

FROM RIVERS TO SOUNDS IN THE BERTIE WATER CRESCENT

AN EARTH & ENVIRONMENTAL SCIENCE PROGRAM THAT FOLLOWS THE WATER

WORKSHOP 3: EVERY ROCK & MINERAL HAS A “STORY TO TELL”

Cashie River Center: 8:00 am to 3:00 pm

NORTH CAROLINA LAND OF WATER (NC LOW) & A TIME FOR SCIENCE (ATFS)

www.nclandofwater.org & www.atimeforscience.org

AGENDA:

8:00-8:30: Introductions and Six Big Concepts in Earth and Environmental Science

8:30-9:00: Review of previous workshops with a K-W-L chart.

Your Place in North Carolina, Coastal Plain, and Bertie County

Lidar maps of “Bertie Water Crescent” and “Bertie Peninsula”

Water, water, water everywhere and its drainage systems

From “Rivers to Sounds” A history of change and the Bertie County’s “5 Water Hubs”

9:00-9:50: Bertie County (Circle Map for Earth Materials)

Every rock and mineral has a “Story to Tell”—Observation, Description, and Interpretation

Sort samples into 4 categories: minerals, igneous, metamorphic, and sedimentary rocks

9:50-10:00: Break

10:00-10:30: Rocks, Weathering, and NC Geology

10:30-11:00: North Carolina’s Natural Resources--Read “Geology & Mining”

Construction (sand, gravel, crushed rock, concrete, etc)

Metals (iron, copper, lead, tin, etc)

Industrial Minerals (phosphate, nitrogen, hydrogen, salt, etc)

High Technology Elements (rare earths, titanium, cesium, etc)

Direct Solar Energy (heat, wind, currents); Stored Solar Energy (peat, coal, oil, natural gas); Other (uranium, geo-thermal)

Soil (clay, sand, organic matter)

Water (fresh, brackish, salt)

11:00-11:15: Summary: Thinking Diagram for Earth Materials and Geology of North Carolina

11:15-11:30: Lunch Break (supplied) and Description of Field Trip

11:30-2:00: Meet at the van with warm clothes and hiking shoes/boots; travel to Bertie

County’s “Tall Glass of Water” and Salmon Creek Water Hub.

2:00-2:30: Return to the Cashie River Center

2:30-3:00: Wrap Up: K-W-L chart, next workshop, and assignments

FIELD TRIP: BERTIE COUNTY'S "TALL GLASS OF WATER"

Main Concepts

1. Rivers and Estuaries
2. Shorelines: Erosion and Deposition
3. Upland Terraces: Old Sea Levels, Incised Channels, and Their Ecosystems
4. Future Land Uses: Environmental Education, Recreation, and Eco-Tourism

WORKSHOP #3 HANDOUTS

- 1 & 2. Agenda
- 3 & 4. Simple Rock Cycle and Process Cross-Section
- 5 & 6. North Carolina Geologic Map and Major Rock Types
- 7 & 8. North Carolina Rock and Mineral Resources
- 9 & 10. Field Trip: Bertie County's "Tall Glass of Water"
- 11 & 12. Field Trip Maps of Bertie County's "Tall Glass of Water"