

**CONNECTION TO LANGUAGE ARTS****● Writing a Plan for Wave Observation**

Observations often include measurements. What to measure depends on what you want to learn. For example, suppose you wanted to observe and measure the wavelength of waves crashing along the shore. The wavelength is the distance between any two successive identical parts of a wave. So, to carry out this observation, you would need to identify which parts of the wave you would use as measuring points—probably two consecutive crests or troughs of a wave. Then you would have to figure out how to measure the distance from the crest of one wave to the crest of the next wave. Some measurements can be done with simple hand instruments. For other measurements, a higher level of technology is needed.

**Your Turn to Think**

Suppose you are going to visit some part of Miami Beach, Florida. The beach runs parallel to the low coastline. Choose one of the following wave properties to observe: *wavelength* (defined above), *period* (how long it takes one full wavelength to pass a certain point), or *frequency* (how many full wavelengths pass a point in a certain amount of time). Complete the observation form below. Fill in the objective, list the instruments you will use, and describe the process you will follow to gather data. Complete the Data Record part of the form by adding a place to record each kind of data you will need to meet your objective.

**WAVE OBSERVATION: Date:** \_\_\_\_\_

Objective:

Instruments Used:

Observing Process:

Data Record: