# Chapter 3 Lab Answers

## Answers to Analysis

**1.** Fine sand and some pebbles were washed down into the water. The fine sand moved into deeper water. Without additional sand, it will turn into a pebble beach.
**2.** Yes, only a small part of the waves got through, and they disappeared quickly. The movement of the sand was reduced to practically nothing.
**3.** The sand on the beach moved into the water as the sand was moved by the current. The waves were refracted toward the shore.
**4.** Sand built up behind the jetty. Some sand remained in front of the jetty.

## Answers to Conclusions

**5.** Beaches can be preserved with rock pilings and other jetties built out into the water. This would deter the longshore movement of sand. Dredging can replace beach sand lost by wave action and longshore currents.
**6.** Walkways can be built over dunes, protective vegetation can be planted, and houses can be built somewhere other than directly on the dunes.

## Answers to Extension

**1.** Answers may vary. Students' models should include breakwaters or jetties, and students should explain how they protect the beach from currents. Students may also propose beach restoration. Beach restoration involves dredging sand offshore and transporting it to beaches.