

Using a Science Notebook for Inquiry Activities

The inquiry activities in *National Geographic Science* provide an opportunity for students to ask questions and do investigations much like scientists do. Writing what they learn will help students understand why they are doing the activity and what it teaches them.

ASK A QUESTION

- Every inquiry activity begins with a question that shows the purpose of the activity. Have students write the question in their science notebook.

○ How can you change the direction of a model sailboat?

BUILD VOCABULARY

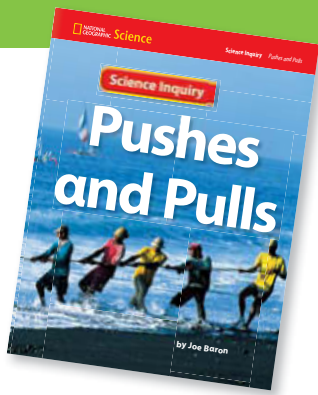
- Have students write the Science Process Vocabulary words and their definitions in their science notebook.

○ model: You can make and use a model to show how something looks or works.
 observe: When you observe, you use your senses to learn about something.

MAKE A PREDICTION

- Have students write a statement predicting what will happen in the activity. Encourage students to use their prior knowledge and experience to make the prediction.

○ I predict that we can change the motion of the sailboat by pushing or pulling it.



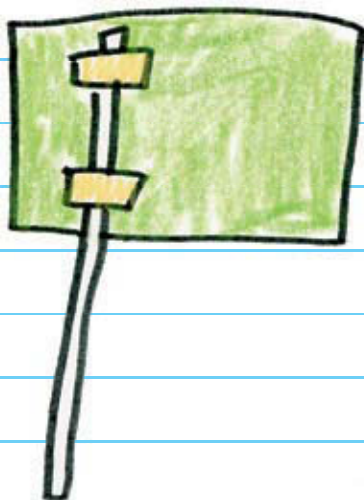
Explore Activity

Guided Inquiry

Directed Inquiry

Open Inquiry

1. Tape the straw to the card.



What I Did: I pushed the boat.

How the Boat Moved from Starting Position: It moved away from me.

WHAT TO DO

- Have students write or draw the steps of the activity in their notebook.

MAKE AND RECORD OBSERVATIONS AND INFERENCES

- Have students record their observations and inferences in the table on the Learning Master or have them draw and fill in their own table or graph. Students can write or make drawings to record their observations and inferences.

Using a Science Notebook for Inquiry Activities, continued

EXPLAIN AND CONCLUDE

- Have students examine data, or evidence, and use this evidence to make inferences, develop explanations, and draw conclusions about their observations and results. This is what the Nature of Science is all about. Students make observations and then support and extend observations with inferences. Both observations and inferences are then used to draw meaningful conclusions. Students learn that Science conclusions must include *both* observations *and* inferences.

○ I moved the boat away from me by pushing it. I moved it toward me by pulling it. Boats must need a push or a pull in order to move. Boats cannot move by themselves.

THINK OF ANOTHER QUESTION

- Have students reflect about what they have learned. Then have them use their observations to think of other questions that they could study through an investigation. Have them write their questions in their science notebook.

○ I wonder if I could move the boat by blowing on it.