

ISTEP+: Grade 4 Science Blueprint Beginning Spring 2012

There are six Indiana Standards for Grade 4 Science, and they are divided into six categories for reporting student achievement. Age-appropriate concepts are assessed within each category.

Reporting Category	Description	Percent Range*
Physical Science	Questions may include understanding how sound and light is produced and travels from one point to another. This would also include how sound and light interact and are affected by different objects and media. Questions may include understanding how heat is generated and can move from one place to another, how to construct a complete circuit, how to identify an insulator or conductor, and how electrical energy can be transformed into other forms of energy.	15-25%
Earth Science	Questions may include understanding the properties of rocks and minerals, how fossils can provide information about past environments and extinct species, and how earth materials are used by humans and other organisms for survival. Questions may also include understanding how the physical features of Earth's surface change over time and the differences between renewable and nonrenewable resources.	15-25%
Life Science	Questions may include understanding the structures of plants and plant growth over time. Questions may also include understanding how organisms are related to their parents and how organisms are adapted to meet the needs of their environment.	5-15%
Science, Engineering and Technology	Questions may include understanding which tools and units should be used in a given scenario and which simple machine is most appropriate for a given scenario. Questions may also include understanding the forces that affect the motion of moving object, how the size of a force can affect the motion of an object, and how to measure the speed of an object in motion.	10-20%
The Nature of Science	Questions may include understanding what criteria are required in order to design and carry out a fair test, how to organize information into tables and graphs, and how to draw conclusions based on the results of an investigation.	15-25%
The Design Process	Questions may include understanding how to identify a need or problem to be solved, selecting a possible solution to that problem, testing the possible solutions, and evaluating the effectiveness of the solution on the original problem.	10-20%

* This range represents the approximate emphasis for each reporting category on the assessment.