

FCAT 2.0 Science (Grades 5 and 8) and Biology 1 EOC Assessment

Low Complexity

Low-complexity items may require students to recall and recognize previously learned concepts and principles. Items typically specify what the student is to do, which is often to carry out a procedure that can be performed mechanically. The student is not required to come up with an original method or solution. Skills required to respond to low-complexity items may include, but are not limited to, the following:

- identifying a common example or recognizing a concept
- retrieving information from a chart, table, diagram, or graph
- recognizing a standard scientific representation of a simple phenomenon
- calculating or completing a familiar single-step procedure or solving a problem using a known formula

Moderate Complexity

Moderate-complexity items involve more flexible thinking than low-complexity items. Items require procedures that go beyond the habitual, are not specified, and ordinarily have more than a single step or thought process. The student is expected to decide what to do—using informal methods of reasoning and problem-solving strategies—and to bring together skills and knowledge from various domains. Skills required to respond to moderate-complexity items may include, but are not limited to, the following:

- interpreting data from a chart, table, or simple graph
- determining the best way to organize or present data from observations, investigations, or experiments
- specifying or inferring relationships among different groups, facts, properties, or variables
- describing or explaining examples and non-examples of scientific processes or concepts
- predicting or determining the logical next step or outcome
- differentiating structures and functions of different organisms or systems
- applying and using concepts from a standard scientific model or theory

High Complexity

High-complexity items make heavy demands on student thinking. Students must engage in abstract reasoning, planning, analysis, judgment, and creative thought. The items often involve multiple steps and require the student to think in an abstract, sophisticated way. Skills required to respond to high-complexity items may include, but are not limited to, the following:

- developing a generalization from multiple data sources
- analyzing data from an investigation or experiment and formulating a conclusion
- analyzing and evaluating an experiment with multiple variables
- analyzing an investigation or experiment to identify a flaw and proposing a method for correcting it
- interpreting, explaining, or solving a problem involving complex spatial relationships
- analyzing a problem, situation, or system and making long-term predictions