

GEORGIA STANDARDS OF EXCELLENCE CORRELATIONS GUIDE

Fernbank exhibits cover numerous topics in life science, Earth science, physical science, social studies and history. Unique artifacts, biofacts and interactive components create immersive experiences highlighting content correlated with Georgia Standards of Excellence. Use this guide to help plan your field trip to best support classroom learning with exhibit correlations organized by grade level.

Please contact us at JustForEducators@FernbankMuseum.org if you need help as you integrate our exhibits into your curriculum.



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FANTASTIC FORCES

Fantastic Forces covers a broad range of themes relating to physical science and earth science. These themes align with Georgia Standards of Excellence. Following are some key correlations between the exhibit and curriculum standards by activity.

Physical Science

Defying Gravity: Bernoulli Principle

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.
- SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion.
- SP2. Obtain, evaluate, and communicate information about how forces affect the motion of objects.

Take to the Sky: Forces of Flight

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.

Blast Off: Thrust

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.
- S8P2. Obtain, evaluate, and communicate information about the law of conservation of energy to develop arguments that energy can transform from one form to another within a system.
- SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion.
- SP1. Obtain, evaluate, and communicate information about the relationship between distance, displacement, speed, velocity, and acceleration as functions of time.

Spin Out: Centripetal Force

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.
- SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion.
- SP2. Obtain, evaluate, and communicate information about how forces affect the motion of objects.

Tug of War: Levers

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.
- SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion.

Pull Yourself Up: Pulleys

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.
- SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion.

Up, Up and Away: Aerodynamics

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.
- S8P2. Obtain, evaluate, and communicate information about the law of conservation of energy to develop arguments that energy can transform from one form to another within a system.
- SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion.

Into the Vortex: Planetary Orbits

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.
- S6E1. Obtain, evaluate, and communicate information about current scientific views of the universe and how those views evolved.
- S8P5. Obtain, evaluate, and communicate information about gravity, electricity, and magnetism as major forces acting in nature.
- SPS8. Obtain, evaluate, and communicate information to explain the relationships among force, mass, and motion.
- SP2. Obtain, evaluate, and communicate information about how forces affect the motion of objects.



FANTASTIC FORCES

Fantastic Forces covers a broad range of themes relating to physical science and earth science. These themes align with Georgia Standards of Excellence. Following are some key correlations between the exhibit and curriculum standards by activity.

Earth Science

Twist it Up: Tornadoes

- S4E4. Obtain, evaluate, and communicate information to predict weather events and infer weather patterns using weather charts/maps and collected weather data.
- S6E4. Obtain, evaluate, and communicate information about how the sun, land, and water affect climate and weather.
- SES5. Obtain, evaluate, and communicate information to investigate the interaction of solar energy and Earth's systems to produce weather and climate.

Explosive Earth: Volcanoes

- S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.
- S6E5. Obtain, evaluate, and communicate information to show how Earth's surface is formed.
- SES2. Obtain, evaluate, and communicate information to understand how plate tectonics creates certain geologic features, landforms, Earth materials, and geologic hazards.

Shake it Up: Earthquakes

- S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.
- S6E5. Obtain, evaluate, and communicate information to show how Earth's surface is formed.
- SES2. Obtain, evaluate, and communicate information to understand how plate tectonics creates certain geologic features, landforms, Earth materials, and geologic hazards.

Sinking Feeling: Liquefaction

- S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.
- S8P1. Obtain, evaluate, and communicate information about the structure and properties of matter.
- SES2. Obtain, evaluate, and communicate information to understand how plate tectonics creates certain geologic features, landforms, Earth materials, and geologic hazards.
- SES3. Obtain, evaluate, and communicate information to explore the actions of water, wind, ice, and gravity as they relate to landscape change.

Super Charged: Lightning

- S5P2. Obtain, evaluate, and communicate information to investigate electricity.
- S8P1. Obtain, evaluate, and communicate information about the structure and properties of matter.
- S8P5. Obtain, evaluate, and communicate information about gravity, electricity, and magnetism as major forces acting in nature.
- SES5. Obtain, evaluate, and communicate information to investigate the interaction of solar energy and Earth's systems to produce weather and climate.



GIANTS OF THE MESOZOIC

Giants of the Mesozoic covers life science and earth science concepts by exploring the lives of some of the world's largest dinosaurs. Topics align with Georgia Standards of Excellence; following are some key correlations between the exhibit and curriculum standards by grade level.

Kindergarten

- SKL1. Obtain, evaluate and communicate information about how organisms (alive and not alive) and non-living objects are grouped.
- SKL2. Obtain, evaluate and communicate information to compare the similarities and differences in groups of organisms.

First Grade

- S1L1. Obtain, evaluate and communicate information about the basic needs of plants and animals.

Second Grade

- S2L1. Obtain, evaluate and communicate information about the life cycles of different living organisms.

Third Grade

- S3E1. Obtain, evaluate and communicate information about the physical attributes of rocks and soils.
- S3E2. Obtain, evaluate and communicate information on how fossils provide evidence of past organisms.

Fourth Grade

- S4L1. Obtain, evaluate and communicate information about the roles of organisms and the flow of energy within an ecosystem.

Fifth Grade

- S5L1. Obtain, evaluate and communicate information to group organisms using scientific classification procedures.

Sixth Grade

- S6E5. Obtain, evaluate and communicate information to show how Earth's surface is formed.

Seventh Grade

- S7L1. Obtain, evaluate and communicate information to investigate the diversity of living organisms and how they can be compared scientifically.
- S7L4. Obtain, evaluate and communicate information to examine the interdependence of organisms with one another and their environments.

High School

- SB5. Obtain, evaluate and communicate information to assess the interdependence of all organisms on one another and their environment.
- SES4. Obtain, evaluate and communicate information to understand how rock relationships and fossils are used to reconstruct the Earth's past.
- SEC3. Obtain, evaluate, and communicate information to construct explanations of community interactions.
- SEV1. Obtain, evaluate, and communicate information to investigate the flow of energy and cycling of matter within an ecosystem.
- SG3. Obtain, evaluate, and communicate information to explore geologic time.
- SZ2. Obtain, evaluate, and communicate information to explain the evolutionary history of animals over the geological history of Earth.
- SZ4. Obtain, evaluate, and communicate information to assess how animals interact with their environment and one another.



NATUREQUEST

NatureQuest is an immersive, interactive exhibit that covers topics in life science, earth science, and geography by exploring the diversity of Georgia. Topics align with Georgia Standards of Excellence; following are some key correlations between the exhibit and curriculum standards by grade level.

Kindergarten

- SKE2. Obtain, evaluate and communicate information to describe the physical attributes of earth materials (soil, rocks, water, and air).
- SKL1. Obtain, evaluate and communicate information about how organisms (alive and not alive) and non-living objects are grouped.
- SKL2. Obtain, evaluate and communicate information to compare the similarities and differences in groups of organisms.

First Grade

- S1L1. Obtain, evaluate and communicate information about the basic needs of plants and animals.
- SS1G3 Locate major topographical features of the earth's surface.

Second Grade

- S2E3. Obtain, evaluate and communicate information about how weather, plants, animals, and humans cause changes to the environment. (Clarification statement: Changes should be easily observable and could be seen on school grounds or at home.)
- S2P1. Obtain, evaluate and communicate information about the properties of matter and changes that occur in objects.
- S2L1. Obtain, evaluate and communicate information about the life cycles of different living organisms.
- SS2G1 Locate and compare major topographical features of Georgia and describe how these features define Georgia's surface.

Third Grade

- S3E1. Obtain, evaluate and communicate information about the physical attributes of rocks and soils.
- S3E2. Obtain, evaluate and communicate information on how fossils provide evidence of past organisms.
- S3L1. Obtain, evaluate and communicate information about the similarities and differences between plants, animals and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia.

Fourth Grade

- S4L1. Obtain, evaluate and communicate information about the roles of organisms and the flow of energy within an ecosystem.



REFLECTIONS OF CULTURE

Reflections of Culture covers topics related to social studies and history by exploring the similarities among cultures throughout the world and the different ways of expressing cultural information through the things people create and wear. Topics align with Georgia Standards of Excellence; following are some key correlations between the exhibit and curriculum standards by grade level.

Middle School

- SS6H1b Explain conflict and change in Latin America.
- SS6G10 Describe selected cultural characteristics of Europe.
- SS6H4 Explain the impact of English colonization on current Aboriginal basic rights, health, literacy, and language.
- SS7G4 Analyze the diverse cultural characteristics of the people who live in Africa.
- SS7G8 Analyze the diverse cultural characteristics of the people who live in Southwest Asia (Middle East).
- SS7G12 Analyze the diverse cultural characteristics of the people who live in Southern and Eastern Asia.
- SS8H1 Evaluate the impact of European exploration and settlement on American Indians in Georgia.

High School

- SSPSP1 Analyze the impact of the social environment on behaviors, and attitudes.
- SSSocC1 Explain the development and importance of culture.
- SSSocC2 Evaluate how cultures evolve over time.
- SSSocC3 Analyze social structure and interaction within society.
- SSSocSC4 Analyze the function of social institutions as agents of social control across differing societies and times.
- SSWH22 Analyze globalization in the contemporary world.



SKY HIGH

Sky High covers topics in life science through the world of birds. As one of the most diverse groups of vertebrates, birds display incredible adaptations, fill numerous ecological roles, and face a variety of conservation and wildlife management challenges. Sky High examines these concepts with representative birds native to Georgia. Topics align with Georgia Standards of Excellence; following are some key correlations between the exhibit and curriculum standards by grade level.

Kindergarten

- SKL1. Obtain, evaluate and communicate information about how organisms (alive and not alive) and non-living objects are grouped.
- SKL2. Obtain, evaluate and communicate information to compare the similarities and differences in groups of organisms.

First Grade

- S1L1. Obtain, evaluate and communicate information about the basic needs of plants and animals.

Second Grade

- S2L1. Obtain, evaluate and communicate information about the life cycles of different living organisms.

Third Grade

- S3L1. Obtain, evaluate and communicate information about the similarities and differences between plants, animals and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia.
- S3L2. Obtain, evaluate and communicate information about the effects of pollution (air, land, and water) and humans on the environment.

Fourth Grade

- S4L1. Obtain, evaluate and communicate information about the roles of organisms and the flow of energy within an ecosystem.
- S4L2. Identify factors that affect the survival or extinction of organisms such as adaptation, variation of behaviors (hibernation) and external features (camouflage and protection).

Fifth Grade

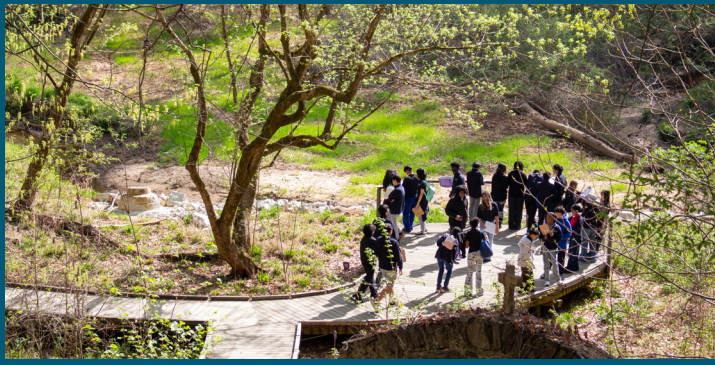
- S5L1. Obtain, evaluate and communicate information to group organisms using scientific classification procedures.
- S5L2. Obtain, evaluate and communicate information showing that some characteristics of organisms are inherited and other characteristics are acquired.

Seventh Grade

- S7L1. Obtain, evaluate and communicate information to investigate the diversity of living organisms and how they can be compared scientifically.
- S7L4. Obtain, evaluate and communicate information to examine the interdependence of organisms with one another and their environments.
- S7L5. Obtain, evaluate and communicate information from multiple sources to explain the theory of evolution of living organisms through inherited characteristics.

High School

- SB5. Obtain, evaluate and communicate information to assess the interdependence of all organisms on one another and their environment.
- SZ3. Obtain, evaluate and communicate information to compare and contrast structure and function of morphological and genetic characteristics across representative taxa.
- SZ4. Obtain, evaluate and communicate information to assess how animals interact with their environment and one another.
- SZ5. Obtain, evaluate and communicate information to analyze the relationship between humans and animals within various phyla.



WILDWOODS

WildWoods covers topics in life science and earth science with outdoor explorations and immersive exhibits. Part of Fernbank's 75 acres of outdoor adventures, WildWoods explores habitats, climate, plant and animal adaptations, and more. Topics align with Georgia Standards of Excellence; following are some key correlations between the exhibit and curriculum standards by section.

Nature Stories (designed for grades pre-K-3rd)

- SKE2. Obtain, evaluate and communicate information to describe the physical attributes of earth materials (soil, rocks, water and air).
- SKL2. Obtain, evaluate and communicate information to compare the similarities and differences in groups of organisms.
- S1L1. Obtain, evaluate and communicate information about the basic needs of plants and animals.
- S2E3. Obtain, evaluate and communicate information about how weather, plants, animals and humans cause changes to the environment.
- S2L1. Obtain, evaluate and communicate information about the life cycles of different living organisms.

Adventure Outpost (designed for grades 4th-8th)

- S4E4. Obtain, evaluate and communicate information to predict weather events and infer weather patterns using weather charts/maps and collected weather data.
- S6E4. Obtain, evaluate and communicate information about how the sun, land and water affect climate and weather.
- S7L4. Obtain, evaluate and communicate information to examine the interdependence of organisms with one another and their environments.
- SS8G1. Describe Georgia's geography and climate.

Nature Gallery

- S2L1. Obtain, evaluate and communicate information about the life cycles of different living organisms.
- S7L4. Obtain, evaluate and communicate information to examine the interdependence of organisms with one another and their environments.
- SB5. Obtain, evaluate and communicate information to assess the interdependence of all organisms on one another and their environment.

Elevated Walkways and Isdell Wildlife Sanctuary

- S4E3. Obtain, evaluate and communicate information to demonstrate the water cycle.
- S4L1. Obtain, evaluate and communicate information about the roles of organisms and the flow of energy within an ecosystem.
- S5E1. Obtain, evaluate and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.
- S7L4. Obtain, evaluate and communicate information to examine the interdependence of organisms with one another and their environments.
- SEC1. Obtain, evaluate and communicate information on how biotic and abiotic factors interact to influence the distribution of species and the diversity of life on Earth.
- SEC3. Obtain, evaluate and communicate information to construct explanations of community interactions.
- SEC5. Obtain, evaluate and communicate information on the impact of natural and anthropogenic activities on ecological systems.
- SEV1. Obtain, evaluate and communicate information to investigate the flow of energy and cycling of matter within an ecosystem.
- SEV2. Obtain, evaluate and communicate information to construct explanations of stability and change in Earth's ecosystems.
- SEV4. Obtain, evaluate and communicate information to analyze human impact on natural resources.
- SG5. Obtain, evaluate and communicate information to explain the effects of Earth's surface processes.



WORLD OF SHELLS

World of Shells covers topics in life science by exploring the diversity of mollusks. Learn about the lives of these invertebrates and explore shells from around the world. Topics align with Georgia Standards of Excellence; following are some key correlations between the exhibit and curriculum standards by grade level.

Kindergarten

- SKL2. Obtain, evaluate and communicate information to compare the similarities and differences in groups of organisms.

Second Grade

- S2L1. Obtain, evaluate and communicate information about the life cycles of different living organisms.

Third Grade

- S3E2. Obtain, evaluate and communicate information on how fossils provide evidence of past organisms.
- S3L1. Obtain, evaluate and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia.

Fourth Grade

- S4L1. Obtain, evaluate and communicate information about the roles of organisms and the flow of energy within an ecosystem.

Fifth Grade

- S5L1. Obtain, evaluate and communicate information to group organisms using scientific classification procedures.

Seventh Grade

- S7L1. Obtain, evaluate and communicate information to investigate the diversity of living organisms and how they can be compared scientifically.
- S7L4. Obtain, evaluate and communicate information to examine the interdependence of organisms with one another and their environments.

High School

- SEC1. Obtain, evaluate and communicate information on how biotic and abiotic factors interact to influence the distribution of species and the diversity of life on Earth.
- SEC3. Obtain, evaluate and communicate information to construct explanations of community interactions.
- SO3. Obtain, evaluate and communicate information to model the flow of energy in the ocean.
- SZ1. Obtain, evaluate and communicate information to derive the phylogeny of animal taxa using informative characteristics.
- SZ4. Obtain, evaluate and communicate information to assess how animals interact with their environment and one another.