

# TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS (TAKS)

## BLUEPRINT FOR GRADE 10 SCIENCE

Objectives	Number of Items
1—Nature of Science	17
2—Organization of Living Systems	11
3—Interdependence of Organisms	11
4—Structures and Properties of Matter	8
5—Motion, Forces, and Energy	8
<b>Total number of items</b>	<b>55</b>

### Curriculum Rationale

#### Objective 1: Scientific Processes and Skills

Objective 1 focuses on an understanding of scientific processes and includes design of investigations, accurate data collection, the use of models to represent the natural world, and data analysis. Because an understanding of the nature of science is critical to scientific literacy, this objective is given slightly more emphasis (17 items) than the other four objectives.

#### Objectives 2 and 3: Biology Concepts

Since biology is usually a freshman or sophomore level class, students will have a better opportunity to accurately demonstrate their knowledge of biological concepts if the assessment is given shortly after they have learned the material. Therefore, more items (11) for Objective 2 and 3 are found on the Grade 10 science assessment.

#### Objectives 4 and 5: Integrated Physics and Chemistry (IPC) Concepts

Even though the test is based on student expectations from IPC and biology, course sequences for high schools are not mandated by the state. Therefore, the blueprint takes into account the recommended high school program sequence of biology, chemistry, and then physics. Since students will likely not have completed this sequence by the end of tenth grade, Objectives 4 and 5 (chemistry and physics) have fewer items (8) than Objectives 2 and 3 (biology).

A 55-item science test will provide an accurate snapshot of students' understanding of IPC and biology concepts and skills.