

Three-Dimensional Learning in the Amplify Science 7th Grade Course

The Amplify Science Grade 7 Course includes 6 units that support students in meeting the NGSS. The following unit summaries demonstrate how students engage in three-dimensional learning to solve real-world questions and problems.

Rock Transformations: As geologists, students investigate different ways rocks form and change. Using their new understanding, they explain how rock transformation processes caused rock material from the Rocky Mountains to eventually become part of the Great Plains.

Chemical Reactions: Students play the role of student chemists, applying what they learn about matter and chemical reactions to solve the mystery of mysterious substances appearing in a county's water supply.

Traits and Reproduction: Working as student genetic researchers, students investigate the causes of surprising variation in spider silk flexibility. Students learn why organisms – even parents, offspring, and siblings – vary in their traits.

Populations and Resources: In their role as student ecologists, students work to uncover the cause of the moon jelly population explosion in Glacier Sea. They learn about how organisms interact in an ecosystem to get the resources they need.

Matter and Energy in Ecosystems: Students act as ecologists to investigate a failed biodome. In the process, they learn about how matter, carbon in particular, flows through biotic and abiotic components of an ecosystem.

Earth's Changing Climate: In their role as climatologists, students must explain why Earth's ice is melting. They learn about how changes in the atmosphere are affecting the energy balance in the Earth's system, and about humans' role in these changes.