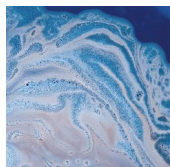


SCIENCE CURRICULUM

Unit 7.1 Chemical Reactions & Matter

How can we make something new that was not there before?

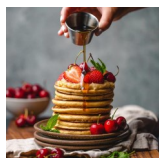
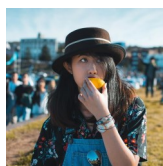


Unit 6.6 Cells & Systems

How do living things heal?

Unit 7.3 Metabolic Reactions

How do things inside our bodies work together to make us feel the way we do?

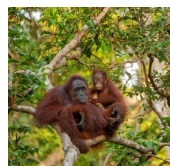


Unit 7.4 Matter Cycling & Photosynthesis

Where does food come from and where does it go next?

Unit 7.5 Ecosystem Dynamics

How does changing an ecosystem affect what lives there?



Unit 8.5 Genetics

Why are living things different from one another?

Unit 8.6 Natural Selection & Common Ancestry

How could things living today be connected to the things that lived long ago?



NEXT
GENERATION
SCIENCE
STANDARDS

Crosscutting Concepts

Crosscutting concepts have application across all domains of science. As such, they are a way of linking the different domains of science. They include **patterns; cause and effect; scale, proportion, and quantity; systems and system models; energy and matter; structure and function; and stability and change.**



The OpenSciEd Instructional Model uses a storyline approach— a logical sequence of lessons that are motivated by students' questions that arise from students' interactions with phenomena.

To help teachers and students advance through a unit storyline, the instructional model takes advantage of five routines—activities that play specific roles in advancing the storyline with structures to help students achieve the objectives of those activities.

The **Anchoring Phenomena Routine** is used to kick off a unit and drive student motivation throughout the unit. It provides a common experience with a phenomenon that is engaging and puzzling, eliciting student questions and a drive to figure things out.

The **Navigation Routine** enables students to link learning across lessons and activities and see how it is connected to their original questions about the phenomena.

The **Investigation Routine** is used to gather additional information the class needs to help answer the questions on the Driving Question Board.

The **Problematizing Routine** reveals potential problems with the current model, explanation, or design solution. The problems and disagreements elicited are useful in motivating students to extend or revise their thinking.

In the **Putting the Pieces Together Routine**, students take the pieces of ideas they have developed across multiple lessons and figure out how they can be connected to account for the phenomenon the class is working on. This helps students take stock of their learning and engage with the class to develop a consensus model.