

Grade 5 Science ISAT Proficiency Level Descriptors

Advanced

In the area of Nature of Science, fifth grade students typically performing at the Advanced level demonstrate an **in-depth understanding** of grade-level skills. These students

- understand different systems then analyze changes that occur in and among systems.
- understand how to use multiple observations, data, and models as evidence to make predictions, explanations, and inferences.
- select and understand how to use multiple tools to appropriately measure in customary and metric systems.
- classify objects or systems based on the relationship between the shape or form and its use or function.
- understand comprehensive skills needed for scientific inquiry.

In the area of Physical Science, fifth grade students typically performing at the Advanced level demonstrate an **in-depth understanding** of grade-level skills. These students

- analyze the differences among elements, compounds, and mixtures.
- evaluate the physical differences among solids, liquids, and gases.
- understand how the difference in molecular motion relates to physical change.

In the area of Biology, fifth grade students typically performing at the Advanced level demonstrate an **in-depth understanding** of grade-level skills. These students

- understand how plants convert energy from the Sun through photosynthesis.
- analyze the structural differences between plant and animal cells.
- demonstrate a thorough understanding that traits are passed from parents to offspring.

In the area of Earth Science, fifth grade students typically performing at the Advanced level demonstrate an **in-depth understanding** of grade-level skills. These students

- analyze interactions among the solid earth, oceans, and atmosphere.
- demonstrate a thorough understanding of the rock cycle and the three classifications of rocks.

In the area of Personal and Social Perspectives and Technology, fifth grade students typically performing at the Advanced level demonstrate an **in-depth understanding** of grade-level skills. These students

- examine complex issues for environmental studies.
- identify examples of science and technology in society.
- evaluate the differences between renewable and nonrenewable resources.

Proficient

In the area of Nature of Science, fifth grade students typically performing at the Proficient level demonstrate an **understanding** of grade-level skills. These students

- compare and contrast different systems, then analyze simple changes that occur in and among systems.
- understand how to use observations, data, and/or models as evidence to make predictions, explanations, and/or inferences.

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- select and understand how to use common tools to measure in customary and metric systems.
- understand how the shape or form of an object or system is related to its use or function.
- identify and apply simple skills used in scientific inquiry.

In the area of Physical Science, fifth grade students typically performing at the Proficient level demonstrate an **understanding** of grade-level skills. These students

- identify the differences among elements, compounds, and mixtures.
- compare the physical differences among solids, liquids, and gases.
- understand the nature of physical change and how it relates to physical properties.

In the area of Biology, fifth grade students typically performing at the Proficient level demonstrate an **understanding** of grade-level skills. These students

- communicate how plants convert energy from the Sun through photosynthesis.
- compare and contrast the structural differences between plant and animal cells.
- understand the concept that traits are passed from parents to offspring.

In the area of Earth Science, fifth grade students typically performing at the Proficient level demonstrate an **understanding** of grade-level skills. These students

- understand the interactions among the solid earth, oceans, and atmosphere.
- recognize the rock cycle and identify the three classifications of rocks.

In the area of Personal and Social Perspectives and Technology, fifth grade students typically performing at the Proficient level demonstrate an **understanding** of grade level skills. These students

- identify issues for environmental studies.
- identify examples of science and technology that are a part of a student's life.
- identify the differences between renewable and nonrenewable resources.

Basic

In the area of Nature of Science, fifth grade students typically performing at the Basic level demonstrate a **limited understanding** of grade-level skills. These students

- identify components of systems.
- identify predictions, explanations, and inferences.
- understand how to use common tools to make measurements.
- recognize the shape or form of an object or system and identify its use or function.
- understand limited skills needed for scientific inquiry.

In the area of Physical Science, fifth grade students typically performing at the Basic level demonstrate a **limited understanding** of grade-level skills. These students

- identify elements, compounds, and mixtures.
- understand limited properties of solids, liquids, and gases.
- recognize a change in physical properties.

In the area of Biology, fifth grade students typically performing at the Basic level demonstrate a **limited understanding** of grade-level skills. These students

- recognize that plants get energy from the Sun.

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- identify a difference between plant and animal cells.
- identify a trait that is passed from parents to offspring.

In the area of Earth Science, fifth grade students typically performing at the Basic level demonstrate a **limited understanding** of grade-level skills. These students

- identify simple interactions among the solid earth, oceans, and atmosphere.
- understand limited skills needed to classify rocks in the rock cycle.

In the area of Personal and Social Perspectives and Technology, fifth grade students typically performing at the Basic level demonstrate a **limited understanding** of grade-level skills.

These students

- identify simple environmental issues.
- identify basic examples of science and technology.
- identify a renewable or a nonrenewable resource.