Science Foundations provides students with opportunities to develop the knowledge, skills, and strategies necessary for success in rigorous high school science courses. The course is appropriate for use as remediation at the high school level or as a bridge to high school.

Science Foundations is a two-semester course, with each semester containing 10 mini-units. Each mini-unit is composed of three lessons. The first lesson focuses on key concepts found in Earth science, physical science, and life science. The second lesson reinforces reading and math skills students need to be successful with the content introduced in the first lesson. The third lesson introduces scientific inquiry and critical thinking skills that will help students thrive in science as well as other disciplines. Carefully paced, guided instruction is accompanied by engaging and accessible interactive practice. Checkup activities provide an opportunity to review content prior to assessment. Practice activities offer an opportunity to apply concepts that were presented in Study activities.

This course is built to state standards.

Length: Two Semesters

Unit 1: Introduction to Biology

- Biology as Science
- Connections in Biology
- Doing Science: Introduction to Biology
- Introduction to Biology Wrap-Up

Unit 2: The Chemistry of Biology

- Chemistry of Life
- Carbohydrates, Lipids, and Nucleic Acids
- Proteins, Enzymes, and Water
- Doing Science: The Chemistry of Biology
- The Chemistry of Biology Wrap-Up

Unit 3: Cells

- Cell Structure
- Cell Membrane
- Cell Differentiation
- Doing Science: Cells
- Cells Wrap-Up

Unit 4: Transfer of Energy and Matter

- Photosynthesis
- Cellular Respiration
- Matter and Energy

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- Doing Science: Energy Transfer
- Energy Transfer Wrap-Up

Unit 5: Earth's Resources

- Biogeochemical Cycles
- A Changing Earth
- Solutions for the Future
- Doing Science: Earth's Resources
- Earth's Resources Wrap-Up

Unit 6: Semester 1 Review and Exam

Unit 7: DNA and Heredity

- The Code of Life
- Passing On Traits
- Mendelian Genetics
- Doing Science: DNA and Heredity
- DNA and Heredity Wrap-Up

Unit 8: DNA to Protein

- Structure of Genetic Material
- From DNA to Protein
- Changes to DNA
- Doing Science: DNA to Protein
- DNA to Protein Wrap-Up

Unit 9: Ecosystems and Natural Selection

- Ecosystems
- Populations
- Adaptation and Natural Selection
- Doing Science: Ecosystems and Natural Selection
- Ecosystems and Natural Selection Wrap-Up

Unit 10: Evolution and Classification

- Evolution
- Classification
- Diversity of Life
- Doing Science: Evolution and Classification
- Evolution and Classification Wrap-Up

Unit 11: Human Biology

- Structure of the Body
- Fuel, Defense, and Signaling
- Reproduction and Development
- Doing Science: Human Biology
- Human Biology Wrap-Up

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Unit 12: Semester 2 Review and Exam

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