



School Programs
Guide
2018-2019

Children's
Science
Explorium 





The Children's Science Explorium is a hands-on science center designed for children from 5-12 years old.

The Explorium offers a variety of fascinating, interactive exhibits and programs created to enhance and complement young explorers' understanding of everyday physical sciences through hands-on learning and their natural curiosity.

All programs and exhibits are designed to enhance classroom instruction, support the Next Generation Sunshine State Standards, Common Core standards, and FSA preparedness.

Field trips begin in your classroom, when you review the pre-visit activities developed by Explorium staff to prepare students for their upcoming visit. Your visit here includes a one-hour program plus one hour of free exploration within the museum.

Other options include age-appropriate challenges, guided nature tours or demonstrations.

All groups receive a brief and informative orientation prior to their time in the museum. Teachers and chaperones join in on the fun and assist students during their entire trip, especially when in the Explorium exhibit halls.

As a follow up and extension to the content of your chosen program, teachers are given access to post-visit activities that can be found on our website to use back in your classroom to reinforce your students' learning experience.

Most of what you need to know about arranging a visit to the Explorium can be found in this guide. Make your field trip reservation today. We look forward to teaching your group!

The Children's Science Explorium Staff



School Field Trip Programs

Earth Science

STARLAB: From Night to Day (K-2)

NGSSS: SC.K.E.5.2, SC.K.E.5.3, SC.K.E.5.4

LAFS: K-2.SL.1.1-3, K-1.SL.2.4, K-2.L.3.4-5

MAFS: K.MD.1.1, K.G.1.1

- ◆ Identify that the sun provides energy in the form of light and heat
- ◆ Investigate the position of the sun in the sky as it appears to change throughout the day
- ◆ Explore the night sky in our STARLAB
- ◆ Observe that sometimes the moon can be seen at night and sometimes during the day
- ◆ Recognize the sun can only be seen during the day

STARLAB: Moon and Stars (3-4)

NGSSS: SC.3.E.5.1, SC.3.E.5.2, SC.3.E.5.3, SC.4.E.5.1, SC.4.E.5.2, SC.4.E.5.3

LAFS: 3-4.SL.1.1, 3-4.SL.1.3, 3-4.L.2.3, 3-4.L.3.4-6

- ◆ Identify the sun as a star that emits energy
- ◆ Investigate changes in the observable shape of the moon
- ◆ Observe the patterns of the night sky in our STARLAB
- ◆ Explore the reasons why stars seem to shift across the sky



STARLAB: Exploring Our Galaxy (5)

NGSSS: SC.5.E.5.1, SC.5.E.5.2, SC.5.E.5.3

LAFS: 5.RF.3.3, 5.RF.4.4, 5.RI.1.3, 5.RI.2.4, 5.W.2.4, 5.SL.1.1, 5.SL.1.3, 5.L.3.4

- ◆ Identify the objects that make up our galaxy
- ◆ Compare properties of the inner and outer planets
- ◆ Discuss the influence of gravity and energy in the formation of galaxies, stars, and solar systems
- ◆ Explore the solar system in our STARLAB

Reasons for Seasons (1-2)

NGSSS: SC.1.E.6.3, SC.2.E.7.1, SC.2.E.7.5

LAFS: 1-2.SL.1.1-3, 1.SL.2.4, 1-2.L.3.4-5

- ◆ Identify that Earth revolves around the sun
- ◆ Discuss how the sun provides energy in the form of light and heat
- ◆ Examine patterns in weather, comparing Florida to other areas in the U.S.
- ◆ Experiment with weather instruments
- ◆ Leave with a “cool” batch of insta-snow

Digging Deep: Fossil Hunt (K-2)

NGSSS: SC.K.N.1.1, SC.K.N.1.3, SC.1.N.1.2, SC.1.N.1.3, SC.1.N.1.2, SC.2.P.8.1

LAFS: K-1.RF.1.1, K-1.RF.2.2, K-2.RF.3.3, K-2.W.2.5, K-2.W.3.7-8, K-2.SL.1.1-3, K-1.SL.2.4, K-2.L.3.4-5

MAFS: K.MD.1.1, K.G.1.1, 2.MD.1.1

- ◆ Define a fossil and discuss formation and types
- ◆ Work in teams in our sand site to uncover and identify fossils
- ◆ Discover the origin and identity of all of the fossils collected
- ◆ Observe and record data based on each fossil discovery

(Outdoor Program)

Mineral Mystery (3-4)

NGSSS: SC.3.N.1.3, SC.3.N.1.6, SC.2.N.1.7, SC.3.P.8.3, SC.4.E.6.2

LAFS: 3-4.RL.2.4, 3-4.RF.3.3, 3.RF.4.4, 3-4.RI.1.1-3, 3-4.RI.2.4, 3-4.SL.1.1, 3.SL.1.3, 3-4.L.2.3, 3-4.L.3.4-6

- ◆ Learn the properties of a mineral
- ◆ Identify minerals and their uses in our daily lives
- ◆ Investigate basic techniques used to identify minerals with the use of test kits
- ◆ Record and interpret data to compare and identify unknown minerals
- ◆ Take home a mineral keepsake

Rock and Erode (3-5)

NGSSS: SC.3.P.8.3, SC.4.E.6.1, SC.4.E.6.4, SC.5.N.1.5

LAFS: 3-5.RL.2.4, 3-5.RF.3.3, 3-5.RF.4.4, 3-4.RI.1.1-2, 3-5.RI.1.3, 3-5.RI.2.4, 3-5.W.1.2, 3-5.W.2.4, 3.W.3.8, 3-5.SL.1.1, 3-5.SL.1.3, 3-4.L.2.3, 3-5.L.3.4, 3-4.L.3.5-6

- ◆ Investigate the properties of rocks and identify the three rock types
- ◆ Explore rock formation and the rock cycle
- ◆ Experiment with a stream table to understand the effects of weathering and erosion
- ◆ Take an “incredible journey” through the rock cycle

(Partial Outdoor Program)



School Field Trip Programs

Chemistry



Icky Squishy Matter (K-2)

NGSSS: SC.K.N.1.1, SC.K.P.8.1, SC.K.P.9.1, SC.1.N.1.2, SC.1.N.1.3, SC.2.P.8.2, SC.2.P.8.3, SC.2.P.9.1

LAFS: K-2.SL.1.1-3, K-1.SL.2.4, K-2.L.3.4-5

- ◆ Explore the concept of matter and its various states
- ◆ Discuss how chemistry is used in our everyday lives
- ◆ Observe a chemical reaction and phase changes
- ◆ Model safe laboratory procedures as students actively participate in making and taking home a gooey concoction

Radical Reactions (3-5)

NGSSS: SC.3.N.1.3, SC.4.N.1.6, SC.4.P.9.1, SC.5.P.9.1

LAFS: 3-5.RI.2.4, 3-5.RF.3.3, 3-5.RF.4.4, 3-4.RI.1.1-2, 3-5.RI.1.3, 3-5.RI.2.4, 3-5.W.1.2, 3-5.W.2.4, 3.W.3.8, 3-5.SL.1.1, 3-5.SL.1.3, 3-4.L.2.3, 3-5.L.3.4, 3-4.L.3.5-6

- ◆ Review the definitions of chemistry and matter
- ◆ Differentiate between chemical and physical reactions
- ◆ Incorporate steps of the scientific method through observation and experimentation
- ◆ Model safe laboratory procedures while recording and interpreting “bubbling” results

General Science Skills

Know Your Rock (1-2)

NGSSS: SC.1.N.1.1, SC.1.E.5.3, SC.1.E.6.1, SC.2.E.6.2

LAFS: 1-2.W.2.5, 1-2.W.3.7-8, 1-2.SL.1.1-3, 1.SL.2.4-5, 1-2.L.3.4-5

- ◆ Learn what it means to make observations using one or more of the five senses
- ◆ Collectively describe an object in as much detail as possible
- ◆ Explore the definition of a rock by actively participating in “My Secret Rock”
- ◆ Discover different types of rocks in a rock dig
- ◆ Select one special rock to take home

Build It: Engineering (3-5)

NGSSS: SC.3.N.1.1, SC.3.N.1.3, SC.4.N.1.3, SC.4.N.1.8, SC.5.N.1.5

LAFS: 3-5.SL.1.1, 3-5.SL.1.3, 3-4.L.2.3, 3-5.L.3.4, 3-4.L.3.5-6

- ◆ Investigate concepts of engineering by raising questions and experimenting in teams
- ◆ Record data in the form of simple charts
- ◆ Explore the idea that science does not always follow a rigid method
- ◆ Construct a model while using creativity and design skills

(Partial Outdoor Program)

Clues of the Past (3-5)

NGSSS: SC.3.N.1.6, SC.4.N.1.7, SC.5.N.1.2

LAFS: 3-5.SL.1.1, 3-5.SL.1.3, 3-4.L.2.3, 3-5.L.3.4, 3-4.L.3.5-6

- ◆ Investigate the use of present artifacts to make inferences about the past lives of Tequesta American Indians
- ◆ Explore evidence and create scientific explanations
- ◆ Differentiate between an experiment and other scientific explanations
- ◆ Explore Florida history by discussing “trash mounds”



School Field Trip Programs

Biology

Body Science: Healthy Habits (K-2)

NGSSS: SC.K.N.1.3, SC.K.L.14.1, SC.1.L.17.1, SC.2.L.14.1

LAFS: K-2.W.2.5, K-2.W.3.7-8, K-2.SL.1.1-3, K-1.SL.2.4, K-2.L.3.4-5

- ◆ Identify that living things grow and change
- ◆ Understand that people need food for survival
- ◆ Explore the concept of nutrition and its importance for growth and function
- ◆ Investigate foods to learn how to make healthy choices

Body Science: Cell Theory (3-5)

NGSSS: SC.3.N.1.3, SC.4.L.17.2, SC.5.L.14.1

LAFS: 3-5.RL.2.4, 3-5.RF.3.3, 3-5.RF.4.4, 3-5.SL.1.1, 3-5.SL.1.3, 3-4.L.2.3, 3-5.L.3.4, 3-4.L.3.5-6

- ◆ Identify that all living organisms are made of cells
- ◆ Investigate the structure & function of cells
- ◆ Explore the concept of cells as building blocks for tissues, organs, and body systems of humans
- ◆ Identify some of the major body systems, organs within these systems, and how they function together
- ◆ Construct an edible cell model

Physics

Magnet Investigations (K-2)

NGSSS: SC.K.N.1.1, SC.1.N.1.3, SC.2.P.13.1

LAFS: K-2.SL.1.1-3, K-1.SL.2.4, K-2.L.3.4-5

- ◆ Collaboratively work in steps to complete the scientific process
- ◆ Identify properties of magnets using careful observation
- ◆ Participate in hands-on experiments with magnets
- ◆ Compare observations & ideas by sharing results with others

Electrical Encounters (3-5)

NGSSS: SC.3.P.10.1, SC.3.P.10.2, SC.4.P.10.1, SC.4.P.10.2,

SC.5.P.10.1, SC.5.P.10.2, SC.5.P.10.4

LAFS: 3-5.SL.1.1, 3-5.SL.1.3, 3-4.L.2.3, 3-5.L.3.4, 3-4.L.3.5-6

- ◆ Explore the concept of electricity and differentiate between static and current
- ◆ Investigate static electricity in the form of lightning
- ◆ Identify current electricity by building circuits
- ◆ Experiment with materials to investigate conductors and insulators
- ◆ Observe a “hair-raising” demonstration with our Van De Graff generator

3-2-1 Blast-Off:

Forces & Motion (3-5)

NGSSS: SC.3.E.5.4,

SC.4.P.10.2, SC.5.P.13.1

LAFS: 3-5.SL.1.1,

3-5.SL.1.3, 3-4.L.2.3,

3-5.L.3.4, 3-4.L.3.5-6

MAFS: 3.MD.1.2, 3.MD.2.3

- ◆ Explore rockets and identify their parts
- ◆ Investigate Newton’s Third Law of Motion while observing a series of demonstrations
- ◆ Identify types of energy and acting forces as a rocket is launched
- ◆ Collaboratively work in pairs to construct and launch a water rocket

(Partial Outdoor Program)



Good Vibrations (K-2)

NGSSS: SC.K.P.10.1, SC.1.N.1.1, SC.2.N.1.1

LAFS: K-2.W.2.5, K-2.W.3.7-8, K-2.SL.1.1-3, K-1.SL.2.4,

K-2.L.3.4-5

- ◆ Explore the concept of vibrations
- ◆ Identify that sound is caused by vibrations that travel in waves through different media
- ◆ Experiment at centers to understand how sound is made



Important Information

ARRIVAL INFORMATION

The Children's Science Explorium can accommodate two classes of up to 22 participants each day. Programs begin promptly at 10:00am and schools should arrive no later than 9:45am for all programs. If you are going to be late, please call (561) 347-3900 to inform staff. When inclement weather prohibits an outdoor program, an alternate program will be substituted.

SCIENCE PLAYGROUND & CAROUSEL

- ◆ The Carousel has 30 colorful horses and 2 chariots. Each group receives a free ride.
- ◆ Chaperones **MUST** distribute themselves around the Playground and Carousel to supervise and oversee students' behavior and activities.

CHAPERONES

- ◆ 1 chaperone per 7 students is recommended.
- ◆ No siblings on the field trip; they may take away from students' learning experience and distract chaperones. Siblings are not permitted in the classroom.
- ◆ Teachers and chaperones are responsible for their students at all times; **they are expected to be involved in the programs.**
- ◆ Staff reserves the right to ask any group to leave due to disorderly or inappropriate behavior.
- ◆ Cell phones are prohibited during programs and tours. Please silence them.



LUNCH

- ◆ A pavilion reservation is included with your field trip.
- ◆ The Explorium has large coolers to hold lunches.
- ◆ Please have students pack lunches in airtight containers to keep food dry and away from animals.
- ◆ Teachers and chaperones are responsible for distributing lunches to students.
- ◆ Coolers will be collected once lunches have been distributed.
- ◆ Students and chaperones are responsible for cleaning up their lunch area.
- ◆ **Please do not allow children to feed the animals.**

TRANSPORTATION INFORMATION

- ◆ Bus passes issued by Sugar Sand Park must accompany all groups using buses or passenger vans.
- ◆ Buses without passes are not permitted in the park.
- ◆ Approximately one month before your visit, a bus pass for your entire grade is e-mailed to the teacher who made the original reservation.
- ◆ **Your bus pass must be displayed inside the front windshield of your bus.** Failure to properly display your bus pass may result in your bus being denied access to the property and reducing your program time.

MAKE A FIELD TRIP RESERVATION

Your Reservation

Groups are limited to schools within the City of Boca Raton and/or the Greater Boca Raton Beach and Park District.

Reservations can be made at the Teacher Open House, on September 6, 2018, from 4-6 pm.

Reservations are filled on a first-come, first-served basis and are also dependent upon staff and space availability.

When making a reservation, be sure to provide two alternate visit dates. Also, please inform us if you have any students with special needs or require specific accommodations.

Send a Form

Visit www.ScienceExplorium.org and select a reservation form from the School Programs page.

Fax your completed form to (561) 347-3910

Attention: Cindy Clairry

You may also mail the completed form to:

Cindy Clairry, Science Educator
300 S. Military Trail
Boca Raton, FL 33486

Call (561) 347-3905

Tuesday-Friday 8:30am-5:30pm

Saturdays, 8:30am-4:30pm

Upcoming Traveling Exhibits



Creating experiences from the “can you hear me now” Scream Chamber to the “good vibrations” of the Dancing Sand Plates, these exhibits take a playful look at the physics of sound waves as well as how music and sound affects our mood.

***Noise!* will be open
September 28 through January 6**



Have you ever seen a mammoth tooth up close? What does the Ice Age smell like? Step into the shoes of a climate science researcher and solve engineering challenges posed by thawing permafrost in Under the Arctic: Digging into Permafrost.

***Under the Arctic* will be open
mid January to the end of May**

Children's Science Explorium



Visit Us

Monday – Friday, 9am - 6pm

Saturday, Sunday and Holidays, 10am - 5pm

The Children's Science Explorium is closed Thanksgiving Day,
Christmas Day and New Year's Day.

Contact Us

(561) 347-3912

Explorium@myboca.us

www.ScienceExplorium.org

Sugar Sand Park

300 South Military Trail

Boca Raton, FL 33486

Follow Us



@SugarSandPark

The Greater Boca Raton Beach and Park District owns and operates Sugar Sand Park. The City of Boca Raton provides daily operation and maintenance.



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