

Name: _____

Eco-Tourism KWL Chart

How are we going to solve the eco-tourism problem in the Outer Banks?

What I know	What I want to know	What I learned

Eco-Tourism in the Outer Banks of North Carolina

The Outer Banks of North Carolina attract 5 million tourists each year to the area's many beaches, historic areas, and natural wonders. Many different ecosystems converge in the Outer Banks – from salt marshes and estuaries to desert-like areas of shifting sands, high winds, and extreme temperatures. The Outer Banks consist of over 100 miles of narrow *barrier islands* – long strips of sand and sediment that run parallel to the coastline.

Barrier islands are formed when the ocean deposits *sediments* (particles of mineral or organic matter) in the shallow waters near a coastline. Over time, the sand builds up until islands are formed above the water. In North Carolina, the barrier islands protect the mainland by absorbing the energy of ocean waves and storm surges. Because wind and water are constantly pounding the Outer Banks, the islands are in continual motion. Sand is eroded away from one location and builds up in another. This erosion is a natural process caused by hurricanes, other storms, and the simple passage of time. But beach erosion is often increased by human activity, and it has become a problem in the Outer Banks.

Tourists tend to visit areas that offer good food, clean and comfortable accommodations, and lively entertainment. Therefore, areas that seek to attract and keep tourists must build hotels, condominiums, and other lodging facilities. These businesses, in turn, draw in other businesses – shopping, restaurants, and transportation. All of this economic development requires building on land that was once natural. Native plants must be cleared from the land to make room for businesses, homes, gardens, and yards. The roots of these plants help to keep sand and soil in place, so when they are removed, serious erosion problems are caused.

Pedestrians also increase erosion by dragging coolers, boats, and other equipment over dunes, or by walking off designated paths. These activities harm the native plants whose roots help to prevent erosion. Humans pose other hazards to the natural environment of the Outer Banks. Trash left behind by tourists can cause harm to wildlife, and the removal of seaweed robs the soil of a natural fertilizer.

More than 30,000 people live in or near the Outer Banks year-round. Many of the people who live in this area of North Carolina rely on the tourism industry to support themselves and their families. For example, the owner of a local restaurant counts on some of the tourists to eat at her restaurant. In addition, all the waiters, dish washers, and managers at the restaurant depend on the tourists to spend money at the restaurant to keep the business open and keep their jobs. The store that sells vegetables to the restaurant also needs the tourists to keep visiting for the same reason. This cycle continues on and on. The money that tourism brings into the area is necessary to the local population. In 2003, tourists spent \$600 million dollars in the Outer Banks. Without this income many people would have to leave their homes behind and start a new life in a different location.

So, although tourists are necessary to the economy of the Outer Banks, they directly and indirectly lead to increased erosion, which in turn leads to a loss of beach. (A hurricane, for example, can cause enough erosion to remove as much 25 feet of beach.) It is the responsibility

of all Outer Banks residents and tourists to help maintain a healthy relationship between tourism and the environment.

I will assign you a career. You will pretend to be a person living in the Outer Banks, and you will be working to solve the tourism/erosion problem facing this area.

Name: _____

ECO-TOURISM

Procedure

1. Use the *Occupational Outlook Handbook* website at <http://www.bls.gov/oco> to learn about your assigned career. Fill in the information about your career below.

Career: _____ **Salary range:** _____

Summary of job description: _____

Educational requirements, training, and other qualifications: _____

How does your career affect the environment? _____

How is your career affected by the environment? _____

2. Now that you have learned about your career, return to your KWL chart and complete the third column. Use the following sites to help you answer the questions you wrote down in the second column of your KWL chart. If you cannot find an answer using one of the sites below, ask your teacher for assistance and approval to use a search engine.

Ecology Information

http://geography4kids.com/files/land_ecology.html

Outer Banks Information

<http://www.outerbanks.org/>

Additional Career Information

<http://www.epa.gov/careers/>

<http://eslmi03.esc.state.nc.us/soicc/info/briefs.htm>

3. Develop a plan to solve the eco-tourism problem in the Outer Banks. Consider the following questions when formulating your plan.
 - What other people or careers will you need to help you with your plan?
 - What resources do you need? Are they available to you?
 - How much will your plan cost? Is it a realistic amount to spend?
 - How long will it take for your plan to work? Can the region wait that long?
 - Is this a long-term solution? If this plan is just a beginning, what will need to be done later?