SAMPLE ASSESSMENT WITH ANNOTATIONS

GRAPHS AND CHARTS

▼ Describes the tasks the student is to perform to demonstrate achievement of Learning Standard 11A at stage D (fourth grade). Bulleted items describe the performance criteria using the rubric’s dimensions.

Performance Standard 11A.D

Construct charts and graphs to display data accordingly:

- **Knowledge**: Know ways to make different kinds of charts and graphs (e.g., line, bar, pie) to display data, including the use of a computer
- **Application**: Analyze and explain data from three charts and graphs.
- **Communication**: Produce 3 charts and/or graphs and written explanations that are well-organized and well-detailed and present them to the class; express all ideas in a way that provide evidence of knowledge and application processes.

Procedures

▼ The first item includes the Learning Standard (in italics) and the performance descriptors (bullets), which indicate the kinds of learning that should take place before attempting the assessment.

1. **In order to know and apply the concepts, principles and processes of scientific inquiry (11A)**, students should experience sufficient learning experiences to develop the following:
   - Construct charts and visualizations to display data.
   - Use a computer or other technology to produce simple graphs and charts.
   - Explain and report data using various kinds of graphs and charts.

▼ Items 2 through the second-to-last item are the directions for administering the assessment.

2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work.

3. Select data from a recently completed science unit and ask students to do the following:
   - Display the data using various kinds of graphs and charts (e.g., line, bar, pie); use computer technology if available.
   - Analyze the data and explain in writing what the data mean.

4. Ask each student to report and explain the data in a brief presentation, using his/her graphs and charts as visual aids.

▼ The last item under “procedures” describes how to evaluate the student work. The italicized categories provide the specifics of the scoring rubric.
5. Evaluate each student’s work using the Science Rubric as follows and add the scores to determine the performance level:

- **Knowledge**: Display of the data on the charts and/or graphs was complete and accurate.
- **Application**: Analysis and explanation of the data were thorough and accurate.
- **Communication**: Presentation and charts/graphs were well-executed and well-organized; all ideas were expressed clearly and provided complete evidence of the knowledge and application processes.

### Examples of Student Work

*Student work, when available, follows the assessment.*

### Resources

*Materials to gather before assessment.*

### Time Requirements

*Approximate time to complete assessment only. Instructional time not included.*

- 25 to 30 minutes

- Graph paper or other means of displaying charts/graphs
- Computers and technology, if available
- Science Rubric