Science Skills 7
Using Data Table to Make Predictions

When scientists perform an experiment sometimes data is not taken on time or is lost in some other way. Other times the data wasn't taken long enough. When these things happen scientists predict what the data might be by looking at the patterns in the data that was collected. When you make predictions between know data points this is called an interpolated prediction. When you make predictions outside or beyond known data points this is called and extrapolated prediction.

The data table below represents the increase in stretch of a hanging spring each time a weight is added. All weights are equal. Note that some spaces are left blank. Make predictions and fill in each space.

Objects of Equal Mass	Distance of Spring Stretch
0 objects	0 cm
2 objects	2 cm
3 objects	
4 objects	4 cm
5 objects	
6 objects	6 cm
7 objects	
15 objects	

The data table below represents the amount of time a candle will burn in different size jars. Some spaces are empty. Make predictions and fill each space.

Volume of the jar	Number of seconds burned
100 mL	9 sec
200 mL	18 sec
300 mL	
400 mL	36 sec
500 mL	
600mL	54 sec
700 mL	
1000 mL	

The data table below represents the amount of water that will be picked up by different numbers of paper towels. Some spaces are empty. Make predictions and fill each space.

Number of paper towels	Amount of water picked up
1	7 mL
5	35 mL
10	
15	105 mL
20	
25	175 mL
30	
50	

The data table below represents the growth of a plant over a period of days. Some spaces are empty. Make predictions and fill each space.

Number of days	Height of plant
5	5 cm
6	8 cm
7	
8	14 cm
9	
10	20 cm
20	
50	

More Directions:

1. Color the data for which you made interpolated predictions with yellow.
2. Color the data for which you made extrapolated predictions with green.