

Science

Third Grade



Third Grade Science Curriculum Overview

The [Indiana Academic Standards](#) define what students should know, understand, and be able to do at grade level beginning in kindergarten and progressing through grade twelve. These standards serve as the foundation to our curriculum in Noblesville Schools but are not a curriculum on their own. The Indiana Academic Standards are supported through grade-level curriculum maps and a selection of curriculum materials to support these maps. These curriculum maps and materials are aligned to the Indiana Academic standards while also meeting the needs of all learners. Therefore, the Noblesville Schools' curriculum is constantly undergoing periodic and systematic analysis and revision.

The Indiana Academic Standards for Grades K-12 Science are based on *A Framework for K-12 Science Education* (NRC, 2012) and the Next Generation Science Standards (NGSS Lead States, 2013). The K-12 Science Indiana Academic Standards outline the knowledge, science, and engineering practices that all students should learn by the end of high school. The standards are three-dimensional because each student performance expectation engages students at the nexus of the following three dimensions:

- **Dimension 1** describes scientific and engineering practices.
- **Dimension 2** describes crosscutting concepts, overarching science concepts that apply across science disciplines.
- **Dimension 3** describes core ideas in the science disciplines.

The content area standards and the types of learning experiences they provide to students in third grade are described below. These third grade standards are supported in Noblesville Schools through curriculum materials for science instruction, including *Inspire Science by McGraw Hill*.

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Inspire Science

Inspire Science by McGraw Hill serves as the primary core curriculum material for all third grade learners and provides alignment with the Indiana Academic Standards for Third Grade Science.

Table 1: Third Grade Inspire Science

Science Unit and Module(s) Pacing Varies By Unit	Science Unit Learning Outcomes Learners will...	Science Unit Big Idea and Essential Questions
Unit 1: Forces Around Us	Module 1: Consider how the different types of forces can cause different types of motion. Create a model to show knowledge of patterns of motion. Understand that when a force is applied to an object, its motion changes. Module 2: Consider how magnets and electricity can be used to move objects. Ask questions that can be investigated to explore the effects of static electricity on objects. Explain how magnetic forces can be used in designing solutions to problems.	Module 1: (Big Idea) What is the relationship between force and motion? What are patterns of motion? What happens when an object is pushed or pulled? Module 2: (Big Idea) How can some push or pull one another without even touching? How does electricity affect an object's motion? How do magnets affect an object's motion?

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Science Unit and Module(s) Pacing Varies By Unit	Science Unit Learning Outcomes Learners will...	Science Unit Big Idea and Essential Questions
Unit 2: Life Cycles and Traits	Module 1: Explore the life cycles of plants and the traits they inherit. Develop and use models to describe patterns in plant life cycles. Explain patterns in the inheritance of traits by plants, and how variations provide plants advantages for survival. Module 2: Explore the life cycles of animals, the traits they inherit, and their social interactions. Use models to describe patterns in animal life cycles. Explain patterns in the inheritance of traits by animals, and how variations provide animals advantages for survival. Engage in argument to explain how some animals form groups that help them survive.	Module 1: (Big Idea) How do plants grow, develop, and reproduce? How do plants grow and develop? How are plants similar and different from their parents? Module 2: (Big Idea) How do animals live, grow, and survive? How do animals grow and develop? How are animals similar and different from their parents and siblings? How does living in a group help some animals survive better?

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Science Unit and Module(s) Pacing Varies By Unit	Science Unit Learning Outcomes Learners will...	Science Unit Big Idea and Essential Questions
Unit 3: Different Environments	Module 1: Explore how different organisms survive in different environments. Use evidence to explain what causes organisms to survive in their environment. Argue from evidence that some animals survive better in certain environments than others. Module 2: Explore how environmental changes affect the organisms that live there. Analyze and interpret data about fossils to provide evidence about where they lived long ago. Explain changes to the environment and how those changes affect living things.	Module 1: (Big Idea) How do some organisms survive in some environments but others cannot? What do organisms need to survive? How do organisms survive in their environments? Module 2: (Big Idea) How do changes in the ecosystem affect the organisms that live there? What do fossils tell us about the environment? How does a changing environment affect organisms?

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Science Unit and Module(s) Pacing Varies By Unit	Science Unit Learning Outcomes Learners will...	Science Unit Big Idea and Essential Questions
Unit 4: Observing Weather	Explore different types of weather and climate, along with natural hazards and how to prepare for them. Analyze and interpret data to describe different weather patterns. Obtain and combine information to describe climate in different regions. Use evidence to describe how natural hazards affect environments, and identify ways to reduce damage from natural disasters. Design and compare models to explain how to reduce the impact of natural hazards.	(Big Idea) How does weather change, and how can natural hazards change environments? How does weather change? How does the weather in the United States compare to other parts in the world? How do natural hazards affect the environment? How can we prepare for natural hazards?