balloon. Talk towards the balloon and question the student to describe the vibrations they are feeling coming from the balloon.

