

## AFTERSCHOOL TRAINING TOOLKIT

### Tutoring to Enhance Science Skills

#### Tutoring Two: Learning to Make Data Tables

#### Sample Data for Data Tables

Use these data to create data tables following the Guidelines for Making a Data Table and Checklist for a Data Table.

#### Example 4: Pet Survey (GR 2–3)

Ms. Hubert's afterschool students took a survey of the 600 students at Morales Elementary School. Students were asked to select their favorite pet from a list of eight animals. Here are the results.

Lizard 25, Dog 250, Cat 115, Bird 50, Guinea pig 30, Hamster 45, Fish 75,  
Ferret 10

#### Example 5: Electromagnets—Increasing Coils (GR 3–5)

The following data were collected using an electromagnet with a 1.5 volt battery, a switch, a piece of #20 insulated wire, and a nail. Three trials were run. *Safety precautions in repeating this experiment include using safety goggles or safety spectacles and avoiding short circuits.*

Number of Coils	Number of Paperclips
5	3, 5, 4
10	7, 8, 6
15	11, 10, 12
20	15, 13, 14

#### Example 6: pH of Substances (GR 5–10)

The following are pH values of common household substances taken by three different teams using pH probes. *Safety precautions in repeating this experiment include hooded ventilation, chemical-splash safety goggles, gloves, and apron. Do not use bleach, ammonia, or strong acids with children.*

Lemon juice 2.4, 2.0, 2.2; Baking soda (1 Tbsp) in Water (1 cup) 8.4, 8.3, 8.7;  
Orange juice 3.5, 4.0, 3.4; Battery acid 1.0, 0.7, 0.5; Apples 3.0, 3.2, 3.5;  
Tomatoes 4.5, 4.2, 4.0; Bottled water 6.7, 7.0, 7.2; Milk of magnesia 10.5, 10.3,  
10.6; Liquid hand soap 9.0, 10.0, 9.5; Vinegar 2.2, 2.9, 3.0; Household bleach  
12.5, 12.5, 12.7; Milk 6.6, 6.5, 6.4; Household ammonia 11.5, 11.0, 11.5;  
Lye 13.0, 13.5, 13.4; and Sodium hydroxide 14.0, 14.0, 13.9; Anti-freeze 10.1,  
10.9, 9.7; Windex 9.9, 10.2, 9.5; Liquid detergent 10.5, 10.0, 10.3; and  
Cola 3.0, 2.5, 3.2

**Teaching tip:** The pH scale is from 0 to 14. Have students make two data tables, one with the data as given and one with the pH scale 0 to 14 with the substances' average pH in rank order on the scale (Battery acid at the lower end and Sodium hydroxide at the upper end) or create a pH graphic organizer.

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Number of Coils	Number of Paperclips
6	300, 100, 30
16	50, 60, 50
25	15, 76, 65
100	13, 78, 20

#### Example 3: pH of Substances (GR 5–10)

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10.6; Liquid hand soap 9.0, 10.0, 9.5; Vinegar 2.2, 2.9, 3.0; Household bleach  
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