



EDUCATOR PROGRAMS GUIDE

2016-2017

Our Mission

Sci-Tech Discovery Center provides dynamic educational experiences that inspire people of all ages and backgrounds to embrace discovery and innovation through the active exploration of science, math and technology.

BRIGHT IDEAS!

That's what Sci-Tech Discovery Center hopes to inspire by providing hands-on experiences in the essential areas of science, math and technology to kids of all ages and backgrounds. Sci-Tech Discovery Center seeks to spark a life-long interest in STEM and helps equip our area's children with these advanced skills. At Sci-Tech, we believe in advancing education and providing inspiration to the next generation of engineers, scientists, educators and innovators.

About Sci-Tech

Sci-Tech Discovery Center offers a wide variety of informal educational experiences for classes, groups and individuals through permanent and traveling exhibits, field trips, vacation and summer camps, parties, special events and programs. We provide programs at our site or on your campus.

At Our Center or your school

We welcome your class or group to our site or we can come to see you! There are many opportunities and programs that will fit your curriculum and meet TEK (Texas Essential Knowledge and Skills). This booklet will outline our current programs and information.

Basic facts

Sci-Tech Discovery Center is located at 8004 North Dallas Parkway (at the Cotton Gin Road/Main Street exit on North Dallas Tollway) at the Frisco Discovery Center.

Our main telephone number is (972) 546-3050.

Our mailing address is Sci-Tech Discovery Center, 8004 North Dallas Parkway, Frisco, TX, 75034.

General admission (ages 3–64)	\$8.00
Seniors (age 65+)	\$6.50
Military (ID required)	\$6.50
Teachers (ID required)	\$6.50



Programs at Sci-Tech

Sci-Tech's immersive, hands-on exhibit gallery (12000+ sq. ft.) is filled with educational experiences that learners of all ages are sure to love!

MAKERSPACE

Welcome to Sci-Tech Discovery Center's Makerspace where you can design and create cool technology projects using our special kits and tools. All Maker programs are held on-site in our Maker Space.



Intro to Soldering

Introduction to Soldering activity. Learn to solder simple wired circuit connections. Activity will consist of learning the basics of Soldering while making a simple lighting circuit.

20 Students max. The program is 45 minutes
\$247.00 per program cost

Soldering Advanced

Circuit board Soldering take your soldering skills to the next level and learn how to solder a prefabricated kit for an LED lighting circuit board with a battery and switch

Two class periods

20 Students max. The program is 90 minutes
\$120 for take home Circuit board with LED, Battery, and Switch
\$414.0 program cost
\$534.00 per program total cost

C02 Cars

Starting from a block of wood students build their own aerodynamic creations to see how fast they make it down the track. Construct car bodies / wheels / weights/ Test track time trial evaluation (Weight vs length vs time) students will be cutting and working with simple wood working tools to shape their cars.

20 Students max. The program is 90 minutes.
\$454.00 per program cost

Scribble Bot - Challenge

Take Scribble bots to the extreme in this challenge activity. Build, test and redesign your ultimate scribble bot to see if you have what it takes to design the ultimate scribbler.

20 Students max. The program is 90 minutes.
\$454.00 per program cost

Sheet Metal Creations

Working with a 1 ft by 1ft sheet of metal construct a simple steel box with a hinge on it. During this activity, the students will actually bend fold and rivet their boxes.

20 Students max. The program is 90 minutes
\$ 8 per student for sheet metal, hinge, and rivets
\$414.0 program cost
\$574.00 per program total cost

Intro to Arduino

Get a great introduction to what the big deal is about Arduino circuits and learn some simple programming.

Class will need to take place in the Computer lab (Will need to have software loaded on them in advance)

Two class periods

20 Students
\$414.0 per program cost

Arduino Advanced

If you already have some understanding of how Arduino circuit boards work attend this advanced class and test your knowledge and build on what you learned during the Intro to Arduino.

Class will need to take place in the Computer lab (Will need to have software loaded on them in advance)

Two class periods



FIELD TRIPS SUPPLEMENTALS

ALL KINDERGARTEN THROUGH 6th GRADE PROGRAMS

MEET THESE TEKS:

GRADES K-2: 1.AB, 2.AB, 3.BC, 4.AB

GRADES 3-6: 1.A, 2.AB, 3.A, 4.A

BLOWN AWAY (K-5th)

Delve into meteorology and the ways we predict weather's constant changes. Students will "become a water molecule" travel through weather cycle and use a Van de Graff generator to demonstrate the phenomenon of lightning.

FORCE AND MOTION (K- 6th)

The force and motion supplement is a high energy interactive demonstration of Newton's Universal Law of Gravity and Three Laws of Motion. The kids will learn about motion and trajectory, force, and kinetic energy principles while playing our life size Angry Birds game.

REPTILE ROUND-UP (K-6th)

Meet a few of Sci-Tech's resident reptiles. Learn about their physical qualities, lifestyles, and adaptations to their unique environments.

SCIENCE SLEUTHS (CSI) (2nd-5th)

Your students—each a budding forensic scientist is on the case to solve the mystery of Sci-Tech's missing snake! Collaborating in teams, they must work together to explain clues, utilize forensic tools and combine numerous science in an interactive, real-world experience.

EYE ON THE SKY (k-6th)

Like a spaceship, our inflatable planetarium carries your students' imaginations through the solar systems, astronomy experience they'll never forget!

FACILITY RENTALS

Your students are the REASON to come together...Let Sci-Tech be the PLACE!

PERFECT FOR ANY EVENT:

- Family Science and Math Nights
- PTA fundraisers
- Group celebration
-

PERFECT FOR ANY BUDGET:

- Starting as low as \$275/per hour with a 2-hour minimum
- Full access to our exhibit galleries, multi-purpose rooms and Discovery Stage
- Customizable programs with activity station, live stations, live shows and more

All facility rentals are custom-ordered to fit the group's needs.

Please contact our Manager of Guest Services at (972) 546-3050 x 106 for more information.



FREQUENTLY ASKED QUESTIONS FOR VISITING OUR CENTER

Check out top questions posed by educators just like you! Don't see the answer you're looking for? Contact our team directly! (972) 546-3050 X106

1. What is the chaperone price-per-person for field trips?

Sci-Tech provides one free adult admission per ten visiting students (e.g. 90 students+ 4 free teachers + free parents). Additional chaperones pay \$7 per person (or \$5 per person, in groups of 100+ students).

2. Is there a place to eat lunch on-site?

Sci-Tech does not have an indoor eating area. However, we encourage outdoor picnic style lunches at the field alongside our building or the nearby Frisco Commons Park (less than 10 minutes away)

3. Will the students have a chance to shop during the field trip?

Yes! Students are able to purchase items directly from our on-site Explore Store (average price \$2-10).

4. Will a field trip to Sci-Tech align with current science TEKS?

Absolutely! All K-6 discovery programs are aligned to grade level science TEKS. In addition, a trip to the museum allows students to experience many exhibits that correlate to various TEKS.

5. Does Sci-Tech offer options in addition to a visit to museum?

Yes! School-wide assemblies are available as well as many different classroom Discovery Programs led by Sci-Tech facilitators. Please see the "At Your Campus" section of this guide for more information.

6. How do I book a field trip, assembly, or discovery program?

Act now! Call the Manager of Guest Services (972) 546-3050 x106 or email bookit@scitechdiscovery.org to make reservations or if you have additional questions.



Programs at YOUR SITE

ASSEMBLIES

WOW SHOW TEKS

2ND GRADE:

1.A, 2.ABC, 3.B, 4.A, 5.ABC

3RD GRADE:

1.A, 2.ABC, 3.A, 4. ABC,
5.ABC, 6.A

4TH GRADE:

1.A, 2.ABC, 3.A, 4.AB, 5.AB,
6.A

5TH GRADE:

1.A, 2.AB, 3.A, 4.AB, 5.AB, 6.A

6TH GRADE: 1.A, 2.AB, 3.A,

4.AB

7TH GRADE:

1.A, 2.AB, 3.A, 4.AB

WOW SHOW

An on-site assembly for grades K-6th

Whoosh, it's getting windy in here! Hold onto your seats for this explosively entertaining look at matter, physical and chemical changes, and the effects of extreme temperatures. It'll be a blast!

This engaging presentation starts by exploring the wonders of science with some fun balloon tricks. Next, we'll have some fun below zero with liquid nitrogen, freezing flowers, shrinking balloons, and shattering racquetballs. All of this chaos will help us explain how properties of matter changes as temperature goes up or down. Hold onto your seats while we demonstrate Bernoulli's Principle by sending toilet paper soaring through the air with a leaf blower. We're done with the wind, but here comes the rain—we'll explore what happens when you shake a can of soda and perform the famous Mentos and Diet Coke experience with borax, salt, and Mentos, while explaining the principle behind the explosion.

TIME: 45-minute show

NUMBER OF PARTICIPANTS: Up to a full assembly (300 max)

MATERIALS YOU PROVIDE: Table, trashcan and electricity

STARRY NIGHT TEKS

K-1ST GRADE:

6.CD 8.ABC

2ND GRADE:

6.CD, 8.D

3RD GRADE:

6.C, 8 BCD

4TH GRADE:

8.C

5TH GRADE:

8.CD

6TH GRADE:

11.ABC

7TH GRADE:

9..AB

STARRY NIGHT-STAR LAB

An on-site or off-site program including Sci-Tech's portable planetarium for grades K-7, targeted for grades 4-7

Starry Night is a custom-tailored astronomy experience, which incorporates the museum's portable planetarium, STAR LAB. During this program, students will get a chance to see how the sun, moon and earth rotate, view sunspots, solar flares, filaments and prominences, and learn how to use a star finder. Through the use of the Starry Night software we will be able to showcase images from NASA and clues up views of constellations.

The program includes hands-on activities covering topics such as the sun, the moon, rotation of the planets, and night sky. We use an inquiry-based approach for this program, and it is designed to the individual needs of each class. Immersive learning includes utilizing a solar telescope, sun earth and moon orbiter, Starry Night software, and STAR LAB portable planetarium.

TIME: 45-minute session

NUMBER OF PARTICIPANTS: Max 25 students per session

MATERIALS YOU PROVIDE: large open space: minimum of 12ft X12ft



Programs at YOUR SITE

ASSEMBLIES

PLANES, TRAINS, AUTOMOBILES TEKS

TEKS

3.6.ABC, 4.6.AD,
5.6.AD, 6.8.ABE,
7.7.A, 8.6.ABC
IPC 112.38
4.ABCDE

Planes, Trains and Automobiles

An on-site assembly for grades 3-10

Today, we can order anything from anywhere and have it in days. Without simple machines this would not be possible. Watch how ropes and pulleys, wheels and axles, levers and ramps enable us to work easily and quickly. We'll even test a rocket with cargo for the Moon. Audience participation will be required for our on-stage shipping operation to run.

TIME: 45-minute session

NUMBER OF PARTICIPANTS: Up to a full assembly (300 max)

MATERIALS YOU PROVIDE: Program requires two 6-8 foot tables for props. It's better to be done in a room with high ceilings.

Wild Weather

TEKS K.8.AC,
1.8.ABD, 2.8C, 3.8B,
4.5.B, 5.6.C, 5.8.AB,
7.8.A, 8.10.AC

Wild Weather

An on-site assembly for grades 4-8

What happens in a thunderstorm, and why are they so dangerous? We'll make rainclouds and hail, test the power of air pressure, and create our own lightning. After demonstrating the forces in a funnel cloud, we'll even find a rainbow to brighten the sky.

This program does not cover all the basic types of weather. It does not cover the instruments used to measure weather such as thermometers and barometers or weather forecasting and predicting.

Audience volunteers are requested.

TIME: 45-minute session

NUMBER OF PARTICIPANTS: Up to a full assembly (300 max)

MATERIALS YOU PROVIDE: Program requires two 6-8 foot tables for props, access to electrical outlets, and access to water. It's better to be done in a room with high ceilings. It is best if the room can be somewhat darkened by closing window shades. The program uses dry ice which is frozen carbon dioxide.



Programs at YOUR SITE

ASSEMBLIES

SCIENCE MATTERS TEKS

TEKS K.5.AB,
1.5AB, 2.5.ABC,
3.5.ABCD, 4.5.ABC

Science Matters

An on-site assembly for grades K-4

Thrill to spectacular chemistry experiments that explore the states of matter, their properties, and what happen with heat or cold. Solids, liquids and gasses will expand and contract, change states, start color-changing reactions and ignite. This assembly focuses on the movement of molecules that make a substance a solid, liquid, or gas. Heating and cooling are used to change states of matter. Indicators are used to show types of substances are present. Audience volunteers are requested.

TIME: 45-minute session

NUMBER OF PARTICIPANTS: Up to a full assembly (300 max)

MATERIALS YOU PROVIDE: Program requires two 6-8 foot tables for props, access to electrical outlets, and access to water. It's better to be done in a room with high ceilings. The program uses liquid nitrogen and a small butane torch. Small balloons are used in two demonstrations.

CHAIN REACTIONS TEKS

TEKS 5.5.ACD,
6.5.AD, 7.6A, 8.5E
Chemistry 112.35:
4.ACD, 10.ABFH,
11.AB

Chain Reactions

An on-site assembly for grades 5-12

Liquids will glow and ooze, materials ignite, and gasses explode as we demonstrate the many types of chemicals reactions. Learn that when simple substances are combined, there can be big changes. This program uses real laboratory chemicals and some of the experiments should not be done without adult supervision. The program covers acid-base reactions, changes in states of matter, exothermic reactions, indicators, substitution reactions, polymers, and reactions that create gasses. Museum staff will use proper safety procedures when handling chemicals and small flames.

TIME: 45-minute session

NUMBER OF PARTICIPANTS: Up to a full assembly (300 max)

MATERIALS YOU PROVIDE: Program requires two 6-8 foot tables for props, access to electrical outlets, and access to water. It's better to be done in a room with high ceilings. The program uses dry ice, a small butane torch, and tiny candle flames.

ASSEMBLIES GENERAL INFORMATION

TIME: 45-minute session

PARTICIPANTS: Max 300 students per session (except Eye on the Sky)

COST: \$325 (additional fee for out of area travel may be added)

See each individual program for TEK information.

To book a DISCOVERY PROGRAM, call the Manager of Guest Services at (972) 546-3050 x106 or email bookit@scitechdiscovery.org



Programs at YOUR SITE

DISCOVERY PROGRAMS AT A GLANCE

Discovery Programs are held on your campus and are facilitated by Sci-Tech staff. All programs include interactive learning for students and are aligned to setae standards.

THEME	PRE-K	K	1ST	2ND	3RD	4TH	5TH	6TH
DINO DETECTIVES	👉	👉	👉	👉				
FLOWER FESTIVAL	👉	👉	👉	👉				
OUR LITTLE LAB	👉	👉	👉	👉				
EYE ON THE SKY, JR.*	👉	👉	👉	👉				
BLOWN AWAY		👉	👉	👉	👉	👉	👉	
SCIENCE SLEUTHS			👉	👉	👉	👉	👉	
EYE IN THE SKY *					👉	👉	👉	👉
ANATOMY ATTACK! COW EYE						👉	👉	👉
ANATOMY ATTACK! PIG HEART						👉	👉	👉
ANATOMY ATTACK! SQUID						👉	👉	👉

DISCOVERY PROGRAM GENERAL INFORMATION

TIME: 45-minute session

PARTICIPANTS: Max 25 students per session

COST: \$160 for first program, \$110 for each additional program

- Fees may be added for travel or Anatomy Attack specimen
- Additional programs must be same theme and must occur on the same day
- *1st session \$325 set up fee/materials needed: large space and electricity

See each individual program for TEK information.

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Discovery Programs

Pre-KINDERGARTEN - 2nd Grade

ALL PRE-KINDERGARTEN THROUGH 2ND GRADE PROGRAMS

MEET THESE TEKS:

GRADES K-2: 1.AB, 2.AB, 3.BC, 4.AB

DINO DETECTIVE TEKS

ADDITIONAL TEKS

KINDERGARTEN:

5.A, K.10.A,

1ST GRADE:

5.A, 10.A

2ND GRADE:

5.A, 10.A

FLOWER FESTIVAL

TEKS

ADDITIONAL TEKS

KINDERGARTEN:

5.A, 9.AB, 10.ABCD

1ST GRADE:

5.A, 8.CD, 9.AC, 10B

2ND GRADE:

5.A, 9.ABC, 10.B

OUR LITTLE LAB

TEKS

ADDITIONAL TEKS

KINDERGARTEN:

5.AB, 6.A

1ST GRADE:

5.AB, 6.A

2ND GRADE:

5.ABCD, 6.A

EYE ON THE SKY, JR. TEKS

ADDITIONAL TEKS

KINDERGARTEN:

6.CD, 8.BC

1ST GRADE:

6.CD, 8.BC

2ND GRADE:

6.CD, 8.B

Dino Detectives

Follow the clues to crack the case of prehistoric proportions! Learn about fossils, classification and the scientific method in the fun-filled mystery that's sure to have everyone asking "Who DINO dunnit?"

Flower Festival

Flowers are PRETTY awesome when science is involved! Students will dissect a flower's parts, learn about the role of wind in spreading seeds and create their own growing take-away.

Our Little Lab

Your youngest learners become mini 'mad scientists' as we practice lab safety, use basic experiment tools and create chemical reactions that are sure to amaze!

EYE ON THE SKY JR.*

Science meets stories as we explore the life-cycle of stars and create constellation collages. Little astronomers get to climb into our inflatable STAR LAB for an immersive experience they'll always remember!

TIME: 45-minute session

PARTICIPANTS: Max 25 students per session

COST: \$160 for first program, \$110 for each additional program

- Fees may be added for travel or Anatomy Attack specimen
- Additional programs must be same theme and must occur on the same day
- *1st session \$325 set up fee/materials needed: large space and electricity

See each individual program for TEK information.

To book a **DISCOVERY PROGRAM**, call or email the Manager of Guest Services at (972) 546-3050 x106/ bookit@scitechdiscovery.org



Discovery Programs

KINDERGARTEN - 5TH Grade

ALL KINDERGARTEN THROUGH 6th GRADE PROGRAMS

MEET THESE TEKS:

GRADES K-2: 1.AB, 2.AB, 3.BC, 4.AB

GRADES 3-6: 1.A, 2.AB, 3.A, 4.A

BLOWN AWAY TEKS

ADDITIONAL TEKS

KINDERGARTEN:

8.ABC

1ST GRADE:

5.B, 8.ABD

2ND GRADE:

8.ABC

3RD GRADE:

8.AB

4TH GRADE:

8.AB

5TH GRADE:

8.AB

SCIENCE SLEUTHS TEKS

ADDITIONAL TEKS:

2ND GRADE:

2.CDE, 3.A

3RD GRADE:

2.CD, 3.D

4TH GRADE:

2.CD, 3.D

5TH GRADE:

2.CDE, 3.D

EYE ON THE SKY TEKS

ADDITIONAL TEKS

3RD GRADE:

8.BCD

4TH GRADE:

8.C

5TH GRADE:

8.CD

6TH GRADE:

11.ABC

Blown Away-Kindergarten – 5th grade

Delve into meteorology and the ways we predict weather's constant changes. Students will "become a water molecule" travel through weather cycle and use a Van de Graff generator to demonstrate the phenomenon of lightning.

Science sleuths-2ND - 5TH grade

Your students—each a budding forensic scientist is on the case to solve the mystery of Sci-Tech's missing snake! Collaborating in teams, they must work together to explain clues, utilize forensic tools and combine numerous science in an interactive, real-world experience.

Eye on the Sky*-3RD - 6TH grade

Like a spaceship, our inflatable planetarium carries your students' imaginations through the solar systems, astronomy experience they'll never forget!

TIME: 45-minute session

PARTICIPANTS: Max 25 students per session

COST: \$160 for first program, \$110 for each additional program

- Fees may be added for travel or Anatomy Attack specimen
- Additional programs must be same theme and must occur on the same day
- *1st session \$325 set up fee/materials needed: large space and electricity

See each individual program for TEK information.

To book a **DISCOVERY PROGRAM**, call or email the Manager of Guest Services at (972) 546-3050 x106/ bookit@scitechdiscovery.org



Discovery Programs

4TH to 6TH Grade

**ALL 4TH GRADE THROUGH 6TH GRADE TEKS:
GRADES 4-6: 4.A**

ANATOMY ATTACK

The campus may choose the station size at the time of booking (recommended 1-4 students).

SPECIMEN COSTS (PER STATION)

Eye \$7
Heart \$10
Squid \$14

Anatomy Attack: Cow Eyeball-Grades 4TH - 6TH

Our eyes are our windows to the world. These organs take in reflected light and make sense of our environments via form, color and movement. Students will work in teams to dissect a cow eyeball, learn about its complex parts and compare/contrast its adaptations to those in a human.

Anatomy Attack: Pig Hearts-Grades 4TH - 6TH

The heart, in many ways, is the very center of life. During this hands-on dissection lab, students will work together to take apart a pig's heart.

Groups will explore the similarities (in structure and processes) between a pig and human heart while gaining a better understanding of biology along the way.

Anatomy Attack: Squid-Grades 4TH - 6TH

Delve into a hands-on eco-exploration of a squid's anatomy. Along the way, students will gain a better understanding of key biology concepts such as animal classification, adaptations and dissection techniques.

TIME: 45-minute session

PARTICIPANTS: Max 25 students per session

COST: \$160 for first program, \$110 for each additional program

- Fees may be added for travel or Anatomy Attack specimen
- Additional programs must be same theme and must occur on the same day
- *1st session \$325 set up fee/materials needed: large space and electricity

See each individual program for TEK information.

To book a **DISCOVERY PROGRAM**, call or email the Manager of Guest Services at (972) 546-3050 x106/ bookit@scitechdiscovery.org



Additional Programs

Summer camps

Sci-Tech offers nine weeks of summer camp for campers in PreK through sixth grade. All three age groups will explore each week's theme through interactive activities and experiments. While PreK/Kindergarten campers will focus on learning fundamental STEM principles to create a solid foundation of knowledge, first through third (1st through 3rd) and fourth through sixth (4th through 6th) will explore increasingly more advanced scientific concepts and materials throughout the week. See mindstretchingfun.org for specific themes and dates available.

TIMES:

PRE-KINDERGARTEN/KINDERGARTEN: 9AM-12PM

1ST GRADE THROUGH 3RD GRADE: 9AM-4PM

4TH GRADE THROUGH 6TH GRADE: 9AM-4PM

1ST GRADE THROUGH 6TH GRADE ONLY:

OPTIONAL EXTENDED CARE OPTIONS FOR EARLY DROP-OFF AND/OR LATE PICK-UP ARE AVAILABLE AT AN EXTRA FEE.

School Year One Day Camps

Sci-Tech will offer daily camps on the following days while school is out for our school age students. Each camp will offer new and "Mind Stretching Fun" activities! For grades 1st – 6th. Camp begins at 9am and ends at 4pm. See mindstretchingfun.org for specific themes and dates available.

November 21, 22, 23

December 19, 20, 21, 22, 23, 26, 27, 28, 29 and 30

January 16

February 20

March 6, 7, 8, 9 10

Scouting Programs

Sci-Tech Discovery Center would love to have your Girl Scout troop visit our museum and earn a badge/patch at the same time. Scouting sessions can be hosted after school or on weekends, pending availability. Admission to the museum is included with the scout participation fee and one adult per pack is offered.

For cost and current badge workshops, please www.mindstretchingfun.org/scouting-programs or call (972) 546-3050 x106.

Preschool Programs at Sci-Tech

Story Time ages 3 - 5

Story Time is a pre-school story-time made just for little scientists. Young learners will enjoy stories, songs and hands-on activities geared towards "Mind Stretching Fun".

TIMES: Fridays: 10:30AM

COST: FREE with paid admission

Check our website frequently for exciting new programs and special upcoming events at www.mindstretchingfun.org For additional questions regarding any program please contact the Manager of Guest Services at (972)-546-3050 x106 or bookit@scitechdiscovery.org