

# Unit 3 Lesson 1: Two-way Tables

## 1 Utensils and Paper Preferences (Warm up)

### Student Task Statement



Several students are surveyed about whether they prefer writing with a pen or a pencil and they are also asked whether they prefer lined paper or unlined paper. Some of the results are:

- The survey included 100 different students.
- 40 students said they prefer using pen more than pencil.
- 45 students said they prefer using unlined paper more than lined paper.
- 10 students said they prefer lined paper and pen.
- 45 student said they prefer pencil and lined paper.

For each part, explain or show your reasoning.

1. How many students prefer using pencil more than pen?
2. How many students prefer using pen and unlined paper?
3. How many students prefer using pencil and unlined paper?

## 2 Fruit Fly Mutations

### Student Task Statement

A scientist is trying to determine the role of specific genes by looking at traits of fruit flies. The offspring of two fruit flies are examined to determine the color of their eyes and whether they have curled wings or standard wings. Eighty offspring are randomly selected, and the results are recorded in the **two-way table**.

	curled wings	standard wings
red eyes	17	45
white eyes	5	13

1. Describe what the 17 in the table represents.
2. How many selected fly offspring had white eyes? Explain or show your reasoning.
3. How many selected fly offspring had standard wings? Explain or show your reasoning.

### 3 Info Gap: Running to the Dentist

#### Student Task Statement

Your teacher will give you either a problem card or a data card. Do not show or read your card to your partner.

If your teacher gives you the data card:

1. Silently read the information on your card.
2. Ask your partner "What specific information do you need?" and wait for your partner to ask for information. Only give information that is on your card. (Do not figure out anything for your partner!)
3. Before telling your partner the information, ask "Why do you need to know (that piece of information)?"
4. Read the problem card, and solve the problem independently.
5. Share the data card, and discuss your reasoning.

If your teacher gives you the problem card:

1. Silently read your card and think about what information you need to answer the question.
2. Ask your partner for the specific information that you need.
3. Explain to your partner how you are using the information to solve the problem.
4. When you have enough information, share the problem card with your partner, and solve the problem independently.
5. Read the data card, and discuss your reasoning.

Pause here so your teacher can review your work. Ask your teacher for a new set of cards and repeat the activity, trading roles with your partner.