Coastal Dynamics Program

Field Notebook
Session 2

Name:

Session 2: Building a Model
Brainstorming Environmental and Anthropogenic Factors

> **What environmental factors and anthropogenic factors might cause the sand volume on the North Beach to increase or decrease?**

With your research team, brainstorm what might cause the sand volume on the North Beach to increase or decrease. In the table below, sort them into one of the two categories

- **Environmental Factors:** Natural factors within the system, such as waves or wind.
- **Anthropogenic Factors:** Human-caused or human-produced factors within the system, such as structures like a seawall or human-caused processes like sea level rise.

Environmental Factors	Anthropogenic Factors

When your research team is finished brainstorming, choose the 8-10 items on your list that you think have the **biggest** influence on sand movement and sand volume within the North Beach.

Coastal Dynamics Program

Field Notebook
Session 2 (Padlet Version)

Name:

Making Your Predictions

Pick four or five factors in your model that are at least two steps removed from sand volume. Use the conditional statements within your model to create proofs to predict how they will impact the sand volume.

Identifying Your Questions

Examine your model and identify any questions you may still have in the space provided below.

Coastal Dynamics Program
Field Notebook
Session 2 (SageModeler Version)

Name:

Simulating Change in Your Model

Pick four or five factors in your model that are at least two steps removed from sand volume. Simulate how that factor will impact the sand volume. Note your simulated results in the table below.

An (increase to / presence of)...	Causes sand volume to...

Identifying Your Questions

Examine your model and identify any questions you may still have in the space provided below.

Coastal Dynamics Program
Field Notebook
Session 2

Name:

Reflect
In your field notebook, take a few minutes to reflect on your experiences during Session 2:

1. What did you do during Session 2? What did you learn? How did your thinking change?

2. Why do you think engineers use models? How can a model help you to make a prediction about interactions within a system?

3. What do you still wonder or have questions about?

4. What will you need to do next to further revise your model?