GRAPHING GASES

Lesson Summary:

Students comprehend the composition of Earth's atmosphere by making a pie graph of the principle gases found in Earth's atmosphere, and by calculating the number of specific gas molecules present in a given concentration of atmospheric gases.

Objectives:

The student will:
- make a pie graph of atmospheric data;
- calculate values using percentages; and
- identify the two most prevalent gases in Earth's atmosphere.

GLEs Addressed:

Science

[5-8] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

Math

[6] S&P-1 The student demonstrates an ability to classify and organize data by [designing an investigation and collecting L], organizing, or displaying, using appropriate scale for data displays (tables, bar graphs, line graphs, or circle graphs), data in real-world problems (e.g., social studies, friends, or school), with whole numbers up to 100 (M6.2.1 & M6.2.2).

[7] S&P-1 The student demonstrates an ability to classify and organize data by [collecting, L] displaying, organizing, or explaining the classification of data in real-world problems (e.g., science or humanities, peers or community) using circle graphs, frequency distributions, stem and leaf, [or scatter plots L] with appropriate scale (M6.3.1).

[7] E&C-5 The student accurately solves problems (including real-world situations) by converting between equivalent fractions, terminating decimals, or percents (10% = 1/10 = 0.1) (M3.3.5).

[8] E&C-3 The student accurately solves problems (including real-world situations) by using percents and percentages (e.g., tax, discount) (M3.3.3 & M3.3.4).

[7] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, and community (M10.3.1 & M10.3.2).

[8] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, community, and careers (M10.3.1 & M10.4.2).

Search Terms:

- Earth's atmosphere
- gases
- graphing
- percentage
- Periodic Table
- nitrogen
- oxygen
- element
- molecule
- atom