Science a-z WORKSHEET

Using a Data Sheet

Name_____ Date_____

Directions: This data sheet shows a relationship between color and temperature. Students placed four colors of paper in sunlight for five minutes, and then measured the temperature on each paper. They tested each color three times to get an average temperature. But some of the data is missing. First, fill in the blank boxes with data that would make sense. Then answer the questions. *Tip: To find the average of three numbers, add them together, and then divide the sum by 3.*

Collect Data

Color	Prediction of average temperature (°C)	Actual temperature (°C)			
		Trial 1	Trial 2	Trial 3	Average
red	24	23	27	22	
green		25	25	25	25
	28	26	25	24	25
purple	23		31	29	30

1. What was the temperature of the red paper on the second trial? _____

2. Which color of paper had the exact same results in all three trials? _____

3. Which average temperature was most different from the prediction? _____

4. Were any of the predictions exactly right? Explain. _____

_____

5. What would be a good title for this data table? _____

6. How could you show data for a new color of paper? _____

_____

Challenge: Make up new questions about the data table, and exchange them with classmates.

Using a Data Sheet Answer Sheet

The blank in the first column should contain a new color of paper. The blank in the predictions column should contain a plausible temperature prediction. The other two blanks should be completed based on computation of averages, as shown below.

Collect Data

Color	Prediction of average temperature (°C)	Actual temperature (°C)			
		Trial 1	Trial 2	Trial 3	Average
red	24	23	27	22	**24**
green	*prediction will vary*	25	25	25	25
color will vary	28	26	25	24	25
purple	23	**30**	31	29	30

1. What was the temperature of the red paper on the second trial? 27° C

2. Which color of paper had the exact same results in all three trials? green

3. Which average temperature was most different from the prediction? purple
   Note: Depending on the new prediction, the answer may be green.

4. Were any of the predictions exactly right? Explain.
   Yes, the prediction and result for the red paper were both 24°C.
   Note: If the student's prediction for green is 25, then both red and green are correct.

5. What would be a good title for this data table? How Color Affects Temperature
   Answers will vary. An example is provided.

6. How could you show data for a new color of paper?
   I could add a new row at the bottom of the data sheet. Then I would write the new color and fill in the other columns for that color.

Challenge: *Encourage students to share their questions with the class.*