

Name: _____

Date: _____

Whale of a Tale Worksheet (page 1)

Read the paragraphs below and then scan the table. Answer the questions that follow on a separate sheet of paper.

One moment, the sea seems calm. Suddenly, a huge fountain appears off the bow of your ship, spraying water high into the air. The dark gray back of an enormous animal, nearly as large as your 50-foot-long ship, emerges from the deep. Next, an 18-foot wide, triangular fluke (tail) rises well above the surface, and then quickly disappears below. You've just seen an adult humpback whale, a sight that you'll likely remember for as long as you live.

The Humpback Whale is one of many species of whales that are seen frequently by students at many of the sitesALIVE! program sites. Whales are marine mammals. Like other mammals, they have lungs and breathe air, have hair rather than scales, and give birth to live young. There are about 80 species of whales in all. Many whales migrate long distances, from summer feeding grounds in the polar regions, where food is plentiful, to wintering areas in the tropics, where they breed and give birth.

Humpbacks can be seen regularly from *Concordia (Class Afloat Live!)* and other shipboard programs. Gray whales are often seen during the winter and spring months in Magdalena Bay, home of the *Wetlands & Fisheries Live!* program. Even the largest animal to have ever lived, the blue whale, is sometimes seen.

Here are some basic facts about three species of whales:

	Gray Whales	Humpback Whale	Blue Whale
Average adult length	46 feet male; 50 feet female	44 feet	78 feet
Average adult weight	16,000 lbs. (male); 35,000 lbs. (female)	66,000 lbs.	220,000 lbs. (max: 380,000 lbs.)
Average length at birth	15 feet	12.5 feet	25 feet
Average weight at birth	1,300 lbs.	2,000 lbs.	6,000 lbs.
Average speed	5 mph	4 mph	12 mph
Estimated current population*	23,000	17,500	11,700
Estimated population before whaling*	25,000	100,000	228,000

* **Note:** These numbers are based on world whale populations.

Whale of a Tale Worksheet (page 2)

1. The largest blue whales grow up to 110 feet in length and weigh up to 380,000 pounds. How does this compare to an average adult blue whale? About how many students of your age would it take to equal the length and weight of the largest blue whales?
2. Compare the length and weight of an average adult male and female gray whale. What can you infer about the relative shapes of the male and female from this data?
3. Compare the three species of whales in terms of average adult length, weight, and speed. Use the female gray whale for the purposes of this comparison. Make a series of three bar graphs to compare your results.
4. Every year, gray whales undertake one of the longest migrations of all mammals, traveling about 6,000 miles southward from the Arctic to Baja California. If a gray whale spends on average about 16 hours a day swimming, how far does it travel in one day on average? About how many days would it take such a whale to complete the entire trip?
5. During the summer feeding season, an average adult blue whale eats an amazing 4 tons (8,000 lbs.) of krill, a tiny shrimp-like creature, a day. What percentage of its body weight is this? How do you think this compares to a typical human on a percent of body weight basis? Why do you think these whales eat so much?
6. If there are about 5,000 krill per pound, how many krill does an average blue whale consume per day during the summer feeding season?
7. A gray whale can remain submerged for about 15 minutes. If it moves a steady 5 mph in a straight line for that period, how far will it travel before it has to come up again for air?
8. Baby blue whales nurse for about seven months after birth, at which time they reach a length of about 52 feet and a weight of 46,000 lbs. How much length and weight do the babies grow during this period? How much do they grow on average each day during this period?
9. Calculate the current population as a percentage of the population before commercial whaling for the three species of whales. Which species has made the best recovery? Which species is having the most trouble regaining its original population?
10. If the population of blue whales grows from its current level at the rate of 5 percent a year, about how long would it take to reach its original level prior to large-scale commercial whaling?