Global Welcome Center

Science Tests

I. Length of Tests

The number of questions varies: Earth Science – 20, Biology – 25, and Chemistry – 25.

II. Type of Questions

All questions are “multiple choice.” This means you will see a question and multiple possible answers. There could be as many as five but, typically, there will be four options. You will need to select one of these options as a correct answer (Example A). Sometimes, directions will ask you to select two or more correct answers (Example B).

Example A

What is the primary role of a carbohydrate?

A. Provide energy to cells
B. Control chemical reactions within cells
C. Build cell membranes
D. Carry genetic information within cells

Correct answer: Choice A

Example B

What mineral properties can be observed in the pictures below? *Select two correct answers.*

A. streak
B. cubic cleavage
C. hardness
D. metallic luster

Correct answers: Choices B and D.

III. Data for Analysis

Science tests include data tables, graphs, models, images, and short texts to read.

Table – Characteristics of Inner Planets of Our Solar System

	Mercury	Venus	Earth	Mars
Time of Rotation (days)	1408	243	1	1.03
Time of Revolution (days)	88	224	365	687.0

Graph - Composition of Earth's Atmosphere

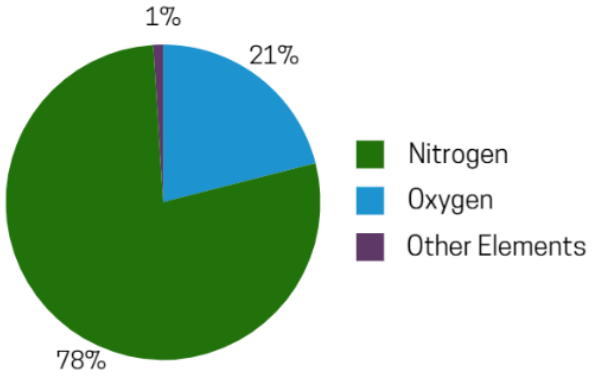


Diagram – Model of an Animal Cell

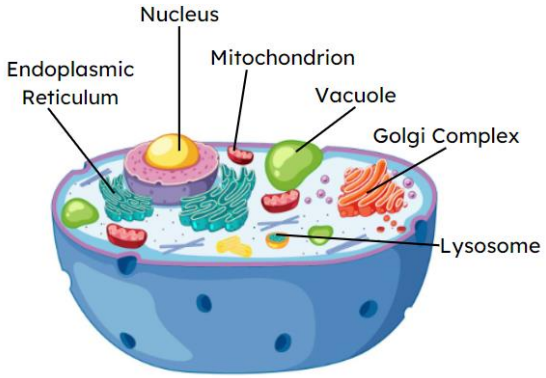
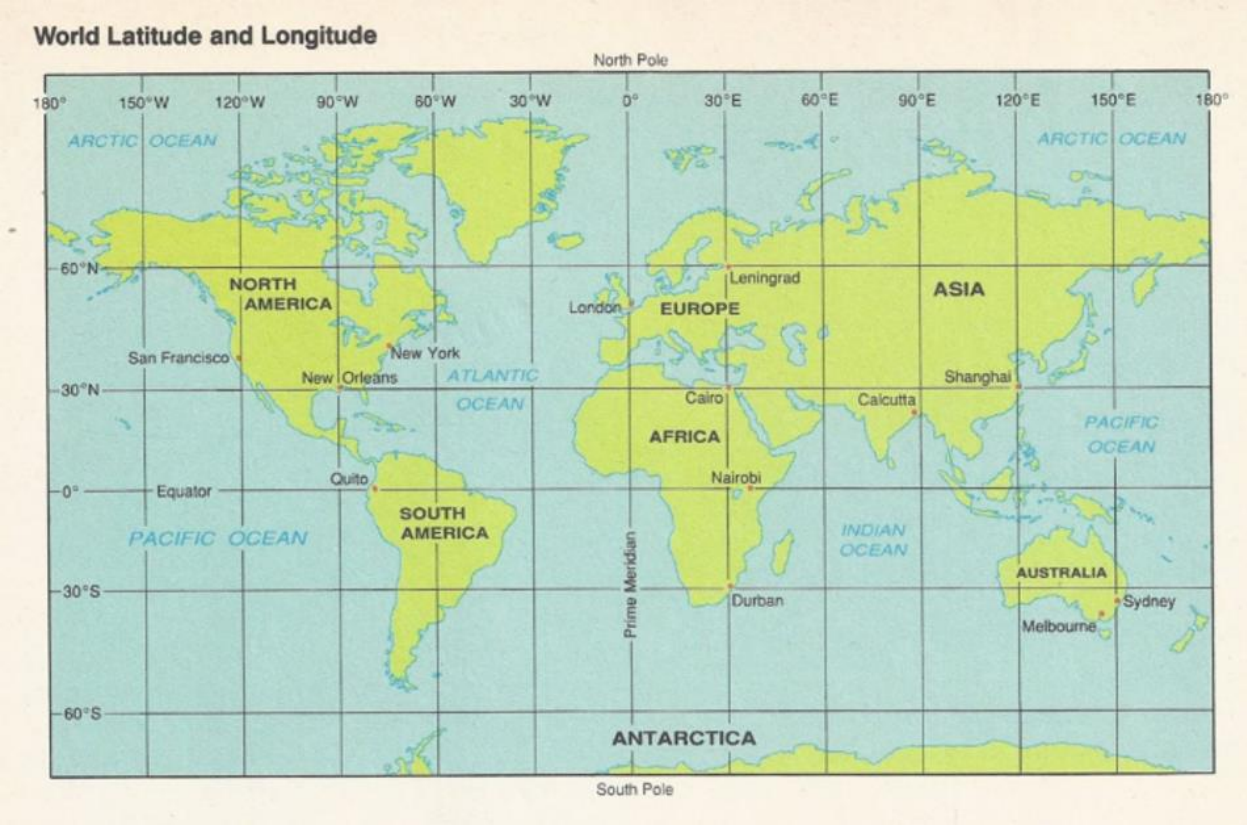


Image – River and Ocean Ecosystems

Sometimes, you will see two or more questions based on the information provided.

Example C

Directions: Use the map to answer questions 3 and 4.



3. What are the approximate coordinates of New York?

A. 40° North and 60° West
B. 40° North and 75° West
C. 75° North and 40° West
D. 75° North and 35° West

Correct answer: Choice B

4. If you were to travel the shortest distance from London to Sydney, Australia, in which direction would you travel?

A. Southeast
B. Northwest
C. East
D. West

Correct answer: Choice A

IV. Review Materials

Earth Science Review

Topic	Video Resources	Website Resources
Cosmology	Formation of the Solar System Solar System 101	What is Cosmology?
Our Unique Earth and Moon	Sun 101 Earth's Rotation & Revolution What Are Latitude & Longitude?	How the Earth and Moon Fell in Love How to Read a Topographic Map
Minerals	Understanding Minerals Minerals and Ores	What are Minerals?
Formation & Transformation of Rocks	What Are Rocks and How Do They Form? What is Weathering?	The Rock Cycle Three Types of Rock
Geologic Processes	The Plate Tectonics Revolution What Are Tectonic Plates? Our Earth and Its Movements	Plate Tectonics What features form at plate tectonic boundaries?
Freshwater & Soil	The Basics of Freshwater What Is Groundwater?	Freshwater (Lakes and Rivers) and the Water Cycle
Geological History	Earth Science: Crash Course History of Science Absolute vs. Relative Ages	Dating Rocks and Fossils Using Geologic Methods
Our Atmosphere	What Does the Atmosphere Do? Evolution of the Atmosphere	Atmosphere
Weather and Climate	Air Masses and Fronts Severe Weather What is Climate Change?	Weather Meteorology
Oceans	How Do Ocean Currents Work? Ocean Floor Features Oceans 101	Ocean How does the ocean affect climate and weather on land?.

Complexity of Global Resources	Definitions in the Field: Natural Resources Renewable Energy 101 Non-Renewable Energy Sources	Renewable vs. Nonrenewable Resources

Biology Review

Topic	Video Resources	Website Resources
Biochemistry	Properties of Water The 5 Most Important Molecules in Your Body Enzymes	Properties of Water Biological Macromolecules
Cell Structure & Function	Membranes & Transport Introduction to Cells: The Grand Cell Tour What is Osmosis?	Cell Theory Cell Growth and Division
Cell Energetics	Photosynthesis ATP & Respiration Relationship between Photosynthesis and Cellular Respiration	Cellular Respiration and Photosynthesis
Cell Growth, Division, & Specialization	Mitosis: The Amazing Cell Process that Uses Division to Multiply! Mitosis vs. Meiosis: Side by Side Comparison How Cells Become Specialized	Mitosis Meiosis
Genetics & Heredity	Monohybrids and the Punnett Square Guinea Pigs	Mendelian Inheritance Punnett Square Approach to a Monohybrid Cross Dihybrid Crosses
Nucleic Acids & Protein Synthesis	DNA Structure and Replication DNA Replication Protein Synthesis	DNA Fact Sheet Protein Synthesis
Evolution	Fossils & Evidence for Evolution Variation | Genetics Natural Selection Evidence of Evolution	Genetic Variation Evidence for Evolution
Classification & Biodiversity	Classification Cladograms The Six Kingdoms of Life!	Biological Classification Classification - The Three Domain System
Bacteria & Viruses	Viruses Bacteria	What's the difference between bacteria and viruses?
Ecology	Populations, Communities, and Ecosystems Food Webs and Energy Pyramids Ecological Succession: Nature's Great Gift	Competition, Predation, and Symbiosis

Chemistry Review

Topic	Video Resources	Website Resources
Matter and The Atom	Models of the Atom Timeline Atomic Numbers, Mass Numbers, and Isotopes What's An Ion?	Calculation Average Atomic Mass Types of Radioactivity - Alpha, Beta, and Gamma Decay
The Periodic Table	Periodic Trends: Atomic Radius Electronegativity Periodic Trend Ionization Energy How to Write the Electron Configuration for an Element in Each Block	Periodic Trends Electron Configuration
Bonding & Nomenclature	The Chemical Bond: Covalent vs. Ionic and Polar vs. Nonpolar Naming Ionic & Molecular Compounds Lewis Dot Structure - Elements VSEPR Theory: Introduction	Naming Covalent Compounds Ionic Compounds - Formulas and Names
Chemical Reactions	Types of Chemical Reactions Introduction to Balancing Chemical Equations	Types of Chemical Reactions Writing and Balancing Chemical Equations
The Mole & Mole Calculations	How big is a mole? Converting Between Moles, Atoms, and Molecules Converting Between Grams and Moles	Molar Mass Percent Composition, Empirical, and Molecular Formulas
Stoichiometry	How to Use a Mole to Mole Ratio Step by Step Stoichiometry Practice Problems Limiting Reactant Intro!	Reaction Stoichiometry Limiting Reagents Theoretical Yield and Percent Yield
Kinetic Molecular Theory & Behavior of Gases	The Kinetic Molecule Theory of Gas Combined Gas Law	Gas Laws - Overview Intermolecular Forces.
Solutions	Solubility Curves and Solutions How to Prepare Solutions How to Dilute a Solution	Molarity and Dilutions
Thermochemistry	Heat Capacity, Specific Heat & Calorimetry Calorimetry Using Gibbs Free Energy	Fast or Slow... Chemistry Makes It Go!
Acids & Bases	What Are Acids & Bases? Setting up and Performing a Titration	Determining and Calculating pH Titration Calculations