

Inquiry Concepts	Grade 1 TEKS Link*
1. Set up a new, appropriate problem/application	2(B) plan and conduct simple descriptive investigations.
2. Pose relevant questions and develop hypotheses	2(A) ask questions about organisms, objects, and events.
3. Make and test predictions	
4. Observations and measurements are accurate and appropriate	2(C) gather information using simple equipment and tools to extend the senses. 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances. 4(B) record and compare collected information. 4(C) measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils.
5. Equipment is used properly with appropriate safety procedures	1(A) demonstrate safe practices during classroom and field 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	
11. Infer patterns and trends	3(A) make decisions using information.
12. Explain data and relationships using evidence	2(D) construct reasonable explanations and draw conclusions. 3(B) discuss and justify the merits of decisions.
13. Collect and organize data	2(C) gather information using simple equipment and tools to extend the senses. 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances 4(B) record and compare collected information. 4(C) measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils.
14. Use multiple forms to represent data	
15. Use models and simulations	
16. Communicate findings	2(E) communicate explanations about investigations.

GLOBE ATMOSPHERE Science Concepts	Grade 1 Direct TEKS Link*	Grade 1 InDirect TEKS Link*
1. The atmosphere has observable and/or measurable characteristics.	5(A) sort objects and events based on properties and patterns 6(A) sort organisms and objects according to their parts and characteristics	
2. Clouds can be categorized by observable features.	5(A) sort objects and events based on properties and patterns 6(A) sort organisms and objects according to their parts and characteristics	
3. Cloud cover and wind can affect atmospheric measurements.	2(C) gather information using simple equipment and tools to extend the senses 7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances; 4(B) record and compare collected information	
4. Cloud types can be associated with certain weather patterns and used to predict the weather.	5(A) sort objects and events based on properties and patterns; and 5(B) identify, predict, and create patterns including those seen in charts, graphs, and numbers 7(C) observe and record changes in weather from day to day and over seasons	
5. pH is a characteristic property that can be measured.	2(C) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances; 4(B) record and compare collected information	
6. Heat energy transfers through radiation, conduction, and convection.		
7. Substances transfer heat energy at different rates.		

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GLOBE ATMOSPHERE Science Concepts	Grade 1 Direct TEKS Link*	Grade 1 InDirect TEKS Link*
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.	7(B) identify and test ways that heat may cause change such as when ice melts	7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement
11. Classification helps to organize and understand the natural world.	5(A) sort objects and events based on properties and patterns 8(A) group living organisms and nonliving objects	
Atmosphere Enrichment Concepts	Grade 1 Direct TEKS Link*	Grade 1 InDirect TEKS Link*
1. Water has the unique property of expansion when changing from a liquid to a solid state.		7(B) identify and test ways that heat may cause change such as when ice melts  7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement

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GLOBE HYDROLOGY Science Concepts	Grade 1 Direct TEKS Link*	Grade 1 InDirect TEKS Link*
1. Surface water exists in many forms and has observable and/or measurable characteristics.	10(A) identify and describe a variety of natural sources of water including streams, lakes, and oceans  7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement	
2. Surface water characteristics are related to the characteristics of the surrounding environment.		10(A) identify and describe a variety of natural sources of water including streams, lakes, and oceans
3. A watershed guides water to a common watercourse.		10(A) identify and describe a variety of natural sources of water including streams, lakes, and oceans
4. Watershed characteristics are related to the physical features of the land.		10(A) identify and describe a variety of natural sources of water including streams, lakes, and oceans
5. The physical environment affects an organism's response patterns; organisms adapt and survive, move, or die.		
6. pH is a characteristic property that can be measured.	2(C) gather information using simple equipment and tools to extend the senses  7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement  4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances;  4(B) record and compare collected information	
7. Classification helps to organize and understand the natural world.	5(A) sort objects and events based on properties and patterns	

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Hydrology Enrichment Concepts	Grade 1 Direct TEKS Link*	Grade 1 InDirect TEKS Link*
1. Macro-invertebrates are sensitive indicators of water quality.		
2. Topographical maps provide 3-dimensional information about the land.		

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GLOBE SOILS Science Concepts	Grade 1 Direct TEKS Link*
1. Soil has observable and/or measurable properties that change with time and location.	10(B) observe and describe differences in rocks and soil samples 2(C) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances; 4(B) record and compare collected information 7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement
2. The interaction of organisms, climate, parent material, topography, and time affect soil properties.	
3. Soil acts as an insulating layer, creating a measurable temperature gradient.	2(C) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances; 4(B) record and compare collected information 7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement
4. Environmental conditions affect the rate of decomposition in soil.	
5. The chemical and physical properties of soils make different soils useful in different ways.	10(C) identify how rocks, soil, and water are used and how they can be recycled
6. pH is a characteristic property that can be measured.	2(C) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances; 4(B) record and compare collected information 7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement
7. Classification helps to organize and understand the natural world.	5(A) sort objects and events based on properties and patterns 6(A) sort organisms and objects according to their parts and characteristics

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Soils Enrichment Concepts:	Grade 1 Direct TEKS Link*
1. There are 12 soil textures representing different amounts of sand-, silt-, and clay-sized particles.	
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(C) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances; 4(B) record and compare collected information
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.	

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GLOBE LAND COVER Science Concepts	Grade 1 Direct TEKS Link*
1. A GLOBE Study Site has observable and/or measurable characteristics.	2(C) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including hand lenses, clocks, computers, thermometers, and balances; 4(B) record and compare collected information
2. A GLOBE Study Site represents a system with boundaries, and is a subset of the earth system.	
3. Earth's land surface is covered by a variety of naturally occurring vegetated ecosystems.	
4. The physical environment affects an organism's response patterns; organisms adapt and survive, move, or die.	7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement
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.	5(A) sort objects and events based on properties and patterns 6(A) sort organisms and objects according to their parts and characteristics
LAND COVER Enrichment Concepts	Grade 1 Direct TEKS Link*
1. Remote sensing is a technique used to create visual representations of data.	
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.	
3. Student remote sensing involves observations made without the use of touch (i.e., using eyes, ears, nose and skin surface).	

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GLOBE Seasons Science Concepts	Grade 1 Direct TEKS Link*
1. Seasonal changes can be observed.	7(A) observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement 7(C) observe and record changes in weather from day to day and over seasons
2. Seasonal changes follow an annual cycle. The magnitude of these changes varies from year to year.	7(C) observe and record changes in weather from day to day and over seasons
3. Seasonal patterns differ based on geographic location.	
4. Earth has many climate zones.	
5. Classification helps to organize and understand the natural world.	5(A) sort objects and events based on properties and patterns 8(A) group living organisms and nonliving objects
Seasons Enrichment Concepts	Grade 1 Direct TEKS Link*
1. Bud-break is the period when leaf buds appear and grow.	
2. Senescence is the period when actively growing plant material dies.	

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GLOBE GPS Science Concepts	Grade 1 Direct TEKS Link*
1. The amount of sunlight that falls directly at a particular site on Earth varies throughout the year.	
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.	
GPS Enrichment Concepts	Grade 1 Direct TEKS Link*
1. Universal time is a technique used to standardize time measurements.	4(B) record and compare collected information
2. The spatial relationship between Earth and celestial objects can be used to determine location on Earth.	
3. The GPS is used to make accurate measurements of latitude and longitude.	

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