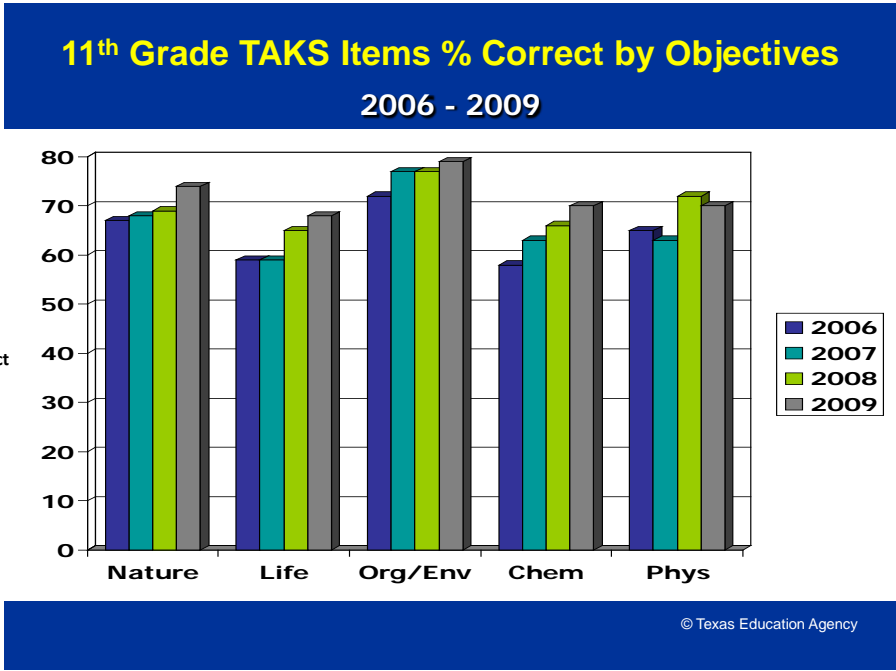
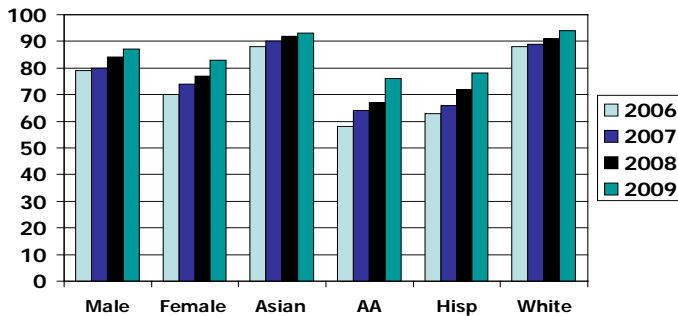


Overall, eleventh grade students have increased their performance on the science TAKS during the past four years. Students have performed best on the TAKS objective pertaining to the interdependence of organisms and the environment. Of all five science TAKS objectives, the concepts of biology pertaining to the organization of living systems are the lowest area of performance statewide. In regard to demographics, efforts need to be made to close the gap between gender performance and among ethnicity performance.

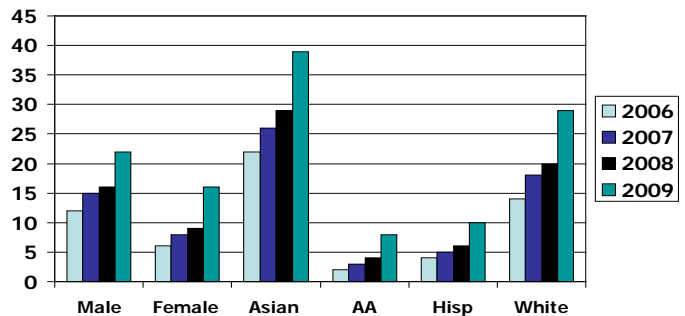


Objectives listed in chart above: (1) "Nature" - Nature of Science, (2) "Life" - Organization of Living Systems, (3) "Org/Env" - Interdependence of Organisms and the Environment, (4) "Chem" - Structures and Properties of Matter, and (5) "Phys" - Motion, Forces, and Energy.

2009 Demographic Summary Grade 11 - Percent Met Standard



2009 Demographic Summary Grade 11 - Percent Commended



11th Grade Exit-level Science TAKS – Statewide Spring 2009 Results by Objective Student Expectations (SEs) Falling Below 70% Correct Response

A Student Expectation (SE) with “BIO” refers to Biology. An SE with “IPC” refers to Integrated Physics and Chemistry (IPC).
If two test items were used for an SE, both percentages are listed (e.g. “66/80%”).

Objective 1: The student will demonstrate an understanding of the nature of science.

SE	%	Description
BIO 1A	54%	demonstrate safe practices during field and laboratory investigations (Question 23)
BIO 2C	66/80%	organize, analyze, evaluate, make inferences, and predict trends from data (Questions 66, 7))
BIO 2D	58%	communicate valid conclusions (Question 38)
IPC 3A	65/68%	analyze, review, [and critique] scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information (Questions 49, 9)
IPC 3B	67/86%	draw inferences based on data related to [promotional materials for] products and services (Questions 51, 42)

Objective 2: The student will demonstrate an understanding of the organization of living systems.

SE	%	Description
BIO 4B	47%	investigate and identify cellular processes including homeostasis, permeability, energy production, transportation of molecules, disposal of wastes, function of cellular parts, and synthesis of new molecules (Question 29)
BIO 6A	54%	describe components of deoxyribonucleic acid (DNA), and illustrate how information for specifying the traits of an organism is carried in the DNA (Question 16)
BIO 6B	48%	explain replication, transcription, and translation using models of DNA and ribonucleic acid (RNA) (Question 36)

Objective 3: The student will demonstrate an understanding of the interdependence of organisms and the environment.

SE	%	Description
BIO 7B	57%	illustrate the results of natural selection in speciation, diversity, phylogeny, adaptation, behavior, and extinction (Question 43)

Objective 4: The student will demonstrate an understanding of the structures and properties of matter.

SE	%	Description
IPC 7A	53/55%	investigate and identify properties of fluids including density, viscosity, & buoyancy (Questions 27, 35)
IPC 8C	44/85%	investigate and identify the law of conservation of mass (Questions 30, 54)
IPC 9A	59/68%	relate the structure of water to its function [as the universal solvent] (Questions 34, 21))
IPC 9B	63%	relate the concentration of ions in a solution to physical and chemical properties such as pH, electrolytic behavior, and reactivity (Question 13)

Objective 5: The student will demonstrate an understanding of motion, forces, and energy.

SE	%	Description
IPC 4B	68/90%	investigate and describe [applications of] Newton's laws such as in vehicle restraints, sports activities, geological processes, and satellite orbits (Questions 48, 8)
IPC 4D	55%	investigate and demonstrate [mechanical advantage and] efficiency of various machines such as levers, motors, wheels and axles, pulleys, and ramps. (Question 25)
IPC 5B	44%	demonstrate wave interactions including interference, polarization, reflection, refraction, and resonance within various materials (Question 33)
IPC 6A	60/74%	describe the law of conservation of energy (Questions 28, 18)
IPC 6B	55%	investigate and demonstrate the movement of heat through solids, liquids, and gases by convection, conduction, and radiation (Question 26)

SPECIAL NOTE: The Texas Essential Knowledge and Skills (TEKS) for high school science can be found at <http://ritter.tea.state.tx.us/rules/tac/chapter112/index.html>. The subset of the high school science TEKS that are eligible on the 11th grade exit-level science TAKS can be found at <http://ritter.tea.state.tx.us/student.assessment/taks/booklets/science/g11e.pdf>. Students have shown steady growth in science performance during the past four years. It is the intent of this document to highlight the specific student expectations from the 2009 TAKS results that indicate a performance level less than 70% correct response statewide.