CSCA Science NGSSS Aligned Programs

2022-23

PLANETARIUM SHOWS Elementary School	Description	Big Ideas	NGSSS
Astronaut	Would you like to learn what it's like to travel through space or to work on the International Space Station? Learn what it takes to be an astronaut as you travel into space in this digital full dome planetarium show.	Big Ideas: 5- Earth in Space and Time 14- Organization and Development of Living Organisms	SC.3.E.5.4 SC.4.E.5.5 SC.5.P.13.1
Bugs! : A Rainforest Adventure	This full dome show will take you into the fascinating universe of insects magnified up to 250,000 times normal size where a leaf weighs as much as a car and a single raindrop can quench the largest thirst.	Big Ideas: 14- Development of Living Organisms 15- Diversity of Living Organisms 16- Heredity and Reproduction 17- Interdependence	SC.5.L.14.2 SC.5.L.15.1 SC.4.L.16.3 SC.4.L.16.2 SC.5.L.17.1
Dinosaurs Alive (Grades 3-5)	Journey through the Triassic and Cretaceous periods with renowned paleontologists hunting for fossilized clues, uncovering evidence that dinosaur descendants may still walk (or fly) among us today.	Big Ideas: 1- The Practice of Science 15- Diversity and Development of Living Organisms	SC.3.N.1.5 SC.4.N.1.7 SC.5.L.15.1 SC.5.L.17.1
Kaluoka 'hina: The Enchanted Reef	A digital full dome planetarium show, this animated feature film transports the viewer to a tropical reef, a one-of-a-kind world inhabited by amazing creatures.	Big Ideas: 17- Interdependence	SC.3.L.17.1 SC.5.L.17.1
Solar System Odyssey	Learn about all of the planets and major moons in our solar system on a futuristic space mission to explore the necessities for life.	Big Ideas: 2- The Characteristics of Scientific Knowledge 5- Earth in Space and Time	SC.5.N.2.1 SC.4.E.5.2 SC.5.E.5.2 SC.5.E.5.3
Stars and Constellations	Take a tour of the stars in our 360° full-dome digital planetarium. Learn some basic principles of astronomy like what a star is made of and how far it is to our closest star.	Big Ideas: 5- Earth in Space and Time	SC.3.E.5.1 SC.4.E.5.1 SC.5.E.5.1 SC.3.E.5.2

LABS Elementary School	Description	Big Ideas	NGSSS
Chemical Concoctions	Students will have the opportunity to make their own polymers while conducting experiments that reinforce chemistry concepts of atoms and molecules, properties of matter and physical vs	Big Ideas: 1- The Practice of Science 8- Properties of Matter 9- Changes in Matter	SC.1.N.1.2 SC.2.P.8.1 SC.2.P.8.2 SC.4.P.8.1 SC.5.P.9.1
Circuit Science	Students create their own functioning electrical circuits while they discover open and closed circuits and the difference between conductors and insulators.	Big Ideas: 10- Forms of Energy	SC.4.P.10.1 SC.4.P.8.4 SC.5.P.8.4 SC.5.P.10.1 SC.5.P.10.2 SC.5.P.11.1 SC.5.P.11.2
Digging Around the World	As they transform into paleontologists, students step back in time and dig for fossils to explore the wild world of the past. Students will also learn how fossils are formed by creating models of fossils.	Big Ideas: 1– The Practice of Science 6– Earth Structures	SC.1.N.1.2 SC.1.E.6.1 SC.4.E.6.3 SC.4.N.1.3
Discovery Dome	The Discovery Dome is a fully portable, inflatable, full-dome planetarium. This immersive experience offers the same unique learning opportunities as a traditional planetarium at your location. Ask about show offerings and space requirements.	*Varies by Program*	
Dissections	Study anatomical structures and how these relate to body systems function in a squid or frog. Our expert educator will provide specimens, equipment and worksheets for this hands on dissection lab.	Big Ideas: 14- Organization and Development of Living Organisms 17- Interdependence	SC.5.L.14.1 SC.5.L.14.2 SC.5.L.17.1
DNA in Motion	DNA contains all the information your body needs to grow and develop into the awesome and unique person that is you. Learn more about this mighty molecule and even get your own chance to extract some DNA.	Big Ideas: 1– Practice of Science 14– Organization and Development of Living Organisms 15– Diversity and Evolution of Living Organisms 16– Heredity and Reproduction	SC.1.L.14.1 SC.3.L.14.1 SC.4.L.16.1 SC.4.N.1.3 SC.5.L.14.1 SC.2.L.14.1

LABS Elementary School (cont)	Description	Big Ideas	NGSSS
Everglades: All About the Alligator	Students will learn all about food webs, Florida's fascinating ecosystems and the anatomy of a real alligator.	Big Ideas: 14- Organization and Development of Living Organisms	SC.K.L.14.3 SC.1.E.6.1 SC.1.L.17.1 SC.3.L.15.1 SC.3.L.17.2 SC.4.L.17.3 SC.5.L.15.1
Heart in Motion	Learn about the anatomy and function of the heart and circulatory system. Observe how we use different techniques like stethoscopes and EKG's to study this extraordinary organ.	Big Ideas 1– Practice of Science 14– Organization and Development of Living Organisms 15– Diversity and Evolution of Living Organisms 17– Interdependence	SC.4.N.1.3 SC.2.L.17.1 HE.3.C.1.5
Investigating Insects	Hold live insects in the palm of your hand as we discuss habitats, characteristics and the beneficial role that insects play in our environment.	Big Ideas: 14- Organization and Development of Living Organisms 17- Interdependence	SC.K.L.14.3 SC.1.L.14.1 SC.3.L.15.1 SC.5.L.17.1 SC.5.L.14.2
Mineral Mysteries	Discover how geologists use observable properties to identify and classify minerals. Use this knowledge to help identify some mystery minerals in this hands-on lab.	Big Ideas: 1– Practice of Science 6– Earth Structures 8– Properties of Matter	SC.5.P.8.4 SC.3.P.8.3 SC.4.P.8.2
Newton Olympics	Sir Isaac Newton discovered that objects in motion always follow certain rules. Find out about Newton's Laws of Motion and compete in some friendly physics challenges.	Big Ideas: 1– Practice of Science 12– Motion of Objects 13– Forces and Change in Motion	SC.1.N.1.3 SC.5.P.13.2 SC.4.P.12.1 SC.1.N.1.2
Pollinating Plants	Dissect a flower to discover different structures and learn how each part has a specific function related to a plant's survival.	Big Ideas: 1– Practice of Science 14– Organization and Development of Living Organisms 15– Diversity and Evolution of Living Organisms 16– Heredity and Reproduction 17– Interdependence	SC.1.L.17.1 SC.1.L.14.1 SC.1.L.14.2

LABS Elementary School (cont)	Description	Big Ideas	NGSSS
3D Printing and Design	Students will learn how 3D printers work and use CAD software to create designs that they can view in a 3D environment.	Big Ideas: 10– Forms of Energy	SC.4.L.17.4 SC.5.P.10.1 SC.5.P.10.3
Shark Tooth Lab	Student teams will utilize scientific observation to sort and classify genuine fossil shark teeth, examine real shark jaw specimens, learn about various shark habitats, and create their own shark tooth necklaces.	Big Ideas: 15- Diversity and Development of Living Organisms 16- Heredity and Reproduction 17- Interdependence	SC.5.L.14.2 SC.5.L.15.1 SC.5.L.17.1

DEMONSTRATIONS Elementary School	Description	Big Ideas	NGSSS
Exciting Electrons	Electrifying, hands-on demonstrations which include testing the strength of an electromagnet and experiencing the static electricity from a Van der Graaf Generator.	Big Ideas: 10- Forms of Energy	SC.3.P.10.1 SC.3.P.10.2 SC.3.P.11.2 SC.4.P.8.4 SC.4.P.10.1 SC.4.P.10.2
Nitromania	Students will see physical changes occur before their very eyes as they learn about the states of matter in this “chilling” program about liquid nitrogen.	Big Ideas: 8- Properties of Matter 9- Changes in Matter	SC.2.P.8.4 SC.2.P.8.3 SC.3.P.9.1 SC.4.P.8.2 SC.5.P.8.4 SC.5.P.9.1
Touch Tank	Experience ocean organisms through observation, touch and fun narration while learning about the special adaptations that help these animals survive.	Big Ideas: 1– Practice of Science 14– Organization and Development of Living Organisms 15 – Diversity and Evolution of Living Organisms 17– Interdependence	SC.1.N.1.2 SC.1.L.14.1 SC.2.L.17.2 SC.3.L.15.1 SC.4.N.1.2 SC.5.L.17.1

PLANETARIUM SHOWS Middle School	Description	Big Ideas	NGSSS
Astronaut	Would you like to learn what it's like to travel through space or to work on the International Space Station? Learn what it takes to be an astronaut as you travel into space in this digital full dome planetarium show.	Big Ideas: 5- Earth in Space and Time 14- Organization and Development of Living Organisms	SC.8.E.5.4 SC.8.E.5.10 SC.8.N.1.6
Dynamic Earth	Students will explore the inner workings of Earth's climate system as they ride along on swirling ocean and wind currents, dive into the heart of a monster hurricane, come face-to-face with sharks and gigantic whales, and fly into boiling volcanoes.	Big Ideas: 5- Earth in Space and Time 7- Earth Systems and Patterns	SC.8.E.5.9 SC.6.E.7.2 SC.6.E.7.9 SC.6.E.7.3 SC.6.E.7.5
Black Holes: The Other Side of Infinity	Viewers encounter a range of spectacular cosmic wonders, including a depiction of the beginning of the universe, the first stars, the collision of two galaxies, and a virtual trip into the center of the Milky Way galaxy, as they witness a scientifically accurate perspective on black holes.	Big Ideas: 2- The Characteristics of Scientific Knowledge 5- Earth in Space and Time	SC.8.E.5.5 SC.8.E.5.4 SC.6.N.2.2
Dinosaurs Alive	Journey through the Triassic and Cretaceous periods with renowned paleontologists hunting for fossilized clues, uncovering evidence that dinosaur descendants may still walk (or fly) among us today.	Big Ideas: 1- The Practice of Science 15- Diversity and Development of Living Organisms	SC.7.L.15.2 SC.7.L.15.1 SC.7.L.15.3 SC.7.L.17.2
Solar System Odyssey	Learn about all of the planets and major moons in our solar system on a futuristic space mission to explore the necessities for life.	Big Ideas: 2- The Characteristics of Scientific Knowledge 5- Earth in Space and Time	SC.8.E.5.7 SC.8.E.5.4 SC.8.E.5.9
Stars and Constellations	Tour the stars in our 360° full-dome digital planetarium. Learn some basic principles of astronomy like what a star is made of and how far it is to our closest star. Our science educator will highlight some seasonal constellations and other interesting night sky sights.	Big Ideas: 2- The Characteristics of Scientific Knowledge 5- Earth in Space and Time	SC.8.E.5.5 SC.8.E.5.6

LABS Middle School	Description	Big Ideas	NGSSS
Brain in Action	Hold a brain in the palm of your hand to discover the structure and function of this three pound organ and its role in coordinating all five senses.	Big Ideas: 14- Organization and Development of Living Organisms	SC.6.L.14.1 SC.6.L.14.5
Chemical Concoctions	Students will have the opportunity to make their own polymers while conducting experiments that reinforce chemistry concepts of atoms, density and changes in states of matter.	Big Ideas: 1- The Practice of Science 8- Properties of Matter 9- Changes in Matter	SC.7.P.11.1 SC.8.P.8.1 SC.8.P.8.4 SC.8.P.8.9 SC.912.P.8.1 SC.912.P.8.2
Digging Around the World	As they transform into paleontologists, students step back in time and dig for fossils to explore the wild world of the past. Students will also learn how fossils are formed by creating models of fossils.	Big Ideas: 1– The Practice of Science 6 – Earth Structures	SC.6.N.2.1 SC.2.E.6.1 SC.7.E.6.5 SC.8.N.1.5
Discovery Dome	The Discovery Dome is a fully portable, inflatable, full-dome planetarium. This immersive experience offers the same unique learning opportunities as a traditional planetarium at your location. Ask about show offerings and space requirements.	*Varies by Program*	
Dissections	Study anatomical structures and how these relate to body systems' function in a squid or frog.	Big Ideas: 15– Development of Living Organisms	SC.6.L.15.1 SC.6.L.14.5 SC.6.L.14.1
DNA in Motion	DNA contains all the information your body needs to grow and develop into the awesome and unique person that is you. Learn more about this mighty molecule and even get your own chance to extract some DNA	Big Ideas: 1– Practice of Science 14– Organization and Development of Living Organisms 15– Diversity and Evolution of Living Organisms 16– Heredity and Reproduction	SC.7.L.16.1 SC.7.L.16.3 SC.6.L.14.5 SC.7.L.16.2 SC.7.L.16.2 SC.912.L.16.16 SC.912.L.16.2
Everglades: All About the Alligator	Students will learn all about food webs, Florida's fascinating ecosystems and the anatomy of a real alligator.	Big Ideas: 14- Organization and Development of Living Organisms	SC.6.E.7.7 SC.1.E.6.6

LABS Middle School (cont)	Description	Big Ideas	NGSSS
Heart in Motion	Learn about the anatomy and function of the heart and circulatory system. Observe how we use different techniques like stethoscopes and EKG's to study this extraordinary organ.	Big Ideas 1– Practice of Science 14– Organization and Development of Living Organisms 15– Diversity and Evolution of Living Organisms 17– Interdependence	SC.6.L.14.5 SC.912.P.8.10 SC.912.L.14.38
Investigating Insects	Become an entomologist by observing insects and exploring some of the oldest living creatures on earth. Hold live insects in the palm of your hand as we discuss habitats, characteristics and the beneficial role that insects play in our environment.	Big Ideas: 14- Organization and Development of Living Organisms 17- Interdependence	SC.6.L.15.1 SC.7.L.17.1 SC.7.L.17.2
Pollinating Plants	Dissect a flower to discover different structures and learn how each part has a specific function related to a plant's survival	Big Ideas: 14- Organization and Development of Living Organisms	SC.6.L.15.1
3D Printing and Design	Students will use modern software to create designs that they can view in a 3D environment.	Big Ideas: 10- Forms of Energy	SC.68.CS-CS.5.1 SC.68.CS-CS.6.2 SC.68.CS-CS.6.6
Newton Olympics	Sir Isaac Newton discovered that objects in motion always follow certain rules. Find out about Newton's Laws of Motion and compete in some friendly physics challenges.	Big Ideas: 1– Practice of Science 12– Motion of Objects 13– Forces and Change in Motion	SC.6.P.11.1 SC.6.N.3.2 SC.6.P.13.1 SC.6.P.13.2 SC.6.P.13.3

DEMONSTRATIONS Middle School	Description	Big Ideas	NGSSS
Exciting Electrons	Electrifying, hands-on demonstrations which include testing the strength of an electromagnet and experiencing the static electricity from a Van der Graaf Generator	Big Ideas: 10- Forms of Energy	SC.8.P.8.4 SC.P.8.1 SC.8.P.8.7
Nitromania	Students will see physical changes occur before their very eyes as they learn about the states of matter in this "chilling" program about liquid nitrogen.	Big Ideas: 8- Properties of Matter 9- Changes in Matter	SC.7.P.11.1 SC.8.P.8.1 SC.8.P.8.4 SC.912.P.8.1 SC.912.P.8.2

PLANETARIUM SHOWS High School	Description	Big Ideas	NGSSS
Dynamic Earth	Students will explore the inner workings of Earth's climate system as they ride along on swirling ocean and wind currents, dive into the heart of a monster hurricane, come face-to-face with sharks and gigantic whales, and fly into boiling volcanoes.	Big Ideas: 5- Earth in Space and Time 7- Earth Systems and Patterns	SC.912.E.5.4 SC.912.E.6.1 SC.912.E.6.6 SC.912.E.7.2 SC.912.E.7.3 SC.912.E.7.9
Black Holes: The Other Side of Infinity	Viewers encounter a range of spectacular cosmic wonders, including a depiction of the beginning of the universe, the first stars, the collision of two galaxies, and a virtual trip into the center of the Milky Way galaxy, as they witness a scientifically accurate perspective on black holes.	Big Ideas: 2- The Characteristics of Scientific Knowledge 5- Earth in Space and Time	SC.912.E.5.1 SC.912.E.5.2 SC.912.E.5.7
Dinosaurs Alive	Journey through the Triassic and Cretaceous periods with renowned paleontologists hunting for fossilized clues, uncovering evidence that dinosaur descendants may still walk (or fly) among us today.	Big Ideas: 1- The Practice of Science 15- Diversity and Development of Living Organisms	SC.912.L.15.1 SC.912.N.3.1
Stars and Constellations	What are stars made of? Is there a cold star? Find out as our science educator takes you into the night sky in our 360° planetarium and reveals the myths behind the famous constellations.	Big Ideas: 2- The Characteristics of Scientific Knowledge 5- Earth in Space and Time	SC.912.E.5.2 SC.912.E.5.3 SC.912.E.5.10 SC.912.E.5.5

PROGRAMS & LABS High School	Description	Big Ideas	NGSSS
Brain in Action	Hold a brain in the palm of your hand to discover the structure and function of this three pound organ and its role in coordinating all five senses.	Big Ideas: 14- Organization and Development of Living Organisms	SC.912.L.14.50 SC.912.L.14.27 SC.912.L.14.26
Dissections	Study anatomical structures and how these relate to body systems' function in a squid, frog, spiny dogfish shark, or fetal pig. Our expert educator will provide specimens, equipment and worksheets for this hands-on dissection lab.	Big Ideas: 14- Organization and Development of Living Organisms 17- Interdependence	SC.912.L.14.26 SC.912.L.14.11 SC.912.L.14.40
Discovery Dome	The Discovery Dome is a fully portable, inflatable, full-dome planetarium. This immersive experience offers the same unique learning opportunities as a traditional planetarium at your location. Ask about show offerings and space requirements	*Varies by Program*	
DNA in Motion	DNA contains all the information your body needs to grow and develop into the awesome and unique person that is you. Learn more about this mighty molecule and even get your own chance to extract some DNA.	Big Ideas: 1– Practice of Science 14– Organization and Development of Living Organisms 15– Diversity and Evolution of Living Organisms 16– Heredity and Reproduction	SC.912.P.8.10 SC.912.L.14.38 SC.912.L.16.16 SC.912.L.16.2
3D Printing and Design	Students will use new software to create designs that they can view in a 3D environment.	Big Ideas: 10- Forms of Energy	SC.912.CS-CC.1.4 SC.912.CS-CS.3.1 SC.912.CS-CS.6.7