



INTRO BUILD APPLY

## Summary

*Diagram It!* provides labeled diagrams that help students to visualize a concept and to understand relationships among its constituent elements. The activity uses charts, graphs, process steps, cross-sections, and drawings to directly support STEM learning and ESL assessments. The activity includes four learning modes: reviewing diagram parts, matching labels to parts, typing labels, and recording an open-ended response to a pre-made prompt.

## Learning Goals

- Develops concept **comprehension** by interacting with diagram elements.
- Shows relationships among related concepts that students are learning in a given unit.



Use with a student device such as a Chromebook, laptop, tablet, or desktop.



Requires a microphone for the speaking option in open-ended response mode.



Use this activity as independent practice.



# How to Use Diagram It!

## Independent Practice

This activity has four different learning modes. Most Speak Agent lessons that include diagrams use only one or two of these modes. Labeling is the most common due to its broad applicability in Universal Design for Learning (UDL 3.3 & 5.2).

- ▶ **Review:** Students can review each numbered diagram element to see the word, definition, and related images that give additional context.
- ▶ **Labeling:** In this mode students move the labels to the matching number slot. When they press Check My Work, the activity provides corrective feedback.
- ▶ **Typing:** Similar to Labeling mode, except that students must type in the labels for each slot. If they cannot recall or spell them correctly, they can redo the Review or Labeling modes or look at the lesson's Word Gallery for the challenging word(s).
- ▶ **Describing:** In this mode students describe elements of the diagram in response to a prompt. They may provide their responses in writing or by recording their speech.

### Labeling Mode

**Label: Volume of a Prism** Check my Work

1. \_\_\_\_

2. length

3. height unit cubes

4. width volume

5. base volume

6. \_\_\_\_

$V = 3 \times 2 \times 2 = 12m^3$

### Describing Mode

How many faces does this figure have? How many vertices?

It has 6 faces and 8 vertices.

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## Key Learning Strategies

Explaining Thinking	When students explain their thought process, they find strategies to solidify understanding.
Scaffolds	Scaffolds facilitate learning and reduce frustration by increasing the level of difficulty, adding new cognitive tasks, or adding complexity in manageable increments.
Visual Representations	Visual representations help students to better understand STEM concepts and to recognize relationships between concepts.