

## Educational Programs for Small Groups

Cowan Museum of History and Science

910-296-2149

*Call several days ahead to arrange a program so we can prepare and obtain supplies*

*(\* Signifies that an activity is dependent upon favorable weather.)*

### Toddler – Grade 2

- Nature Cycles Activity  
Listen to the book Nature Cycles (for toddler - PreK) or Cycles in Nature (for PreK to Grade 2) which were written, illustrated, and translated to Spanish by museum staff. Then discuss and act out the life cycles of a plant, a bird, and a butterfly.

### Preschool – Grade 1

- Season Cards  
Arrange the season cards in order starting with the season we are in now.
- Sun In the Sky Cards  
Arrange the cards in order showing the sun in different positions in the sky throughout the day.

### Preschool – Grade 2

- Seed and Plant Activities
  1. Story and sorting seeds  
Listen to a story about seeds. Discuss questions such as, “Have you ever eaten a seed?” Sort a variety of seeds by color, size, and shape. Plant seeds in a glove to take home.
  2. Dissect lima bean and color “Life Cycle of a Plant”  
See a diagram of parts of a seed. Dissect a lima bean with your fingernail and look for the parts. Color a “Life Cycle of a Plant” worksheet.
  3. Make a seed mosaic  
Review what you’ve learned about seeds and create a seed mosaic.
  4. Story and make sprouting seed necklaces  
Listen as the book From Seed to Plant is read. Make sprouting seed necklaces.
- Needs of Plants  
Look at pictures of a desert, forest, cave, and a field. Discuss where there would be more plants and why. Discuss what plants need. Color the things plants need on the “Plants need ...” coloring sheet.
- Leaf Identification  
With help from museum staff, use a simple Leaf Key to identify 4 trees found on the museum grounds.
- Fossil Identification  
Use a simple Fossil Key with help from museum staff to identify 4 fossils.
- Rock Identification  
Museum staff will help children use a simple Rock Key to identify 4 rock specimens.
- Mineral Identification  
Use a simple Mineral Key with help from museum staff to identify 4 minerals.

### Grade 3 – Middle School

- Camouflage Potato Animals \*  
Learn about how animals blend into their environment to hide from predators or sneak up on prey by camouflaging your own potato critter to blend in on the museum grounds. Hide your animal for someone else in your group to find. Look for camouflaged

bugs on tree bark, plant stems, and leaves. Fill out a Bug Data Sheet or take photos of examples. (Source: A Time for Science)

- Shifting Shorelines  
Rotate through 4 hands-on stations to explore how different shoreline stabilization methods (e.g., seawalls, plants, and plants, plus an oyster reef) affect coastal erosion and the nearby habitat. Enjoy simulating wave energy! (Source: NC Coastal Federation)
- Be a Helper  
Pull some weeds in the gravel path in the garden, water some plants with a watering can, rake leaves, or pick up sticks.

#### Upper Elementary – Middle School

- Investigating the Tiny \*  
Use magnifiers to examine leaves, seeds, flowers, weeds, etc. Notice how some of the tiny flowers on weeds look when magnified
- Fossils  
Learn what a fossil is and how they are formed. See examples of some fossils. Find some small fossils yourself.
- Water Cycle  
Explore the water cycle with demos, discussion, and puzzle pieces.
- Heat Transfer – Conduction, Radiation, and Convection  
Learn about conduction, radiation, and convection through touch activities, demos, and a scavenger hunt.

#### Elementary – High School

- Weather Measurement and Prediction  
Use a thermometer to measure temperature, an anemometer to measure wind speed, a wind vane to determine wind direction, a barometer to measure air pressure, and a cloud chart to identify clouds. Then use the information to predict the weather.

#### Grades 6-12

- Soil Activities (Pick which ones interest you)
  1. Soil erosion and vegetation  
Pour water over a model of land covered with plants and land without plants and compare the results. (from NISE Net)
  2. Infiltration  
Push soup cans into soil in different places (compacted/noncompacted, more/less vegetation, different types of soil). Pour water in each soup can. Compare how much water soaks in and how fast. Discuss infiltration.
  3. Draining and holding water  
Predict which soil will let water drain through the best and which will hold water the best. Test your hypothesis by pouring water over the soil samples.
  4. Soil core – texture and organic matter  
Examine a soil core. Identify textures and organic matter. Try “ribboning out” some of the soil to see if there is clay.
  5. Sponge model  
Use a sponge and water to model dry soil on a slope, porosity, permeability, infiltration, percolation, saturation, water-holding capacity, drainage, runoff, and bearing capacity as a staff member explains each one.

#### Middle School – Adult

- Igneous Rocks  
Examine specimens and learn how they were formed and how to identify them.
- Sedimentary Rocks

Examine specimens and learn how they were formed and how to identify them.

- **Metamorphic Rocks**  
Examine specimens and learn how they were formed and how to identify them.
- **Tectonic and Geologic History of NC (at least 9 participants needed)**  
Use posterboard continents, terranes, and oceans to model the tectonic and geologic history of North Carolina. A museum staff member can narrate the events, or for an extra challenge, participants can interpret diagrams and text to determine what events occurred in what order. Then review by arranging diagram strips of the events in order.