

CURIOUS MUSEUM

The only East Texas hands-on STEAM learning facility

Note from the director

Curious is an experience

Curious is a hands-on STEAM museum that promotes classroom content engagement, learning and higher level thinking. Curious is based on the famous San Francisco science/arts museum, the Exploratorium, and collaborates with a number of other nationally-known museums to bring fun and cool experiences to all visitors.

Curious gives East Texas students fun and engaging hands-on opportunities to engage, question, explore, and learn. It integrates the sciences and arts in exhibits and in field trips to promote important creative thinking skills that stimulate mandated content engagement and learning.

Developed by educators for educators

Since Curious is also a school adjunct learning site, its foundational partner is Palestine Independent School District. Other school districts are also represented on the team of educators that develop and oversee Curious exhibits, field trips, and other programming.

Based on the latest research

Studies show that students learn and retain information more effectively when they process information across disciplines to solve problems. All of Curious' school-based programs are based on the latest research in mandated content engagement, learning, and retention.

To promote your students' content engagement, learning and higher level thinking, join us to be.....**CURIOUS!**

"The important thing is not to stop questioning. Curiosity has its own reason for existing."

- Albert Einstein

Lucinda Presley



Hands-on learning

In This Packet

- Directors' Welcome
- Exhibit TEKS Content
- Grade Level Classroom Experience
- Exhibit Information
- Field Trip Information



TVCC Science Club at Curious Museum

Exhibit TEKS-based Content

Forces/Motion

Balancing Stick - K, 1, 2, 3, 4, 5, 6, 7, 8
 Bernouli Blower - K, 1, 2, 3, 4, 5, 6, 7, 8, HS
 Bouncing Ball - K, 1, 2, 3, 4, 5, 7, 8, HS
 Keva Building - K, 1, 2, 3, 4, 5, 6, 7, 8, HS
 Wind Tube - K, 1, 2, 3, 4, 5, 6, 7, 8, HS
 Marble Runs - K, 1, 2, 3, 4, 5, 6, 7, 8, HS

Electricity/Magnetism

Circuit Workbench - 4, 5, HS
 Magnetic Sculpture - K, 2, 4, 5
 Pedal Generator - K, 1, 2, 3, 4, 5, 6, 7, 8, HS

Light and Color

Bubble Screen - K, 1, 2, 3, 4, 5, HS
 Colored Shadows - K, 1, 2, 3, 4, 5, 6, HS
 Human Kaleidoscope - K, 1, 2, 3, 4, 5, HS
 Light Island - K, 1, 2, 3, 4, 5, 6, HS

Life

Garden of Smells - K, 1, 2, 3, 4, 5, 6, 7, HS
 Giant Microscope - K, 1, 2, 3, 4, 5, 6, 7, 8, HS

Earth and Beyond

Augmented Reality Sand Box - 1, 2, 3, 4, 5, 7, 8, HS
 Solar System - K, 1, 2, 3, 5, 6, 7, 8, HS
 Earth, Sun, and Moon - K, 1, 2, 3, 5, 6, 8

Geometry

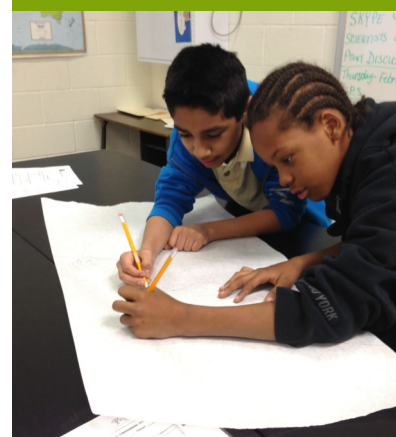
Nature's Geometry - K, 1, 2, 3, 4, 5, 6, 7, 8
 Playing with Geometry - K, 1, 2, 3, 4, 5, 6, 7, 8
 Building with Geometry - K, 1, 2, 3, 4, 5, 6, 7, 8

Exhibits

The Curious Museum is designed with schools and grade-level TEKS in mind. Each exhibit has specific science or math TEKS that it meets for a number of grade levels. The categories of TEKS covered in the museum exhibits are: forces and motion, electricity and magnetism, light and color, Earth and space, changes in Earth land-forms, chemistry of smell, and geometry.

Classroom

Each of the classroom activities is designed to reinforce the exhibits' TEKS-based science or math learning. These activities are integrated with art thinking skills in order to promote standards-based content engagement, higher level thinking, and, ultimately, retention. Teachers receive pre-visit preparation and post-visit activity ideas to reinforce the museum's TEKS-based learning and thinking in the classroom.



Be Curious!

Classroom Experience

1st – 2nd grades:

Physical Properties and Picasso: Students learn the connections between physical properties of matter and art making by famous artists such as Picasso. Grade-level TEKS focus includes: 1st grade - size, mass, color, texture, shapes; 2nd grade, previously mentioned physical properties, in addition to position, sliding, rolling, spinning

TEKS: 1.2A, B, C, D, E; 1.4A, B; 1.5A; 2.2A, B, C, D, E; 2.5A, 2.6C, D

3rd grade:

Adaptation, Structure, and Function: Students learn the connections between environment, adaptation, structure, and function. They use art-making materials to design their own animal that would survive in a chosen environment.

TEKS: 3.2 B, D; 3.10A

3rd - 5th grades:

Light Energy and Adaptation: Students learn the connections between light energy and its effect on animal adaptation. They use art making materials to better understand light energy and then apply that knowledge to animals' structure and function in their camouflage traits.

TEKS: 3.2A, C, D, F; 3.3D; 3.6A, 3.10A; 4.2A, C, D, F; 4.3D; 4.6A; 4.10A; 5.2A, C, D, F; 5.3D; 5.6A; 5.10A

6th grade:

Gravity, and Solar System Bodies: Students learn the connections between gravity and solar system bodies such as the Sun, planets, meteors, asteroids, and comets. They also learn the differences in physical properties, locations, and movements of these solar system components through design activities.

TEKS: 6.2A, C, E; 6.11A, B, C

TEKS Content

In addition to visiting the museum exhibits, students can extend their learning through Curious classroom experiences.

In all the classroom experiences, students use hands-on scientific investigations, vocabulary, and reasoning, in addition to art thinking and art making, to better understand, learn, and retain grade-level science TEKS. Each classroom experience is directly related to exhibits on the museum floor, which also are TEKS-based. Teachers are given pre-visit preparation and post-visit follow up activities to reinforce this learning in their classrooms



Be Curious!

Classroom Experience *(Cont.)*

7th grade:

Forces/Motion and Life Science: Students learn the connections between forces/motion, phototropism, and geotropism. Students take their understanding of forces and motion that they have gained in the museum's Marble Run exhibit into creating 3D sculptures that demonstrate how organisms respond to stimuli through phototropism and geotropism.

TEKS: 7.1A, B; 7.7A, B, C; 7.13A

8th grade:

Forces/Motion and Electromagnetic Spectrum: In the exhibit area, students conduct hands-on investigations of Newton's laws and of topographical maps. In the classroom, they investigate connections between the electromagnetic spectrum, light waves, star classification, and visual phenomena. Their art making tests the impact of various light waves on the human eye. They tie this phenomenon to their investigation of topographical maps.

TEKS: 8.1A, B; 8.2A, B, C; D; E; 8.3B, C 8.6A, B, C; 8.7A, B; 8.8A, B, C; 8.9C; 8.11A

High School Physics:

Waves: Students learn the characteristics of longitudinal and transverse waves and apply this knowledge to the electromagnetic spectrum and sound, to how various waves travel through different types of matter and to how different species react to these waves. Students also apply this knowledge to their art and music making.

TEKS: 2E, F, J, K; 7A, B, C, D, E



Be Curious! Exhibits

Many of the exhibits have related images by famous artists that tie the science and the art thinking.

Forces and Motion

Keva Building

Special wooden blocks give students opportunities to build a vast array of intriguing structures and patterns.

Wind Tube

Sponsored by Employees of Ben E. Keith

Students can craft sculptures and other objects from paper, plastic, and other materials and then test them to see what flies.

Bernouli Blower

Sponsored by Employees of Ben E. Keith

Small objects float above two movable hoses blowing air. Students explore of how this happens to better understand aerodynamics.

Balancing Stick

Students try balancing a wooden dowel with a special weight on it on their hand. Where should the weight be? How does changing the weight's placement change the behavior of the stick?

Marble Machines Room

This area promotes open-ended exploration and tinkering, where students use a wide variety of materials in a broad space to make a sphere move down a ramp creatively at the slowest speed possible.

Electricity and Magnetism

Circuit Workbench

In this exhibit, students immerse in an open-ended exploration of circuits at a long workbench. They can create and test different types of circuits and explore a variety of ways to create light, motion, sound, and other circuit-driven phenomena.

Magnetic Sculpture

Sponsored by Prosperity Bank

Students create a sculpture using magnets and metal objects. They explore magnetism, mass, force/motion, and gravity.

Pedal Generator

Bicycle on Loan from Palestine Saw and Lawn

In this dramatic demonstration of how much motion it takes to generate electricity, students ride a bike. The pedals on this bike, in turn, generate electricity, which the students can experience on a display.

Light and Color

Colored Shadows

Sponsored by Braly Builders Supply

How do colors in light mix differently than colors in paint? Can you create a light painting on a wall? Students explore these and other fun questions about light and color by making their own colored shadows on a wall.

Bubble Screen

Sponsored by Palestine Junior Service League

Everyone is intrigued by bubbles....their shapes, their incredibly thin layers, their beautiful colors. Students will explore bubbles in a different way in this exhibit as they raise a screen of bubble film and watch the interplay of forces, viscosity, light, and color.

Light Island

How does light reflect and refract? At this exhibit, students experiment with optics and the effects of mirrors, lenses, prisms, and colors.

Human Kaleidoscope

What's it like to see yourself reflected hundreds of times – a crowd made up of only your image? Students duck into this human-sized kaleidoscope and watch their reflected images stretch into the distance.

"I have no special talent.

*I am only passionately
curious."*

- Albert Einstein

Exhibit Experience *(cont.)*

Life

Garden of Smells

Sponsored by Atmos Energy

Did you know that your nose is a chemistry laboratory? This exhibit helps students explore ways that chemistry and their noses are related.

Giant Microscope

Sponsored and Built by Hugh Summers,
Timothy Triplett, and Jason Watts

Students can view the micro-world and organisms moving around in it magnified 100 times on a 12" screen.

Earth and Beyond

Augmented Reality Sandbox

Sponsored and Built by Hugh Summers,
Elaine Triplett, Timothy Triplett, and
Jason Watts

The future is here! Students experience 3D visualization of changing topography in a sandbox where topographical maps are projected onto landforms created in the sand. The maps change as the landforms are altered by students' moving the sand.

Earth, Moon, Sun, and Planets

Sponsored by Oncor

How is the solar system arranged and how do the Sun, Earth, and Earth's moon relate to each other? Students explore these questions and figure out real distances between the Sun, Earth, and planets in a hands-on activity.

Geometry

Nature's Geometry

Nature is full of geometric patterns. From honeycombs to nautilus shells to pine cones, nature offers intriguing visual treats. This display lets students see how geometrically-oriented nature actually is.

Playing with Geometry

Sponsored by Texas Farm Bureau Insurance

How many different geometric shapes can you create? Students are intrigued by the use of a variety of multi-colored polygonal tiles that they can use to construct their own patterns. This will relate to the natural forms in Nature's Geometry.

Building with Geometry

How can you solve 3D geometric problems?

In this exhibit, students are given a variety of problems involving geometry and are invited to solve them using geometric shapes that can fit onto each other. This will relate to the natural forms in Nature's Geometry.

Designed and Led by Teachers

The exhibits and the museum design have been directed by classroom teachers. The pre- and post-visit information and the classroom experiences have been designed in collaboration with teachers. All of this is intended to give your students the maximum in science or math standards-based content that is integrated with fun, hands-on, open-ended exploration.

CONTACT US TODAY!

Curious Museum
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Museum Hours:
Saturday 10 a.m. - 3 p.m.
Monday - Friday: field
trips by appointment

Field Trips

Exhibit Only \$4/student
Exhibit & Classroom Activity
\$6/student

