

Inquiry Skills	Astronomy 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 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 equipment and technology.
3. Make and test predictions	
4. Observations and measurements are accurate and appropriate	2(B) collect data and make measurements with precision.
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	
11. Infer patterns and trends	2(C) organize, analyze, evaluate, make inferences, and predict trends from data.
12. Explain data and relationships using evidence	2(C) organize, analyze, evaluate, make inferences, and predict trends from data.
13. Collect and organize data	2(B) collect data and make measurements with precision.
14. Use multiple forms to represent data	
15. Use models and simulations	
16. Communicate findings	2(D) communicate valid conclusions.

GLOBE ATMOSPHERE Science Concepts	Astronomy Direct TEKS Link*	Astronomy InDirect TEKS Link*
1. The atmosphere has observable and/or measurable characteristics.	2(B) collect data and make measurements with precision	
2. Clouds can be categorized by observable features.	2(B) collect data and make measurements with precision	
3. Cloud cover and wind can affect atmospheric measurements.	2(C) organize, analyze, evaluate, make inferences, and predict trends from data	
4. Cloud types can be associated with certain weather patterns and used to predict the weather.		
5. pH is a characteristic property that can be measured.	2(B) collect data and make measurements with precision	
6. Heat energy transfers through radiation, conduction, and convection.		8(C) describe the Sun's effects on the Earth
7. Substances transfer heat energy at different rates.		8(C) describe the Sun's effects on the Earth
8. Some materials are good conductors of heat energy; some are good insulators of heat energy.		8(C) describe the Sun's effects on the Earth
9. The transfer of heat energy affects temperature.		8(C) describe the Sun's effects on the Earth
10. Substances expand and contract as the temperature changes.		8(C) describe the Sun's effects on the Earth
11. Classification helps to organize and understand the natural world.		
Atmosphere Enrichment Concepts	Astronomy Direct TEKS Link*	Astronomy InDirect TEKS Link*
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	Astronomy Direct TEKS Link*
1. Surface water exists in many forms and has observable and/or measurable characteristics.	2(B) collect data and make measurements with precision
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.	
6. pH is a characteristic property that can be measured.	2(B) collect data and make measurements with precision
7. Classification helps to organize and understand the natural world.	
Hydrology Enrichment Concepts	Astronomy Direct TEKS Link*
1. Macro-invertebrates are sensitive indicators of water quality.	2(B) collect data and make measurements with precision 2(C) organize, analyze, evaluate, make inferences, and predict trends from data
2. Topographical maps provide 3-dimensional information about the land.	

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GLOBE SOILS Science Concepts	Astronomy Direct TEKS Link*
1. Soil has observable and/or measurable properties that change with time and location.	2(B) collect data and make measurements with precision
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(B) collect data and make measurements with precision 2(C) organize, analyze, evaluate, make inferences, and predict trends from data
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.	2(B) collect data and make measurements with precision
6. pH is a characteristic property that can be measured.	
7. Classification helps to organize and understand the natural world.	
Soils Enrichment Concepts:	Astronomy Direct TEKS Link*
1. There are 12 soil textures representing different amounts of sand-, silt-, and clay-sized particles.	2(B) collect data and make measurements with precision
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 and make measurements with precision
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(B) collect data and make measurements with precision 2(C) organize, analyze, evaluate, make inferences, and predict trends from data

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GLOBE LAND COVER Science Concepts	Astronomy Direct TEKS Link*
1. A GLOBE Study Site has observable and/or measurable characteristics.	2(B) collect data and make measurements with precision
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.	
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.	
Land Cover Enrichment Concepts	Astronomy Direct TEKS Link*
1. Remote sensing is a technique used to create visual representations of data.	2(C) organize, analyze, evaluate, make inferences, and predict trends from 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.	2(C) organize, analyze, evaluate, make inferences, and predict trends from data
3. Student remote sensing involves observations made without the use of touch (i.e., using eyes, ears, nose and skin surface).	2(C) organize, analyze, evaluate, make inferences, and predict trends from data

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GLOBE Seasons Science Concepts	Astronomy Direct TEKS Link*	Astronomy InDirect TEKS Link*
1. Seasonal changes can be observed.	2(C) organize, analyze, evaluate, make inferences, and predict trends from data 8(C) describe the Sun's effects on the Earth 10(B) determine the effects of the Earth's rotation, revolution, and tilt on its environment	
2. Seasonal changes follow an annual cycle. The magnitude of these changes varies from year to year.	2(C) organize, analyze, evaluate, make inferences, and predict trends from data 8(C) describe the Sun's effects on the Earth 10(B) determine the effects of the Earth's rotation, revolution, and tilt on its environment	
3. Seasonal patterns differ based on geographic location.	2(C) organize, analyze, evaluate, make inferences, and predict trends from data 8(C) describe the Sun's effects on the Earth 10(B) determine the effects of the Earth's rotation, revolution, and tilt on its environment	
4. Earth has many climate zones.		8(C) describe the Sun's effects on the Earth
5. Classification helps to organize and understand the natural world.		
Seasons Enrichment Concepts	Astronomy Direct TEKS Link*	Astronomy InDirect TEKS Link*
1. Bud-break is the period when leaf buds appear and grow.	2(B) collect data and make measurements with precision; 2(C) organize, analyze, evaluate, make inferences, and predict trends from data	8(C) describe the Sun's effects on the Earth 10(B) determine the effects of the Earth's rotation, revolution, and tilt on its environment
2. Senescence is the period when actively growing plant material dies.	2(B) collect data and make measurements with precision; 2(C) organize, analyze, evaluate, make inferences, and predict trends from data	8C 10B

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GLOBE GPS Science Concepts	Astronomy Direct TEKS Link*
1. The amount of sunlight that falls directly at a particular site on Earth varies throughout the year.	2(C) organize, analyze, evaluate, make inferences, and predict trends from data 8(C) describe the Sun's effects on the Earth 10(B) determine the effects of the Earth's rotation, revolution, and tilt on its environment
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	Astronomy Direct TEKS Link*
1. Universal time is a technique used to standardize time measurements.	3(E) research and describe the history of astronomy and contributions of scientists
2. The spatial relationship between Earth and celestial objects can be used to determine location on Earth.	3(E) research and describe the history of astronomy and contributions of scientists
3. The GPS is used to make accurate measurements of latitude and longitude.	

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