

**ENRICHMENT ACTIVITY 16-1****Taking a Survey: Designing a Statistical Study**

Many surveys are conducted in today's world. There are surveys to find out what products people prefer, surveys to obtain political ideas, surveys to determine the effectiveness of a new medicine, and so on. Many economic, political, and social decisions are made based on the results of surveys. Surveys are conducted by statisticians who, after they collect data, organize, display, and analyze the data. In this activity, you will play the role of a statistician.

To extract specific information, statisticians ask questions in various styles including a multiple-choice format, a Likert scale format, and an open-ended format.

**Examples**

*Multiple-Choice Format:* How many times have you attended a movie at the movie theater during the past 6 months?

- (A) 4 or more      (B) 3      (C) 2      (D) 1      (E) none

*Likert Scale Format:* How much do you agree/disagree with the following statement: "All students should be required to take 4 years of mathematics during their high school career."

1. Strongly agree    2. Slightly agree    3. Slightly disagree    4. Strongly disagree

*Open-Ended Format:* Approximately how many miles do you drive per year?

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**Exercises**

In 1–3, for each topic, write a question in **a.** multiple-choice format, **b.** Likert scale format, and **c.** open-ended format.

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| 1. After-school activities | 2. Winter break |
| 3. Pets                    | 4. Vegetables   |