Texas Assessment of Knowledge and Skills - Answer Key

Grade: 08
Subject: Science
Administration: April 2009

Item Number	Correct Answer	Objective Measured	Student Expectations
01	C	01	8.1 (A)
02	F	03	8.9 (A)
03	C	04	8.7 (A)
04	G	05	6.14 (B)
05	D	03	8.8 (A)
06	G	01	8.2 (D)
07	A	04	6.9 (A)
08	G	02	6.5 (B)
09	A	05	8.14 (C)
10	H	01	8.3 (A)
11	A	04	7.6 (C)
12	G	02	7.8 (B)
13	D	05	7.13 (A)
14	H	01	8.3 (A)
15	D	02	7.12 (C)
16	F	01	8.2 (D)
17	C	02	8.6 (A)
18	G	05	8.14 (B)
19	A	02	7.12 (B)
20	G	02	6.10 (B)
21	C	05	7.13 (B)
22	120	01	8.2 (B)
23	B	03	8.10 (A)
24	H	05	7.14 (B)
25	D	04	8.7 (B)
26	F	02	7.12 (D)
27	C	05	8.10 (B)
28	H	01	8.3 (B)
29	A	01	8.4 (A)
30	G	03	6.7 (B)
31	C	05	8.12 (A)
32	F	02	8.11 (B)
33	D	05	8.13 (A)
34	F	01	8.2 (E)
35	C	04	7.8 (A)
36	G	03	7.7 (C)
37	C	01	8.3 (C)
38	J	05	7.14 (A)
39	B	02	8.6 (C)
40	H	05	7.14 (C)
41	B	01	8.4 (B)
42	F	02	8.11 (C)
43	C	05	8.12 (C)
44	J	01	8.2 (C)
45	B	02	8.6 (B)
46	H	04	7.6 (A)
47	C	03	8.9 (B)
48	F	01	8.2 (A)
49	D	02	6.10 (C)
50	H	01	8.3 (B)

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TAKS Grade 8 Science

For a more complete description of the objectives measured, please refer to the Revised TAKS Information Booklet for Grade 8 Science at http://www.tea.state.tx.us/student.assessment/taks/booklets/index.html.

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

(6.1, 7.1, 8.1) **Scientific processes.** The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to

(A) demonstrate safe practices during field and laboratory investigations.

(6.2, 7.2, 8.2) **Scientific processes.** The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to

(A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;

(B) collect data by observing and measuring;

(C) organize, analyze, evaluate, make inferences, and predict trends from direct and indirect evidence (7.2, 8.2);

(D) communicate valid conclusions; and

(E) construct graphs, tables, maps, and charts using tools [including computers] to organize, examine, and evaluate data.

(6.3, 7.3, 8.3) **Scientific processes.** The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to

(A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;

(B) draw inferences based on data [related to promotional materials] for products and services; and

(C) represent the natural world using models and identify their limitations.

(6.4, 7.4, 8.4) **Scientific processes.** The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to

(A) collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices (8.4); and

(B) extrapolate from collected information to make predictions (8.4).

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

(6.5) **Science concepts.** The student knows that systems may combine with other systems to form a larger system. The student is expected to

(B) describe how the properties of a system are different from the properties of its parts.

TAKS Grade 8 Science (continued)

(6.10, 7.9) **Science concepts.** The student knows the relationship between structure and function in living systems. The student is expected to

(B) determine that all organisms are composed of cells that carry on functions to sustain life (6.10); and

(C) identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations (6.10).

(6.8, 7.8, 8.10) **Science concepts.** The student knows that complex interactions occur between matter and energy. The student is expected to

(B) identify that radiant energy from the Sun is transferred into chemical energy through the process of photosynthesis (7.8).

(7.12) **Science concepts.** The student knows that there is a relationship between organisms and the environment. The student is expected to

(B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources;

(C) describe how different environments support different varieties of organisms; and

(D) observe and describe the role of ecological succession in ecosystems.

(8.6) **Science concepts.** The student knows that interdependence occurs among living systems. The student is expected to

(A) describe interactions among systems in the human organism;

(B) identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions; and

(C) describe interactions within ecosystems.

(6.11, 7.10, 8.11) **Science concepts.** The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to

(A) identify that change in environmental conditions can affect the survival of individuals and of species (8.11);

(B) distinguish between inherited traits and other characteristics that result from interactions with the environment (8.11); and

(C) make predictions about possible outcomes of various genetic combinations of inherited characteristics (8.11).

Objective 3: The student will demonstrate an understanding of the structures and properties of matter.

TAKS Grade 8 Science (continued)

(6.7, 7.7, 8.9) **Science concepts.** The student knows that substances have physical and chemical properties. The student is expected to

(B) classify substances by their physical and chemical properties (6.7);

(C) recognize that compounds are composed of elements (7.7);

(A) demonstrate that substances may react chemically to form new substances (8.9);

(B) interpret information on the periodic table to understand that [physical] properties are used to group elements (8.9); and

(C) recognize the importance of formulas and equations to express what happens in a chemical reaction (8.9).

(8.8) **Science concepts.** The student knows that matter is composed of atoms. The student is expected to

(A) describe the structure and parts of an atom; and

(B) identify the properties of an atom including mass and electrical charge.

(6.8, 7.8, 8.10) **Science concepts.** The student knows that complex interactions occur between matter and energy. The student is expected to

(A) illustrate interactions between matter and energy including specific heat (8.10).

Objective 4: The student will demonstrate an understanding of motion, forces, and energy.

(6.9) **Science concepts.** The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to

(A) identify energy transformations occurring during the production of energy for human use such as electrical energy to heat energy or heat energy to electrical energy.

(6.8, 7.8, 8.10) **Science concepts.** The student knows that complex interactions occur between matter and energy. The student is expected to

(A) illustrate examples of potential and kinetic energy in everyday life such as objects at rest, movement of geologic faults, and falling water (7.8).

(6.6, 7.6, 8.7) **Science concepts.** The student knows that there is a relationship between force and motion. The student is expected to

(B) demonstrate that changes in motion can be measured and graphically represented (6.6);

(A) demonstrate basic relationships between force and motion using simple machines including pulleys and levers (7.6);

(C) relate forces to basic processes in living organisms including the flow of blood and the emergence of seedlings (7.6);

(A) demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion (8.7); and

(B) recognize that waves are generated and can travel through different media (8.7).

Objective 5: The student will demonstrate an understanding of earth and space systems.

(6.14) **Science concepts.** The student knows the structures and functions of Earth systems. The student is expected to

(B) identify relationships between groundwater and surface water in a watershed.

(6.13, 7.13) **Science concepts.** The student knows components of our solar system. The student is expected to

(A) identify and illustrate how the tilt of the Earth on its axis as it rotates and revolves around the Sun causes changes in seasons and the length of a day (7.13); and

(B) relate the Earth's movement and the moon's orbit to the observed cyclical phases of the moon (7.13).

(6.8, 7.8, 8.10) **Science concepts.** The student knows that complex interactions occur between matter and energy. The student is expected to

(B) explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin (6.8); and

(B) describe interactions among solar, weather, and ocean systems (8.10).

(8.12) **Science concepts.** The student knows that cycles exist in Earth systems. The student is expected to

(A) analyze and predict the sequence of events in the lunar and rock cycles; and

(C) predict the results of modifying the Earth's nitrogen, water, and carbon cycles.

(8.13) **Science concepts.** The student knows characteristics of the universe. The student is expected to

(A) describe characteristics of the universe such as stars and galaxies.

(7.14, 8.14) **Science concepts.** The student knows that natural events and human activity can alter Earth systems. The student is expected to

(A) describe and predict the impact of different catastrophic events on the Earth (7.14);

(B) analyze effects of regional erosional deposition and weathering (7.14);

(C) make inferences and draw conclusions about effects of human activity on Earth's renewable, non-renewable, and inexhaustible resources (7.14);

(A) predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, [and continental drift] (8.14);*

*TAKS will assess students' understanding of plate tectonics. The theory of plate tectonics is the most current and accepted theory of plate movement.

(B) analyze how natural or human events may have contributed to the extinction of some species (8.14); and

(C) describe how human activities have modified soil, water, and air quality (8.14).

Texas Assessment of Knowledge and Skills - Answer Key

Grade: 08
Subject: Social Studies
Administration: April 2009

Item Number	Correct Answer	Objective Measured	Student Expectations
01	A	05	8.30 (A)
02	H	01	8.5 (G)
03	A	05	8.30 (D)
04	J	02	8.10 (B)
05	C	03	8.29 (C)
06	G	04	8.19 (B)
07	C	02	8.10 (B)
08	J	04	8.16 (D)
09	C	05	8.30 (C)
10	F	03	8.13 (B)
11	C	05	8.30 (B)
12	G	04	8.22 (B)
13	D	03	8.28 (A)
14	F	05	8.30 (C)
15	C	02	8.11 (B)
16	H	01	8.4 (D)
17	A	04	8.18 (B)
18	G	04	8.16 (A)
19	B	04	8.17 (B)
20	H	03	8.24 (D)
21	C	01	8.5 (C)
22	G	01	8.4 (B)
23	D	01	8.8 (B)
24	F	01	8.6 (D)
25	D	04	8.17 (A)
26	G	02	8.12 (A)
27	C	01	8.5 (E)
28	F	04	8.19 (A)
29	B	04	8.16 (B)
30	G	03	8.28 (D)
31	C	01	8.4 (C)
32	J	02	8.10 (B)
33	B	01	8.7 (B)
34	J	05	8.30 (B)
35	C	01	8.1 (C)
36	G	04	8.3 (A)
37	C	04	8.20 (B)
38	H	03	8.28 (A)
39	A	01	8.2 (B)
40	H	05	8.30 (B)
41	B	03	8.28 (C)
42	F	03	8.25 (A)
43	D	01	8.4 (B)
44	H	02	8.12 (A)
45	D	04	8.20 (A)
46	F	01	8.7 (A)
47	A	03	8.24 (E)
48	J	05	8.30 (C)

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TAKS Grade 8 Social Studies

For a more complete description of the objectives measured, please refer to the Revised TAKS Information Booklet for Grade 8 Social Studies at http://www.tea.state.tx.us/student.assessment/taks/booklets/index.html.

Objective 1: The student will demonstrate an understanding of issues and events in U.S. history.

(8.1) **History.** The student understands traditional historical points of reference in U.S. history through 1877. The student is expected to

(A) identify the major eras in U.S. history through 1877 and describe their defining characteristics;

(B) apply absolute and relative chronology through the sequencing of significant individuals, events, and time periods; and

(C) explain the significance of the following dates: 1607, 1776, 1787, 1803, and 1861-1865.

(8.2) **History.** The student understands the causes of exploration and colonization eras. The student is expected to

(B) compare political, economic, and social reasons for establishment of the 13 colonies.

(8.4) **History.** The student understands significant political and economic issues of the revolutionary era. The student is expected to

(A) analyze causes of the American Revolution, including mercantilism and British economic policies following the French and Indian War;

(B) explain the roles played by significant individuals during the American Revolution, including Samuel Adams, Benjamin Franklin, King George III, Thomas Jefferson, [the Marquis de Lafayette,] Thomas Paine, and George Washington;

(C) explain the issues surrounding important events of the American Revolution, including declaring independence; writing the Articles of Confederation; fighting the battles of Lexington, Concord, Saratoga, and Yorktown; and signing the Treaty of Paris; and

(D) analyze the issues of the Philadelphia Convention of 1787, including major compromises and arguments for and against ratification.

(8.5) **History.** The student understands the challenges confronted by the government and its leaders in the early years of the Republic. The student is expected to

(C) explain the origin and development of American political parties;

(D) explain the [causes of and] issues surrounding important events of the War of 1812;

(E) [trace the foreign policies of Presidents Washington through Monroe and] explain the impact of Washington's Farewell Address and the Monroe Doctrine;

(F) explain the impact of the election of Andrew Jackson, including the beginning of the modern Democratic Party; and

(G) analyze federal [and state] Indian policies and the removal and resettlement of Cherokee Indians during the Jacksonian era.

(8.6) **History.** The student understands westward expansion and its effects on the political, economic, and social development of the nation. The student is expected to

(A) explain how the Northwest Ordinance established principles and procedures for orderly expansion of the United States;

(B) explain the political, economic, and social roots of Manifest Destiny;

(C) analyze the relationship between the concept of Manifest Destiny and the westward growth of the nation; and

(D) explain the major issues [and events] of the Mexican War and their impact on the United States.

(8.7) **History.** The student understands how political, economic, and social factors led to the growth of sectionalism and the Civil War. The student is expected to

(A) analyze the impact of tariff policies on sections of the United States before the Civil War;

(B) compare the effects of political, economic, and social factors on slaves and free blacks;

(C) analyze the impact of slavery on different sections of the United States; and

(D) compare the provisions and effects of congressional conflicts and compromises prior to the Civil War, including the roles of John C. Calhoun, Henry Clay, and Daniel Webster.

(8.8) **History.** The student understands individuals, issues, and events of the Civil War. The student is expected to

(A) explain the roles played by significant individuals during the Civil War, including Jefferson Davis, Ulysses S. Grant, Robert E. Lee, and Abraham Lincoln;

(B) explain the issues surrounding significant events of the Civil War, including the firing on Fort Sumter, the battles of Gettysburg and Vicksburg, the announcement of the Emancipation Proclamation, the assassination of Lincoln, and Lee's surrender at Appomattox Court House; and

(C) analyze Abraham Lincoln's ideas about liberty, equality, union, and government as contained in his first and second inaugural addresses and the Gettysburg Address.

Objective 2: The student will demonstrate an understanding of geographic influences on historical issues and events.

(8.6) **History.** The student understands westward expansion and its effects on the political, economic, and social development of the nation. The student is expected to

(E) identify areas that were acquired to form the United States.

(8.10) **Geography.** The student uses geographic tools to collect, analyze, and interpret data. The student is expected to

(B) [pose and] answer questions about geographic distributions and patterns shown on maps, graphs, charts, [models, and databases].

(8.11) **Geography.** The student understands the location and characteristics of places and regions of the United States, past and present. The student is expected to

(A) locate places and regions of importance in the United States during the 18th and 19th centuries;

(B) compare places and regions of the United States in terms of physical and human characteristics; and

(C) analyze the effects of physical and human geographic factors on major historical [and contemporary] events in the United States.

(8.12) **Geography.** The student understands the physical characteristics of the United States during the 18th and 19th centuries and how humans adapted to and modified the environment. The student is expected to

(A) analyze how physical characteristics of the environment influenced population distribution, settlement patterns, and economic activities in the United States during the 18th and 19th centuries.

Objective 3: The student will demonstrate an understanding of economic and social influences on historical issues and events.

(8.5) **History.** The student understands the challenges confronted by the government and its leaders in the early years of the Republic. The student is expected to

(B) summarize arguments regarding protective tariffs, taxation, [and the banking system].

(8.13) **Economics.** The student understands why various sections of the United States developed different patterns of economic activity. The student is expected to

(A) identify economic differences among different regions of the United States; and

(B) explain reasons for the development of the plantation system, the growth of the slave trade, and the spread of slavery.

(8.14) **Economics.** The student understands how various economic forces resulted in the Industrial Revolution in the 19th century. The student is expected to

(B) identify the economic factors that brought about rapid industrialization and urbanization.

(8.15) **Economics.** The student understands the origins and development of the free enterprise system in the United States. The student is expected to

(A) explain why a free enterprise system of economics developed in the new nation.

(8.24) **Culture.** The student understands the relationships between and among people from various groups, including racial, ethnic, and religious groups, during the 17th, 18th, and 19th centuries. The student is expected to

(D) analyze the contributions of people of various racial, ethnic, and religious groups [to our national identity]; and

(E) identify the political, social, and economic contributions of women to American society.

(8.25) **Culture.** The student understands the major reform movements of the 19th century. The student is expected to

(A) describe the historical development of the abolitionist movement; and

(B) evaluate the impact of reform movements including public education, temperance, women's rights, [prison reform, and care of the disabled].

(8.28) **Science, technology, and society.** The student understands the impact of science and technology on the economic development of the United States. The student is expected to

(A) explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, [and the Bessemer steel process];

(B) analyze the impact of transportation systems on the growth, development, and urbanization of the United States;

(C) analyze how technological innovations changed the way goods were manufactured and marketed, nationally [and internationally]; and

(D) explain how technological innovations led to rapid industrialization.

(8.29) **Science, technology, and society.** The student understands the impact of scientific discoveries and technological innovations on daily life in the United States. The student is expected to

(C) identify examples of how industrialization changed life in the United States.

Objective 4: The student will demonstrate an understanding of political influences on historical issues and events.

(8.3) **History.** The student understands the foundations of representative government in the United States. The student is expected to

(A) explain the reasons for the growth of representative government and institutions during the colonial period; and

(B) evaluate the importance of the Mayflower Compact, [the Fundamental Orders of Connecticut,] and the Virginia House of Burgesses to the growth of representative government.

(8.16) **Government.** The student understands the American beliefs and principles reflected in the U.S. Constitution and other important historic documents. The student is expected to

(A) identify the influence of ideas from historic documents including the Magna Carta, the English Bill of Rights, the Mayflower Compact, the Declaration of Independence, the Federalist Papers, [and selected anti-federalist writings] on the U.S. system of government;

(B) summarize the strengths and weaknesses of the Articles of Confederation;

(C) identify colonial grievances listed in the Declaration of Independence and explain how those grievances were addressed in the U.S. Constitution and the Bill of Rights; and

(D) analyze how the U.S. Constitution reflects the principles of limited government, republicanism, checks and balances, federalism, separation of powers, popular sovereignty, and individual rights.

(8.17) **Government.** The student understands the process of changing the U.S. Constitution and the impact of amendments on American society. The student is expected to

(A) summarize the purposes for and processes of changing the U.S. Constitution; and

(B) describe the impact of the 19th-century amendments including the 13th, 14th, and 15th amendments on life in the United States.

(8.18) **Government.** The student understands the dynamic nature of the powers of the national government and state governments in a federal system. The student is expected to

(A) analyze the arguments of the Federalists and Anti-Federalists, including those of Alexander Hamilton, Patrick Henry, James Madison, [and George Mason]; and

(B) describe historical conflicts arising over the issue of states' rights, including the Nullification Crisis and the Civil War.

(8.19) **Government.** The student understands the impact of landmark Supreme Court cases. The student is expected to

(A) summarize the issues, decisions, and significance of landmark Supreme Court cases including *Marbury v. Madison*, [*McCulloch v. Maryland*, and *Gibbons v. Ogden*]; and

(B) evaluate the impact of selected landmark Supreme Court decisions including *Dred Scott v. Sandford* on life in the United States.

(8.20) **Citizenship.** The student understands the rights and responsibilities of citizens of the United States. The student is expected to

(A) define and give examples of unalienable rights; and

(B) summarize rights guaranteed in the Bill of Rights.

(8.22) **Citizenship.** The student understands the importance of the expression of different points of view in a democratic society. The student is expected to

(B) describe the importance of free speech and press in a democratic society.

(8.23) **Citizenship.** The student understands the importance of effective leadership in a democratic society. The student is expected to

(B) describe the contributions of significant political, social, [and military] leaders of the United States such as Frederick Douglass, [John Paul Jones,] James Monroe, and Elizabeth Cady Stanton.

Objective 5: The student will use critical thinking skills to analyze social studies information.

(8.30) **Social studies skills.** The student applies critical-thinking skills to organize and use information acquired from a variety of sources including electronic technology. The student is expected to

(A) [differentiate between, locate, and] use primary and secondary sources [such as computer software, databases, media and news services, biographies, interviews, and artifacts] to acquire information about the United States;

(B) analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations [and predictions], and drawing inferences and conclusions;

(C) [organize and] interpret information from [outlines, reports, databases, and] visuals including graphs, charts, timelines, and maps;

(D) identify points of view from the historical context surrounding an event and the frame of reference which influenced the participants; and

(F) identify bias in written, [oral,] and visual material.