

## SFSCA Science NGSSS Aligned Programs

<b>PLANETARIUM SHOWS</b> <b>Elementary School</b>	<b>Description</b>	<b>Big Ideas</b>	<b>NGSSS</b>
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 fulldome 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.L.14.1
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 17- Interdependence	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 fulldome 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	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: 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 / NGSS	NGSSS
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.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 will take an electrifying look at how electricity gets around. This hands-on lab allows students to create their very own functioning electrical circuits and introduces some functional concepts like open vs. closed circuits, the difference between conductors and insulators, and much more. Students will use their newfound knowledge to construct a simple motorized robot of their very own!	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.10.2 SC.5.P.11.1 SC.5.P.11.2 SC.5.P.11.3
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.6.L.14.5
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
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
Pollinating Plants and Flower Dissection	Enjoy an interactive flower dissection activity and find out more about the flower petals, sepals, anther, stamens, and how each play a role in the life cycle of all living things.	Big Ideas: 14- Organization and Development of Living Organisms	SC.3.L.14.1 SC.3.L.14.2 SC.3.L.15.2 SC.3.L.17.1 SC.3.L.17.2 SC.4.L.16.2 SC.4.L.17.2 SC.4.L.17.4
Shark Tooth Lab	Student teams will utilize scientific observation to sort and classify genuine	Big Ideas: 15- Diversity and Development of	SC.5.L.14.2 SC.5.L.15.1

	fossil shark teeth, examine real shark jaw specimens, learn about various shark habitats, and create their own shark tooth necklaces.	Living Organisms 16- Heredity and Reproduction 17- Interdependence	SC.5.L.17.1
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<b>DEMONSTRATIONS Elementary School</b>	<b>Description</b>	<b>Big Ideas</b>	<b>NGSSS</b>
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

<b>PLANETARIUM SHOWS Middle School</b>	<b>Description</b>	<b>Big Ideas</b>	<b>NGSSS</b>
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 fulldome 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.6.L.14.5 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	Big Ideas: 2- The Characteristics of Scientific Knowledge	SC.8.E.5.5 SC.8.E.5.4 SC.6.N.2.2

	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.	5- Earth in Space and Time	
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	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.8.E.5.5 SC.8.E.5.6

<b>LABS Middle School</b>	<b>Description</b>	<b>Big Ideas</b>	<b>NGSSS</b>
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
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	Big Ideas: 14- Organization and Development of Living Organisms 17- Interdependence	SC.6.L.15.1 SC.6.L.14.5 SC.6.L.14.1

	worksheets for this hands-on dissection lab.		
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
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 and Flower Dissection	Enjoy an interactive flower dissection activity and find out more about the flower petals, sepals, anther, stamens, and how each play a role in the life cycle of all living things.	Big Ideas: 14- Organization and Development of Living Organisms	SC.6.L.15.1
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.	15- Diversity and Development of Living Organisms 16- Heredity and Reproduction 17- Interdependence	SC.6.L.15.1 SC.7.N.1.6
3D Printing and Design	Students will use modern software to create designs that they can view in a 3D environment. (Not available Jun - Aug)	Big Ideas: 10- Forms of Energy	SC.68.CS-CS.5.1 SC.68.CS-CS.6.2 SC.68.CS-CS.6.6

<b>DEMONSTRATIONS Middle School</b>	<b>Description</b>	<b>Big Ideas</b>	<b>NGSSS</b>
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

<b>PLANETARIUM SHOWS High School</b>	<b>Description</b>	<b>Big Ideas</b>	<b>NGSSS</b>
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

<b>PROGRAMS &amp; LABS High School</b>	<b>Description</b>	<b>Big Ideas</b>	<b>NGSSS</b>
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	Big Ideas: 14- Organization and	SC.912.L.14.50 SC.912.L.14.27

	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.	Development of Living Organisms 17- Interdependence	SC.912.L.14.26 SC.912.L.14.11 SC.912.L.14.40
3D Printing and Design	Students will use new software to create designs that they can view in a 3D environment. (Not available Jun - Aug)	Big Ideas: 10- Forms of Energy	SC.912.CS-CC.1.4 SC.912.CS-CS.3.1 SC.912.CS-CS.6.7