Here is the graph of the Robinsons' data.

A Sample of Animals

Discuss
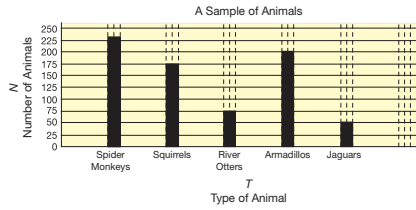
1. What variables do the letters *T* and *N* stand for?

2. What variable is on the horizontal axis (⟷)?

3. What variable is on the vertical axis (↕)?

4. At the beginning of the experiment, the Robinsons chose **values** for the variable Type of Animal. Two of these values are Spider Monkeys and Jaguars. What are the other values for this variable?

5. What values for the variable Number of Animals did the Robinsons record in their data table?

6. Look at the vertical axis on the graph the Robinsons made to display their data. How did they scale this axis? Why do you think they chose to do it this way?

7. What is the most common animal in the sample? Least common?

8. Predict which two animals are the most common in the whole population.

Conduct a similar experiment using a bean population instead of different animals in the rain forest. Use the *Kind of Bean Lab* pages in the *Student Activity Book* and the TIMS Laboratory Method. Pull a sample of beans from a container and count the number of each kind of bean. Use the data to predict which kind of bean is the most common and which is the least common in the bean population.

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A Sample of Beans: Impossible, Unlikely, Likely, and Certain

Some things are **certain.** You know they will definitely happen. Other things are **likely.** They will probably happen, but they might not.

Still other things are **unlikely.** They can happen, but they will not happen very often. Finally, some things are **impossible.** They can never happen.

Discuss

After you have completed the *Kind of Bean Lab*, discuss the questions below.

9. Imagine you pull out one bean from the bean population container. What type of bean are you most likely to pull out? Use your data to predict. Be ready to explain your thinking.

10. Now test your prediction by pulling out one bean and returning it.
   A. Was it the type you predicted?
   B. Discuss with your class what happened when other groups pulled one bean. Did every group pull the bean that was most likely?
   C. If an event is likely, will it happen every time? Most of the time?

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* **Answers and/or discussion are included in the lesson.**

Kind of Bean (SG pp. 10–11)
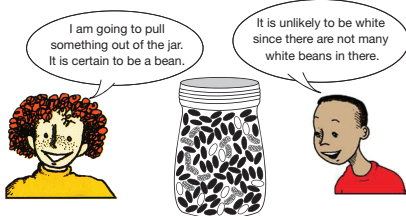## Questions 1–10

1. Type of Animal *(T)* and Number of Animals *(N)*

2. Type of Animal

3. Number of Animals

4.* squirrels, river otters, armadillos

5.* 230 spider monkeys
   175 squirrels
   75 river otters
   200 armadillos
   50 jaguars

6. The Robinsons scaled their graph by 25. They chose this so they could show all the data, since the smallest value was 50 for jaguars and the largest value was 230 for spider monkeys.

7. spider monkeys are most common, jaguars are least common

8. spider monkeys and armadillos are most common

9.* See lesson.

10.* See lesson.