

Advisement Teacher & Room # _____

Student Name _____ Tutor: _____

Biology Tutorial #24

Biology Teacher's Name _____ Period _____

CA State Standard 1a. select and use appropriate tools and technology (such as computer-linked probes, spread sheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.

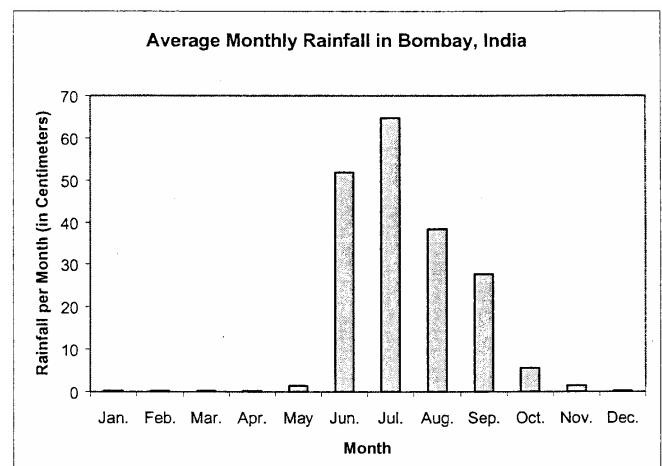
The chart below gives information about how much water is used in performing certain daily activities. The chart compares normal and water-efficient types of household equipment.

Activity	Regular equipment	Water-efficient equipment
Showering	19 liters per minute	9 liters per minute
Toilet flush	19 liters per flush	1 3 liters per flush
Washing clothes	1 70 liters per wash load	72 liters per wash load
Running dishwasher	6 1 liters for full cycle	24 liters for short cycle
Running faucet	1 9 liters per minute	9 liters per minute

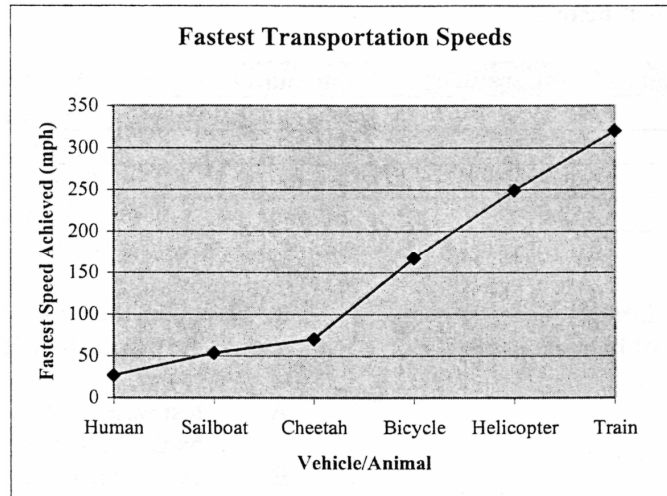
- What can you conclude about the information in the chart?
 - Water-efficient clothes washers are less expensive to buy than regular ones.
 - People should use water efficiently to keep water supplies from running low.
 - More people who live in dry climates use water-efficient faucets.
 - Running a regular faucet for one minute uses as much water as one regular toilet flush.
- Which of the following could not be directly concluded from the information shown on the chart?
 - Using a water-efficient toilet saves 6 liters per flush.
 - Water-efficient toilets are less efficient than water efficient faucets.
 - All water-efficient equipment saves water at the same rate.
 - Washing clothes with water-efficient equipment uses approximately 3 times as much water as running a water-efficient dishwasher for a short cycle.
- Which of the following activities requires the most water per use?
 - running faucet for 1 minute
 - 1 toilet flush
 - running dishwasher for a short cycle
 - washing 1 load of clothes
- Identify the statement that is true based on the information in the chart.
 - Flushing a water-efficient toilet once saves more water than washing a load of clothes with water-efficient equipment.
 - Showering with water-efficient equipment for 3 minutes uses the same amount of water as running a water-efficient faucet for 3 minutes.
 - Flushing a water-efficient toilet once saves as much water as washing a load of clothes with water-efficient equipment.
 - Showering with water-efficient equipment for 3 minutes uses twice as much water as running a regular faucet for 3 minutes.

The graph (right) gives information about the average rainfall in Bombay, India. The data in the graph compares the amount of rain that falls, on average, for each month of the year.

- What can you conclude about the information in the chart?
 - Most of the world's cities have a similar pattern of rainfall to Bombay.
 - Every year, it rains more in July than in any other month.
 - Most of Bombay's rainfall occurs during the summer months.
 - In Bombay, it rains as much in July as in the remainder of the months combined.
- In what month does it rain approximately 5cm?
 - December
 - October
 - November
 - June



The graph (below) gives information about the fastest speeds achieved by various vehicles and animals as of 2001. The data in the graph compares the top speeds.



7. Which of the following could not be directly concluded by information shown on the chart?
- A. Under certain circumstances, a sailboat can travel as fast as 50 mph.
 - B. The fastest train travels faster than the fastest human.
 - C. All bicycles are faster than all sailboats.
 - D. Some bicycles are faster than cheetahs.
8. Identify the statement that is true based on the information in the chart.
- J. J. Cheetahs have been recorded to travel at speeds greater than 100 mph.
 - K. The fastest speed achieved by a train is about twice the fastest speed achieved by a bicycle.
 - L. Most bicycles can travel at "speeds greater than 100 mph.
 - M. Trains are the fastest vehicles that have ever been created.

A marine biologist collected four water samples from different points along a river that flows out to the ocean. Each sample was labeled with the distance from the ocean at which it was collected. The biologist forgot to label one of the samples. She tested each sample and placed her information in the chart below.

Distance from ocean	Temperature	Salt content	Dissolved gas
1 mile	49° F	340 ppm	7.8 ppm
2 miles	54° F	200 ppm	7.5 ppm
3 miles	60° F	81 ppm	7.2 ppm
Unknown	51°F	250 ppm	7.7 ppm

9. At what distance from the ocean was the unknown sample most likely collected?
- A. 0.5 miles
 - B. 1.5 miles
 - C. 2.5 miles
 - D. 3.5 miles
10. What topic is the marine biologist who collected these samples most likely to be studying?
- J. the types of ecosystems that exist at different parts of the river
 - K. the age of the river in different locations
 - L. how deep the river is in different locations
 - M. the cost of building a boat that could travel from the ocean to the river
11. To collect the most accurate data, what should the marine biologist do?
- A. test water from both the left and right bank of the river
 - B. save some of the water she has collected and run the test a second time
 - C. add tap water to each of her samples so she has an equal amount of water for each
 - D. test the water several more times at the same locations