

Inquiry Skills	Grade 7 TEKS Links
1. Set up a new, appropriate problem/application	2(A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology.
2. Pose relevant questions and develop hypotheses	2(A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology.
3. Make and test predictions	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence.
4. Observations and measurements are accurate and appropriate	2(B) collect data by observing and measuring. 4(A) collect, analyze, and record information to explain a phenomenon 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, timing devices, magnets, and compasses.
5. Equipment is used properly with appropriate safety procedures	1(A) demonstrate safe practices during field and laboratory investigations.
6. Quality assurance procedures are employed (multiple, repeated readings; recalibration) and measurement errors are detected	
7. Specify measurements and variables	
8. Identify similarities and differences	
9. Explain reasons for differences	
10. Use appropriate mathematical procedures	2(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.
11. Infer patterns and trends	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence. 3(B) draw inferences based on data related to promotional materials for products and services. 4(B) collect and analyze information to recognize patterns such as rates of change.
12. Explain data and relationships using evidence	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence.
13. Collect and organize data	4(A) collect, analyze, and record information to explain a phenomenon 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, timing devices, magnets, and compasses. 2(B) collect data by observing and measuring.
14. Use multiple forms to represent data	2(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.
15. Use models and simulations	3(C) represent the natural world using models and identify their limitations.
16. Communicate findings	2(D) communicate valid conclusions.

GLOBE ATMOSPHERE Science Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. The atmosphere has observable and/or measurable characteristics.	2(B) collect data by observing and measuring	12(A) identify components of an ecosystem
2. Clouds can be categorized by observable features.	2(B) collect data by observing and measuring	
3. Cloud cover and wind can affect atmospheric measurements.	2(B) collect data by observing and measuring	
4. Cloud types can be associated with certain weather patterns and used to predict the weather.	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence 4(B) collect and analyze information to recognize patterns such as rates of change	
5. pH is a characteristic property that can be measured.	2(B) collect data by observing and measuring	
6. Heat energy transfers through radiation, conduction, and convection.		
7. Substances transfer heat energy at different rates.		
8. Some materials are good conductors of heat energy; some are good insulators of heat energy.		
9. The transfer of heat energy affects temperature.		
10. Substances expand and contract as the temperature changes.		
11. Classification helps to organize and understand the natural world.		
<b>Atmosphere Enrichment Concepts</b>	<b>Grade 7 Direct TEKS Link*</b>	<b>Grade 7 InDirect TEKS Link*</b>
1. Water has the unique property of expansion when changing from a liquid to a solid state.		

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GLOBE HYDROLOGY Science Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. Surface water exists in many forms and has observable and/or measurable characteristics.	2(B) collect data by observing and measuring	12(A) identify components of an ecosystem
2. Surface water characteristics are related to the characteristics of the surrounding environment.		
3. A watershed guides water to a common watercourse.	5(A) describe how systems may reach an equilibrium such as when a volcano erupts 8(A) illustrate examples of potential and kinetic energy in everyday life such as objects at rest, movement of geologic faults, and falling water 14(B) analyze effects of regional erosional deposition and weathering	3(C) represent the natural world using models and identify their limitations
4. Watershed characteristics are related to the physical features of the land.	8(A) illustrate examples of potential and kinetic energy in everyday life such as objects at rest, movement of geologic faults, and falling water 14(B) analyze effects of regional erosional deposition and weathering	3(C) represent the natural world using models and identify their limitations
5. The physical environment affects an organism's response patterns; organisms adapt and survive, move, or die.	9(B) describe how organisms maintain stable internal conditions while living in changing external environments 10(B) compare traits of organisms of different species that enhance their survival and reproduction 11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light	12(B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources; 12(C) describe how different environments support different varieties of organisms
6. pH is a characteristic property that can be measured.	2(B) collect data by observing and measuring	
7. Classification helps to organize and understand the natural world.		

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Hydrology Enrichment Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
<p>1. Macro-invertebrates are sensitive indicators of water quality.</p>	<p>2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence</p> <p>11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light</p>	<p>12(A) identify components of an ecosystem</p> <p>12(B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources;</p> <p>12(C) describe how different environments support different varieties of organisms</p>
<p>2. Topographical maps provide 3-dimensional information about the land.</p>	<p>2(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data</p> <p>3(C) represent the natural world using models and identify their limitations</p>	

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GLOBE SOILS Science Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. Soil has observable and/or measurable properties that change with time and location.	2(B) collect data by observing and measuring	12(A) identify components of an ecosystem
2. The interaction of organisms, climate, parent material, topography, and time affect soil properties.		5(B) observe and describe the role of ecological succession in maintaining an equilibrium in an ecosystem  12(B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources;
3. Soil acts as an insulating layer, creating a measurable temperature gradient.	2(B) collect data by observing and measuring	
4. Environmental conditions affect the rate of decomposition in soil.		12(C) describe how different environments support different varieties of organisms
5. The chemical and physical properties of soils make different soils useful in different ways.		
6. pH is a characteristic property that can be measured.	2(B) collect data by observing and measuring	
7. Classification helps to organize and understand the natural world.		

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Soils Enrichment Concepts:	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. There are 12 soil textures representing different amounts of sand-, silt-, and clay-sized particles.	2(B) collect data by observing and measuring	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence
2. A soil profile can be classified according to its properties, such as horizon, color, structure, consistency, texture, root and rock distribution, density, pH, carbonates, and fertility.	2(B) collect data by observing and measuring	
3. Infiltration is the rate at which water flows into the ground; the rate changes depending on the level of soil saturation, soil texture and structure, and land cover.	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence 4(B) collect and analyze information to recognize patterns such as rates of change	14(B) analyze effects of regional erosional deposition and weathering

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GLOBE LAND COVER Science Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. A GLOBE Study Site has observable and/or measurable characteristics.	2(B) collect data by observing and measuring	
2. A GLOBE Study Site represents a system with boundaries, and is a subset of the earth system.	12(A) identify components of an ecosystem	5(A) describe how systems may reach an equilibrium such as when a volcano erupts
3. Earth's land surface is covered by a variety of naturally occurring vegetated ecosystems.	5(B) observe and describe the role of ecological succession in maintaining an equilibrium in an ecosystem 12(A) identify components of an ecosystem 12(B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources; 12(C) describe how different environments support different varieties of organisms 12(D) observe and describe the role of ecological succession in ecosystems	
4. The physical environment affects an organism's response patterns; organisms adapt and survive, move, or die.	9(B) describe how organisms maintain stable internal conditions while living in changing external environments 11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light 12(B) observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources; 12(C) describe how different environments support different varieties of organisms	
5. The magnetic needle of a compass is attracted to Earth's Magnetic North and to some metal objects that are nearby.		
6. Classification helps to organize and understand the natural world.		

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Land Cover Enrichment Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. Remote sensing is a technique used to create visual representations of data.	2(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data 3(C) represent the natural world using models and identify their limitations	
2. Image display is accomplished by conversion of stored data to a user-defined coded scheme and creating an image based on differences in measurement.	2(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data 3(C) represent the natural world using models and identify their limitations	
3. Student remote sensing involves observations made without the use of touch (i.e., using eyes, ears, nose and skin surface).	3(C) represent the natural world using models and identify their limitations	

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GLOBE Seasons Science Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. Seasonal changes can be observed.	2(B) collect data by observing and measuring	
2. Seasonal changes follow an annual cycle. The magnitude of these changes varies from year to year.	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence 4(B) collect and analyze information to recognize patterns such as rates of change 13(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	11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light
3. Seasonal patterns differ based on geographic location.	2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence 4(B) collect and analyze information to recognize patterns such as rates of change	11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light 13(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
4. Earth has many climate zones.		11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light 12(A) identify components of an ecosystem 12(C) describe how different environments support different varieties of organisms 12(D) observe and describe the role of ecological succession in ecosystems
5. Classification helps to organize and understand the natural world.		

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Seasons Enrichment Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. Bud-break is the period when leaf buds appear and grow.	2(B) collect data by observing and measuring 2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence 11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light	
2. Senescence is the period when actively growing plant material dies.	2(B) collect data by observing and measuring 2(C) organize, analyze, make inferences, and predict trends from direct and indirect evidence 11(B) identify responses in organisms to external stimuli found in the environment such as the presence or absence of light	

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GLOBE GPS Science Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. The amount of sunlight that falls directly at a particular site on Earth varies throughout the year.	13(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	12(A) identify components of an ecosystem
2. The magnetic needle of a compass is attracted to Earth's Magnetic North and to some metal objects that are nearby.		
3. A map is a symbolic representation of a certain land area.	2(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data 3(C) represent the natural world using models and identify their limitations	
GPS Enrichment Concepts	Grade 7 Direct TEKS Link*	Grade 7 InDirect TEKS Link*
1. Universal time is a technique used to standardize time measurements.		
2. The spatial relationship between Earth and celestial objects can be used to determine location on Earth.	3(C) represent the natural world using models and identify their limitations	
3. The GPS is used to make accurate measurements of latitude and longitude.		

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