Name _____ Date _____

Exploring Ecosystems: Human-Environment Interactions in the Barataria Preserve

Part 1. Explore the Barataria Preserve
Using FieldScope (http://lafitte.fieldscope.org), follow the steps below. Answer each question as you explore how humans and nature are connected in and around the Barataria Preserve.

1. Turn on the **Housing Density** layer.

   a. Where are the most densely populated areas? _____

   _____

   b. Where has density changed the most between 1970 and 2000? *(Hint: See this change by dragging the timeline dividing bar back and forth across the screen.)* _____

   _____

   c. What are some possible reasons for these changes? _____

   _____

2. Turn off **Housing Density** and turn on the **Levees** layer.

   a. What are the two different kinds of levees? *(Hint: Use the **Query Tool.**)* _____

   _____

   b. Describe any trends in where levees are located. _____

   _____

   c. Are there any levees near where you live? If so, describe them. _____

   _____

3. Turn off **Levees** and turn on all **Resource Extraction** layers.

   a. Are there any resource extraction sites in the Barataria Preserve? _____

   _____

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b. In what ways do you think these human-related features—density, levees, and extraction—influence the Barataria Preserve? _____

_____

4. Turn off all previous layers, except **Boundaries and Places,** and turn on the **Land Cover** layer. Use the **Query Tool** to click on the different colors and find the cover type.

   a. What are the most common land cover types you see in the New Orleans area?

   _____

   _____

5. Zoom into the Barataria Preserve. Use the **Query Tool** to identify all of the land cover types within this area.

   a. What are the land cover types inside the Barataria Preserve? _____

   _____

6. Turn off the **Land Cover** layer, and turn on **Elevation.**

   a. Where are the highest areas in the Barataria Preserve? Explain. _____

   _____

   _____

7. Finally, turn off **Elevation** and turn on I**nvasive Species.**

   a. Name the invasive species found within and close to the Barataria Preserve. *(Hint: Use the **Query Tool.**)* _____

   _____

   b. Zoom out to see the New Orleans region. Do you see any pattern in where invasive species are located across the broader landscape? Explain. _____

   _____

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c. How might you explain this pattern? _____

_____

d. How might these nature-related layers—land cover, elevation, and invasive species—affect the Barataria Preserve? _____

_____

_____

Part 2. Analyze Ecosystem Relationships
Now that you have an idea of the different kinds of features that influence the Barataria Preserve and its landscape, you can analyze a question of your own. Using at least two different layers in FieldScope (e.g., land cover and housing density), come up with a question that interests you. Questions can be simple or complex. Examples include:

- What types of invasive species are found in densely populated areas?
- In what direction is the population growing?
- What land cover is changing the most as a result of population growth?
- How many miles of levees are there in each bracket of housing density?

Answer your question by analyzing the relationship between the layers you choose, using FieldScope tools such as **Query** or **Measure.** Use the Problem-and-Solution diagram to write your question (the problem), the different layers you are using, and how analyzing those layers produces an answer (the solution).

Finally, create a map that shows your layers of interest and save it by clicking on the **Save** button at the top right corner. Print this map when you are done.

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