

How to Implement Scaffolds: Science

Why use scaffolds?

Scaffolds allow all students to access grade-level content. At UnboundEd, we empower educators to address the predictability of student outcomes through evidence-informed, engaging, affirming, and meaningful grade-level — GLEAM™ instruction — so all students succeed academically. GLEAM instruction provides all students access to texts, tasks, and materials aligned with grade-appropriate college and career standards. For more information on GLEAM, see [What is GLEAM™ Instruction?](#)

What are scaffolds?

Scaffolds are evidence-based practices that provide students support for unfamiliar or challenging aspects of a lesson. Effective scaffolds:

- Help students manage cognitive load — by freeing up working memory for new learning
- Preserve grade-level rigor
- Are gradually removed as students build proficiency

To better understand how scaffolds and modifications differ, see [Supports vs. Modifications: What's the Difference?](#)

Use our **How to Plan Scaffolds: Science** tool to help you implement scaffolds, as needed, when students are building background knowledge or accessing new concepts in science.

Scaffolding: A Three-Step Process

This three-step process for planning scaffolds aligns with the characteristics of effective scaffolds.

Step 1 Determine whether students need support.

Step 2 Choose scaffolds and adapt instruction.

Step 3 Adjust future instruction based on student progress.

Step 1 Determine whether students need support.

What is the objective of the target lesson?

What aspect of the lesson are you looking to support?

- Building background knowledge
- Accessing new concepts

What evidence shows that these aspects will be challenging for your students?

Step 2 Choose scaffolds and adapt instruction.

How will you use scaffolds to help students build background or provide access to new concepts?

Building Background	Accessing New Concepts
<ul style="list-style-type: none"><input type="checkbox"/> Add illustrations, photos, or diagrams.<input type="checkbox"/> Show a short clip of an idea or concept.<input type="checkbox"/> Use real-life objects to provide a representation of a scientific concept.<input type="checkbox"/> Provide additional texts to build supplemental knowledge and vocabulary.<input type="checkbox"/> Create charts and tables with key information (could be in the home language for Multilingual Learners).<input type="checkbox"/> Create (or co-create) a vocabulary glossary with pictures.	<ul style="list-style-type: none"><input type="checkbox"/> Teach roots of words to show patterns or identify cognates.<input type="checkbox"/> Co-create a pictorial glossary.<input type="checkbox"/> Add gestures or movement to support understanding of concepts.<input type="checkbox"/> Use pictorial modeling to show processes, changes, cycles, etc.<input type="checkbox"/> Develop timelines to model what's happening over time.<input type="checkbox"/> Create charts and tables with key information (could be in the home language for Multilingual Learners).

Step 3 Adjust future instruction based on student progress.

Determine the effectiveness of the scaffold and how you can remove it over time.

- **Did the scaffold help students access grade-level concepts? What evidence do you have of student progress?**
- **Will the scaffold be needed to support students in future lessons? If so, when can you begin removing it to allow students to practice skills independently?**