Scientific investigation and reasoning skills are not assessed in isolation but are incorporated into questions that assess science content. These skills focus on safe, environmentally appropriate, and ethical laboratory and outdoor investigations; using scientific methods and equipment in investigations; and using critical thinking and scientific problem solving to make informed decisions.

### Students achieving Level III: Advanced Academic Performance can

- Explain the flow of energy in series and parallel circuits
- Evaluate the advantages and disadvantages of using alternative energy resources
- Analyze the effects of changing variables while experimenting with forces
- Interpret causes and effects of gradual and rapid changes to Earth’s surface
- Explain how adaptations help organisms survive in their environments

### Students achieving Level II: Satisfactory Academic Performance can

- Differentiate between substances and mixtures using physical properties
- Explore and describe various sources and uses of energy
- Explain the effects of forces on objects through investigations
- Recognize and compare gradual and rapid changes to Earth’s surface
- Identify patterns and cycles caused by interactions among the sun, Earth, and moon
- Investigate inherited traits, learned behaviors, and structures and functions of different species that allow organisms to survive and interact in an ecosystem
- Describe how energy from the sun is transferred through ecosystems

### Students achieving Level I: Unsatisfactory Academic Performance can

- Classify matter as liquid, solid, or gas
- Identify the different sources of energy
- Recognize basic characteristics of the sun, Earth, and moon
- Identify stages in a life cycle and roles of organisms in a food chain