

GYSTC: 2011 Year Program Outlook

This fall, we are excited to present our new standardized In-Class Field Trips/Embedded Professional Development and Family Science Nights, as well as online classes beginning October 4th, 2010. Please visit our website www.gystc.org or you can call us at 770-794-7592.

Sign me up!!!!

Ever wanted to learn how to "Make Fake Snot?" or what causes "A Bad Hair Day?"

Lucky for you, GYSTC will be providing the opportunity to do so! Both Family Science Nights and In-Class Field Trips are completely interactive and hands-on and certain to answer science questions from the most inquisitive minds.

Registration opens October 4th at www.gystc.org or you can call us at 770-794-7592.

GYSTC Program Offerings for 2010-2011

GYSTC Elementary Family Science Night/Day

Family Science Nights are events taking place at the schools and involving the active participation of students, parents and site-based teachers. Students and their parents (or guardians) are involved in hands-on science activities designed to teach specific curricular principles that have been integrated in the required learning objectives. Students and parents work in teams in order to prepare each student for the way in which science is practiced as a profession.

Kindergarten	Sink or Float	SKP1.b.
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Classify objects according to their physical attributes – buoyancy.

Kindergarten	Disks Going the Distance	SKP2.b.
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Investigates different types of motion. Push, pull, and roll common objects and describe motions.

1st Grade	Magnetic Attraction	S1P2.a.b.c.
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Identify, investigate and demonstrate objects that are magnetic and the effects of magnets on other magnets and other objects.

1st Grade	Shadow Makers	S1P1.b.
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Investigate and explore the behaviors of light and sound.

2nd Grade	Energy on the Move	S2P2.a.b.
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Identify the properties, movement and sources of energy and how the energy is used.

2nd Grade	Life Cycle of a Frog	A2L1.a.
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Investigate the development of tadpoles as they develop into adult frogs and introduce the concept of metamorphosis.

3rd Grade	What's the Attraction?	S3P2.a.b.
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Identify, investigate and demonstrate objects that are magnetic and the effects of magnets on other magnets and other objects.

3rd Grade	Cleaning-up Oil Spill	S3Lb.
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Investigate and identify problems associated with cleaning up ocean oil spills and the effects of the pollution for humans and the environment.

4th Grade	Bernoulli Ball	S4P3.c.
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Participate in an activity to demonstrate Newton's 1st law of motion and the relationship between the application of a force and the resulting change in the position and motion of an object.

4th Grade	Constellations	S4E1.a.
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Explore star patterns and physical attributes in the night sky.

5th Grade	Kitchen Chemistry	S5P2.c.
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Use common kitchen liquids and materials to explore and explain the difference of the physical and chemical change to chemical reactions.

5th Grade	Bad Hair Day	S5P3.a.
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Investigate and demonstrate the effects of static electricity and how it is created.

GYSTC Middle School Family Science Night/Day

Family Science Nights are events taking place at the schools and involving the active participation of students, parents and site-based teachers. Students and their parents (or guardians) are involved in hands-on science activities designed to teach specific curricular principles that have been integrated in the required learning objectives. Students and parents work in teams in order to prepare each student for the way in which science is practiced as a profession.

6th Grade **Liquid Layers** **S6E5.a.**

Explore and compare the relationship between mass, volume, and density.

6th Grade **Cleaning-up Oil Spill** **S6E6.**

Investigate and identify some of the problems associated with cleaning up ocean oil spills.

6th Grade **Edible Rock Cycle** **S5E5.c.**

Explore and investigate the scientific path that rocks may take during formation.

7th Grade **Classifying Aquatic Quitters** **S7L1.b.**

Identify and observe types of aquatic macro-invertebrates and their sensitivity to water pollution.

7th Grade **Test your Dominant Side** **S7L5.**

The purpose of this activity is to demonstrate how your body and brain work together.

7th Grade **Making Fake Snot** **S7L2.**

Students will make a protein like substance representing a bodily fluid.

8th Grade **Chain Challenge** **S8P3.b.**

It might look like magic, but in this activity students will learn how to use gravity and friction to make a metal ring tie a chain in a knot.

8th Grade **Sound Waves with Palm Pipes** **S8P4.f.**

This activity will provide a constructive example of a longitudinal and a transverse wave where the student can see the shape of a wave and can locate the amplitude, wavelength, trough and crest of a wave.

8th Grade **How are electricity and magnetism related?** **S8P5.c.**

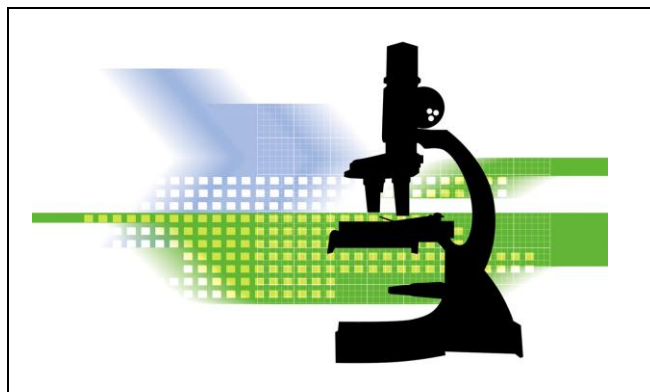
Students will see how a magnet in motion can induce a voltage that leads to an electric current in a conducting coil of wire.

Family Science Nights/Days

\$625 per session

GYSTC members contact your Regional Center to register.

Non-Members, please register via our website www.gystc.org or call 770-794-7592.



In-Class Field Trips/Embedded Professional Development

In-Class Field Trips are designed to motivate and inspire students while modeling hands-on activities for teachers. Programs typically follow the 5-E Model for lesson planning. Ideally GYSTC will use a single day to present the activity to each class of a particular grade-level thus allowing all students and all teachers to participate. Because this is a professional development activity, the classroom teacher is expected to be present and to participate in the activity.

Grade	Course	Class duration	GPS equivalency
Kindergarten	Property of Rocks	(25-30 minutes)	SKE2.a.
<i>Students will explore the physical properties of rocks through the use of observation with hand lenses and balances.</i>			
Kindergarten	Living or Non-Living?	(30-45 minutes)	SKL1.a.
<i>Students will be introduced to the concept of living objects vs. non-living objects and discover what living things require to stay alive.</i>			
Kindergarten	Push or Pull?	(30-45 minutes)	SKP2.b.
<i>Students will investigate ways to change how something is moving (e.g., push, pull).</i>			
1st Grade	Parts of a Plant	(30-40 minutes)	S1L1.c.
<i>Students will investigate plant parts through the use of a class-sized model.</i>			
1st Grade	What Makes Shadows?	(30-40 minutes)	S1P1.b.
<i>Using the book <u>Gregory's Shadow</u> and flashlights, students will investigate how shadows are formed.</i>			
1st Grade	Weather	(30-40 minutes)	S1E1.c.
<i>Using the book <u>Hooray for Summer</u> and <u>Chaucer's First Winter</u> as a foundation, students will correlate what is worn during different types of weather.</i>			
2nd Grade	Trees Change	(40-45 minutes)	S2E3.a.
<i>Students will discover the effects that wildlife and plants can have on trees in their school yard.</i>			
2nd Grade	Who Moved and How?	(40-45 minutes)	S2P3a.b.
<i>Students will discover the effects that pushes and pulls have on changes in speed and direction of objects.</i>			
2nd Grade	Life Cycle of a Frog	(40-45 minutes)	S2L1.a.
<i>Students will become familiar with the development of a frog from an egg to tadpole and ending in an adult frog. Students will learn the concept of life cycle and be introduced to the term metamorphosis.</i>			
3rd Grade	Attractive Magnetism	(40-45 minutes)	S3P2.a.b.
<i>Students will discover the effects magnets can have on objects while learning that magnets attract and repel each other.</i>			
3rd Grade	Rocks and Minerals....How Hard Can This Be?	(40-45 minutes)	S3E1.a.b.c.d.
<i>Using the book <u>Rocks: Hard, Soft, Smooth, Rough</u> as a starting point, students will investigate the properties of rocks using observation and measurement.</i>			
3rd Grade	Habitats of Georgia	(40-45 minutes)	S3L1.a.b.c.
<i>Students will explore the different habitats of Georgia by using map skills and research about each of the areas.</i>			
4th Grade	Star Lab: Constellations	(40-45 minutes)	S4E1.a. /S4E2.
<i>Students will explore the star patterns that compose constellations and learn to identify three of the most common constellations in the northern hemisphere.</i>			
4th Grade	Sound with Palm Pipes	(40-45 minutes)	S4P2.
<i>Learn how to create vibrations that you hear as music. Play music on your own palm! Just pound your chosen pipe into the center of your hand to create an amazing tone.</i>			
4th Grade	Water Cycle	(40-45 minutes)	S4E3.d.
<i>Students will simulate the water cycle in a plastic bag in order to understand the cycle is continuous.</i>			
4th Grade	Adaptive Behavior	(40 – 45 minutes)	S4L2.a.b.
<i>Students will design and create an animal adapted for the year 3000.</i>			

In-Class Field Trips/Embedded Professional Development

In-Class Field Trips are designed to motivate and inspire students while modeling hands-on activities for teachers. Programs typically follow the 5-E Model for lesson planning. Ideally GYSTC will use a single day to present the activity to each class of a particular grade-level thus allowing all students and all teachers to participate. Because this is a professional development activity, the classroom teacher is expected to be present and to participate in the activity.

Grade	Course	Class duration	GPS equivalency
5th Grade	Shocking Electroscopes	(40-45 minutes)	S5P3.
<i>Using household elements, students will construct a device to create static electricity.</i>			
5th Grade	Jelly Belly Classification	(40-45 minutes)	S5L1.a.b.
<i>Through the use of jelly beans, students will be introduced to the systems of classification that we use to determine relationships between organisms.</i>			
5th Grade	Volcanic Action: Destructive or Constructive	(40-45 minutes)	S5E1.a.b.
<i>Students will discuss volcanoes and the importance of volcanoes as a destructive or constructive force. Students will build volcanoes and be able to relate the eruption processes as part of a destructive or constructive force.</i>			
6th Grade	Star Lab: Exploring the Solar System	(40-45 minutes)	S6E1.a.b.c.e.f.
<i>Students will use Star Lab to investigate the structure of our solar system and to learn more about the details of each planet it contains.</i>			
6th Grade	Earth's Plasticity	(40-45 minutes)	S6E5.a.
<i>Students will investigate the density of the Earth's mantle by making an amorphous solid that simulates plasticity. This will lead to a deeper understanding of the structure and composition of the earth.</i>			
6th Grade	Weathering Made Simple	(40-45 minutes)	S6E5.b.c.
<i>Using Jolly Ranchers, students will explore the process of erosion on rocks while weathering is explored using sedimentation tubes.</i>			
7th Grade	Natural Selection	(50-60 minutes)	S7L5.b.
<i>Students will hunt for M&M's[®] and bean prey in a series of different habitats and with a variety of tools to discover which organisms can adapt and have a better chance of survival. Students will model natural selection by using various utensils to "capture food".</i>			
7th Grade	Genes, Genes, Genes!	(50-60 minutes)	S7L3.a.
<i>Students will make a chart and collect data identifying various traits among their classmates. Students will understand that they share many traits. In this activity you will learn principles of probability and how they can be used to predict inheritance of traits based on Mendel's laws.</i>			
7th Grade	Cells: Plant or Animal	(50-60 minutes)	S7L2.a.b.
<i>Students will prepare slides from the cheek to view animal cells and from an onion skin to view plant cells. A comparison of the two will be made with the each student preparing a drawing and a listing the function of each of the parts.</i>			
8th Grade	Tracks of a Thief	(50-60 minutes)	S8CS3.a.b.c.e.; S8CS4.b.; S8CS6.b.c.
<i>Seeking to solve a crime, students will examine clues and using their measurement and computation skills, if there is a relationship between the length of a person's stride and his or her height. Their data will help them identify the thief.</i>			
8th Grade	Motion and Speed	(50-60 minutes)	S8P3.a.
<i>Through the use of observational activities, students will begin to distinguish between distance and displacement. Additional activities will lead students to explain the difference between speed and velocity.</i>			
8th Grade	Music in the Palm of Your Hand	(50-60 minutes)	S8P4.e.f.
<i>Students will create music using palm pipes. An investigative approach is used in determining the correct pitch. Students will determine which pipes are designed to create which musical note through exploration.</i>			

In-Class Field Trips Embedded/Professional Development

\$600 per day. Maximum of five class periods per day

GYSTC members contact your Regional Center to register.

Non-Members, please register via our website www.gystc.org or call 770-794-7592.