Inquiry Skills	Grade 2 TEKS Links
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(D) gather information using simple equipment and tools to extend the senses. 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances. 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units.
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	2(E) construct reasonable explanations and draw conclusions using information and prior knowledge.
12. Explain data and relationships using evidence	2(E) construct reasonable explanations and draw conclusions using information and prior knowledge.
13. Collect and organize data	2(D) gather information using simple equipment and tools to extend the senses. 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances. 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units.
14. Use multiple forms to represent data	
15. Use models and simulations	
16. Communicate findings	2(F) communicate explanations about investigations.

GLOBE ATMOSPHERE Science Concepts	Grade 2 Direct TEKS Link*	Grade 2 InDirect TEKS Link*
1. The atmosphere has observable and/or measurable characteristics.	5(A) classify and sequence organisms, objects, and events based on properties and patterns 7(D) observe, measure, and record changes in weather, the night sky, and seasons	
2. Clouds can be categorized by observable features.	5(A) classify and sequence organisms, objects, and events based on properties and patterns 7(D) observe, measure, and record changes in weather, the night sky, and seasons	
3. Cloud cover and wind can affect atmospheric measurements.	7(D) observe, measure, and record changes in weather, the night sky, and seasons 2(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units	
4. Cloud types can be associated with certain weather patterns and used to predict the weather.	5(A) classify and sequence organisms, objects, and events based on properties and patterns 5(B) identify, predict, replicate, and create patterns including those seen in charts, graphs, and numbers 7(D) observe, measure, and record changes in weather, the night sky, and seasons	
5. pH is a characteristic property that can be measured.	2(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units	

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

GLOBE ATMOSPHERE Science Concepts	Grade 2 Direct TEKS Link*	Grade 2 InDirect TEKS Link*
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.	7(B) identify, predict, and test uses of heat to cause change such as melting and evaporation	
11. Classification helps to organize and understand the natural world.	5(A) classify and sequence organisms, objects, and events based on properties and patterns	
Atmosphere Enrichment Concepts	Grade 2 Direct TEKS Link*	Grade 2 InDirect TEKS Link*
1. Water has the unique property of expansion when changing from a liquid to a solid state.		7(B) identify, predict, and test uses of heat to cause change such as melting and evaporation

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

GLOBE HYDROLOGY Science Concepts	Grade 2 Direct TEKS Link*	Grade 2 InDirect TEKS Link*
1. Surface water exists in many forms and has observable and/or measurable characteristics.	5(A) classify and sequence organisms, objects, and events based on properties and patterns 7(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement	
2. Surface water characteristics are related to the characteristics of the surrounding environment.		
3. A watershed guides water to a common watercourse.		
4. Watershed characteristics are related to the physical features of the land.		
5. The physical environment affects an organism's response patterns; organisms adapt and survive, move, or die.		9(B) compare and give examples of the ways living organisms depend on each other and on their environments
6. pH is a characteristic property that can be measured.	2(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units	
7. Classification helps to organize and understand the natural world.	5(A) classify and sequence organisms, objects, and events based on properties and patterns	

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

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

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

GLOBE SOILS Science Concepts	Grade 2 Direct TEKS Link*
1. Soil has observable and/or measurable properties that change with time and location.	2(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units 5(A) classify and sequence organisms, objects, and events based on properties and patterns 7(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, 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(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units
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(B) identify uses of natural resources
6. pH is a characteristic property that can be measured.	2(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units
7. Classification helps to organize and understand the natural world.	5(A) classify and sequence organisms, objects, and events based on properties and patterns

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

Soils Enrichment Concepts:	Grade 2 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(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units
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.	

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

GLOBE LAND COVER Science Concepts	Grade 2 Direct TEKS Link*	Grade 2 InDirect TEKS Link*
1. A GLOBE Study Site has observable and/or measurable characteristics.	2(D) gather information using simple equipment and tools to extend the senses 4(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and 4(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units 7(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement	
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.		9(B) compare and give examples of the ways living organisms depend on each other and on their environments
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) classify and sequence organisms, objects, and events based on properties and patterns	

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

Land Cover Enrichment Concepts	Grade 2 Direct TEKS Link*	Grade 2 InDirect 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).		

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.

GLOBE Seasons Science Concepts	Grade 2 Direct TEKS Link*
1. Seasonal changes can be observed.	7(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement
2. Seasonal changes follow an annual cycle. The magnitude of these changes varies from year to year.	7(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement 7(D) observe, measure, and record changes in weather, the night sky, and 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) classify and sequence organisms, objects, and events based on properties and patterns
Seasons Enrichment Concepts	
1. Bud-break is the period when leaf buds appear and grow.	
2. Senescence is the period when actively growing plant material dies.	

GLOBE GPS Science Concepts	No TEKS Links for Grade2

Direct TEKS Link* = Students have the opportunity to practice this TEKS when they participate in GLOBE Student Activities that provide opportunities to learn this GLOBE concept.
InDirect TEKS Link* = Students have the opportunity to practice this TEKS IF the teacher provides additional scaffolding during GLOBE Student Activities that provide opportunities to learn this GLOBE concept.