

Name \_\_\_\_\_

## Task Cards

Your task is to mathematically represent the speed of your toys. In this lesson, you will use rates and a graph to compare the speeds of the different toys.

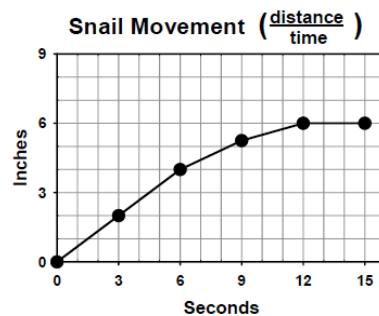
A **rate** is a ratio of two quantities measured in different units. Rates compare two measures. Speed is measured as a rate comparing distance and time. **Rates** can be written a number of ways.

$$15 \text{ miles per hour} \quad 15 \text{ mi/h} \quad \frac{15 \text{ mi}}{1 \text{ hr}}$$

If you know the total distance traveled and the total time it took to travel that distance, you can calculate the **unit rate**, or average speed, by dividing the distance by the time:

$$\text{Unit Rate (or Speed)} = \frac{\text{Distance}}{\text{Time}}$$

A **graph** can also be used to illustrate distance traveled at different points in time.



Design an experiment to test the speed of your toys. How far do they travel over time?

Represent your results as a series of rates at different points in time.

As a group, make a graph showing the distance each toy traveled over time. Compare the speed of the toys in your group. Prepare to present your group results with an explanation of how both the rates and your graph may be used to compare the speeds of the toys.

**Caution: Do NOT overwind your toy or it will break!**