Science Grade 6 Round Final

(Student name) scored at the *Advanced* level in Science. Students scoring at this level generally exhibit the ability to

- compare and contrast investigations by generating testable questions, identifying variables, and evaluating experimental designs;
- select a variety of appropriate tools and resources for data collection; analyze data; make inferences; and predict trends;
- communicate experimental procedures, data, and analyses in a variety of appropriate methods;
- describe and explain how science is advanced through mathematics, technology, communication, and the work of others;
- identify faulty reasoning, information, communications, or statements that misinterpret or are not supported by evidence;
- determine mass, volume, and density and recognize that density does not change with the amount of a substance;
- identify the average atomic masses of given elements, using the periodic table;
- compare physical and chemical properties and changes and relate the structure and movement of matter to temperature;
- identify, describe, and compare substances in common materials and chemical reactions and predict the mass of their products;
- analyze graphs of motion; infer how motion is related to applied forces; and predict future positions and speed of objects;
- describe, compare, and give examples of different forms of energy, energy changes and interactions, and production and use risks;
- categorize energy types and evaluate the risks and benefits of their use and production on the environment and economy; and
- explain how people can conserve and sustain resources and evaluate both the short- and long-term effects of these actions.

(Student name) scored at the *Mastery* level in Science. Students scoring at this level generally exhibit the ability to

- explain investigations by generating testable questions, identifying variables, and comparing experimental designs;
- select appropriate tools and resources for data collection and analyze data to make inferences and predict trends;
- communicate experimental procedures, data, and analyses through appropriate methods;
- describe how science is improved through mathematics, technology, communication, testing, and the work of others;
- identify faulty reasoning and statements that misinterpret or are not supported by evidence;
- determine the mass, volume, and density of different amounts of a variety of substances;
- identify the average atomic masses of given elements, using the periodic table;
- compare physical and chemical changes and differentiate between physical and chemical properties of a substance;
- identify and describe substances in materials and chemical reactions and relate phase changes of water to changes in water temperature;
- compare motion and predict future positions and speed of objects and describe forces acting on objects and predict their effects;
- describe and give examples of different energy forms, energy changes and interactions, and energy production and use risks;
- identify and categorize energy types and determine their uses and effects on the environment and economy; and
- identify, describe, and categorize ways people can conserve and sustain resources.

(Student name) scored at the *Basic* level in Science. Students scoring at this level generally exhibit the ability to

- describe investigations by generating testable questions and identifying variables;
- select appropriate tools and resources to collect and analyze data to evaluate explanations and models and to make inferences;
- communicate experimental procedures, data, and analyses;
- recognize that science is improved by mathematics, technology, and the work of others and is continually tested, revised, and advanced;
- identify faulty reasoning and statements that misinterpret or are not supported by evidence;
- determine mass and volume and compare the masses of the same volumes of different substances;
- identify the average atomic masses of given elements, using the periodic table;
- identify physical and chemical properties and changes and describe the temperatures at which changes of the phase of water occurs;
- identify substances in common materials and chemical reactions;
- compare and construct graphs of motion and identify and describe forces acting on objects;
- describe different forms of energy, transformations, and interactions with matter and identify risks associated with energy use; and
- identify and categorize energy types and identify and describe ways people can conserve and sustain resources.

Science Grade 6 Round Final

(Student name) scored at the *Approaching Basic* level in Science. Students scoring at this level generally exhibit the ability to

- describe an investigation and identify its variables;
- select tools and resources to collect and use data to evaluate explanations and models;
- communicate experimental data and explanations;
- describe that science is continually tested, advanced, and improved by the work of others;
- recognize statements that are not supported by evidence;
- determine the masses and volumes of different substances and identify the atomic masses of given elements, using the periodic table;
- identify physical and chemical properties or changes and identify substances in common materials;
- recognize that phase changes of water occur at different temperatures;
- identify and compare graphs of motion and identify forces acting on objects;
- give examples of different energy forms, transformations, and interactions with matter and risks associated with energy use; and
- identify categories of energy types and examples of how people can reuse, recycle, and reduce resources.

(Student name) scored at the *Unsatisfactory* level in Science. Students scoring at this level have not demonstrated the fundamental knowledge and skills needed for the next level of schooling. Students scoring at this level need to develop the ability to

- describe an investigation and identify its variables;
- select tools and resources to collect and use data to evaluate explanations and models;
- communicate experimental data and explanations;
- describe that science is continually tested, advanced, and improved by the work of others;
- recognize statements that are not supported by evidence;
- determine the masses and volumes of different substances and identify the atomic masses of given elements, using the periodic table;
- identify physical and chemical properties or changes and identify substances in common materials;
- recognize that phase changes of water occur at different temperatures;
- identify and compare graphs of motion and identify forces acting on objects;
- give examples of different energy forms, transformations, and interactions with matter and risks associated with energy use; and
- identify categories of energy types and examples of how people can reuse, recycle, and reduce resources.