Grade 10 Science ISAT Proficiency Level Descriptors

Advanced
Tenth grade students typically performing at the Advanced level consistently demonstrate the ability to use their understanding of the world around them to solve real-world problems. Students have a clear understanding of the role of complex systems and their components, Newton's laws of motion, classification of energy, conservation of energy, atomic particles, chemical reactions, theory of evolution, specialized cellular functions, planetary formation theories, energy and matter, multiple environmental issues, and various energy resources. As a result students show the ability to consistently base scientific explanations on logical reasoning, understand how to use the metric system to measure and calculate changes, and understand how to use scientific inquiry to analyze complex technical material. Understanding these scientific concepts allows the student to more fully understand the world around them.

Proficient
Tenth grade students typically performing at the Proficient level consistently demonstrate a clear understanding of how the world around them works. Students have an understanding of the role of system components, Newton's laws of motion, classification of energy, conservation of energy, atomic particles, chemical reactions, theory of evolution, specialized cellular functions, planetary formation theories, energy and matter, common environmental issues, and various energy resources. Students show the ability to base scientific explanations on logical reasoning, understand how to use the metric system to measure and calculate changes, and understand how to use scientific inquiry to analyze technical material. Understanding these scientific concepts allows the student to more fully understand the world around them.

Basic
Tenth grade students typically performing at the Basic level consistently demonstrate a limited understanding of how the world around them works. Students have a minimal understanding of the role of system components, Newton's laws of motion, classification of energy, conservation of energy, atomic particles, chemical reactions, theory of evolution, specialized cellular functions, planetary formation theories, energy and matter, common environmental issues, and energy resources. Students show limited ability to base scientific explanations on logical reasoning, understand how to use the metric system to measure and calculate changes, and understand how to use scientific inquiry to analyze technical material. Understanding these scientific concepts allows the student to more fully understand the world around them.