

Grade 7 Science ISAT Proficiency Level Descriptors

Advanced

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

- explain that small systems are components of larger systems and analyze changes that occur within them.
- interpret observations, data, and models as evidence on which to base scientific explanations and inferences.
- apply concepts of science that have been stable over time.
- select appropriate tools to measure in metric units.
- identify, analyze, and evaluate the components of scientific inquiry.
- read and evaluate complex technical instructions.

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

- evaluate differences in properties of matter as observed in elements, compounds, and mixtures.
- analyze the effects of different forces on the movement, speed, and direction of an object.

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

- analyze how natural selection helps explain species change over time.
- understand the relationships between matter and energy in ecosystems.
- identify structures and complex functions of cells.
- analyze the levels of organization within organisms.

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

- compare the interactions among the solid earth, oceans, atmosphere, and organisms.
- understand the water cycle and analyze its affect on weather patterns, cloud types, and climates.

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

- understand how science and technology are interrelated.
- evaluate alternative sources of energy.

Proficient

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

- understand that small systems are components of larger systems and recognize changes that occur within them.
- identify observations, data, and models as evidence on which to base simple scientific explanations and inferences.
- identify concepts of science that have been stable over time.
- select appropriate tools to measure in metric units.
- understand how to identify, use, and evaluate the components of scientific inquiry.
- read and evaluate technical instructions.

Grade 7 Science ISAT Proficiency Level Descriptors

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

- compare and contrast differences in properties of matter as observed in elements, compounds, and mixtures.
- identify the effects of different forces on the movement, speed, and direction of an object.

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

- identify how natural selection helps explain species change over time.
- understand the relationships between matter and energy in ecosystems.
- identify structures and functions of cells.
- identify the levels of organization within organisms.
- understand how dominant and recessive traits are inherited.

In the area of Earth Science, seventh 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, atmosphere, and organisms.
- understand the water cycle and its relationship to weather patterns, cloud types, and climates.

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

- recognize how science and technology are interrelated.
- identify alternative sources of energy.

Basic

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

- recognize that small systems are components of larger systems.
- recognize that observations, data, and models are evidence on which to base simple scientific explanations and inferences.
- identify common concepts of science that have been stable over time.
- select tools to measure in metric units.
- identify some components of scientific inquiry.
- read and understand simple technical instructions.

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

- identify differences in properties of matter as observed in elements, compounds, and mixtures.
- identify different forces that can affect the movement, speed, and direction of an object.

Grade 7 Science ISAT Proficiency Level Descriptors

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

- provide a simple description of how natural selection helps explain species change over time.
- understand basic relationships between matter and energy in ecosystems.
- identify some structures and basic functions of cells.
- identify the levels of organization within organisms.
- recognize that inherited traits can be dominant or recessive.

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

- recognize interactions among the solid earth, oceans, atmosphere, and organisms.
- recognize parts of the water cycle and simple relationships to weather patterns, cloud types, and climates.

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

- recognize how science and technology are interrelated.
- recognize alternative sources of energy.