June 2003

SeaWorld/Busch Gardens

Dolphins

4-8 Classroom Activities

Top Speeds at Sea

OBJECTIVE

The student will calculate the top speeds of two dolphin species (killer whale and striped dolphin) and compare them to several marine animals' speeds.

ACTION

1. Distribute funsheets, pencils, and scratch paper. Read through the activity directions to make sure each student understands what to do.
2. When all students have finished calculating the speeds, lead a discussion based on the following questions:
   - Which ocean animal has the fastest speed? (marlin)
   - Large whales can move quickly when danger threatens, but usually move more slowly. Why do you think that is? (Moving fast takes more energy, decreases feeding opportunities, and can result in getting separated from a pod.)
   - How do these dolphins' top speeds compare with the fastest land animal—the cheetah—that can run up to 70 mph (110 kph)? (much slower)
   - In what ways have dolphins' bodies adapted to make them fast swimmers? (streamlined shapes, smooth skin, and strong, flexible tails)
3. Ask students to compute the average speed of the dolphins featured in the activity.

ANSWERS

1. 2.25/15 = X/60 (60 divided by 15 multiplied by 2.25 = 9 mph; 14.4 kph)
2. 1.58/5 = X/60 (60 divided by 5 multiplied by 1.58 = 19 mph; 30 kph)
3. 8.3/10 = X/60 (60 divided by 10 multiplied by 8.3 = 50 mph; 80 kph)
4. 2/3.5 = X/60 (60 divided by 3.5 multiplied by 2 = 34 mph; 54 kph)
5. 0.5/53.4 x 60 sec./min = X/60 (60 divided by 53.4 multiplied by 0.5 and 60 = 34 mph; 54 kph)

MATERIALS

- ❑ copy of *Top Speeds at Sea* funsheet (pg 2)
- ❑ pencil
- ❑ scratch paper

Name _____

Top Speeds at Sea

Scientists timed several sea animals to figure out their top speeds. Read the descriptions (below) of what the scientists observed below, then calculate how fast each swimmer was going in miles per hour and in kilometers per hour. (1 mile = 1.6 kilometers. Round your answers to the nearest mile and kilometer.)

1. King penguin
   In pursuit of a school of fish, a king penguin was observed "porpoising," or plunging in and out of the sea as it moved forward. The penguin traveled 2.25 miles (3.62 km) in 15 minutes. How fast was it going?

   Answer: _____mph, or _____kph

2. Striped dolphin
   A pod of striped dolphins had been frightened by the noise from a large sea-going ship. The dolphins took off at top speed, traveling 1.58 miles (2.54 km) in 5 minutes. How fast were they going?

   Answer: _____mph, or _____kph

3. Marlin
   A marlin was captured, equipped with a radio transmitter, then released. The fish immediately swam off at top speed, sending a signal back to the ship. It traveled an astounding 8.3 miles (13.3 km) in 10 minutes. How fast was it going?

   Answer: _____mph, or _____kph

4. Dall's porpoise
   Observing from a study ship, a scientist watched a Dall's porpoise speed along the coast of an island that was 2 miles (3.21km) long. The porpoise covered the distance in 3.5 minutes. How fast was it going?

   Answer: _____mph, or _____kph

5. Killer whale
   A killer whale was in pursuit of a seal. It sped through the water for half a mile (.8 km), capturing the seal in just 53.4 seconds. How fast was the killer whale swimming?

   Answer: _____mph, or _____kph