NewEdge Academy

Class Catalog

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Elizabeth Johnson's time tested techniques use all of the senses to ignite children's love of learning, affecting deep and lasting memories. Each experiment and demonstration ties in with the concept to illustrate and give students a chance to actually experience how the standards apply.

These classes are designed to be 90 minute classes, lasting one semester or 17 weeks. Many of these classes have been adapted to be 8 or 10 week modules. The ages assigned to each class are merely a guideline. Classes can be tailored to any age group.

Art Around the World: Geography through Art

9-12 years old

Students will explore cultures of the world through the medium of art. For example, we will examine and create frescos while listening to Greek music, learning about the culture, maps, terrain, foods, religions, government history etc. of Greece. We will do profiles and pictograms in Egypt, brush work in Japan, gold leaf in Turkey, mosaic in Arabia, batik in India, and so much more! Students will complete the class with a portfolio of artwork representing cultures from all the corners of the world. There is weekly homework.

$55 material fee.

6-12 students in each age group.

Cooking Around the World: Geography Through Food

9-12 years old

Students will explore cultures of the world through the medium of flavor. For example, we will create falafel while listening to Greek music and learning about the culture, maps, terrain, art, religions, government history etc. of Greece. We will make Ful in Egypt, miso soup in Japan, Curry in India, Kabab in Arabia, Momos in Tibet, and so much more! Students will complete the class with a cookbook representing all the parts of the world. There is weekly homework. Lunch is included!

$55 material fee.

6-12 students in each age group.

Beyond Botany

5-8 years old

Students will learn about the science of plants, not just anatomy, function; soil composition, food and water but also plant lore: healing plants, homeopathy, magical plants, poultices, brews and zombie formulae. They will learn the hidden meaning of flowers, the spirit essence of plants, and how to use them. Students will go on field trips, gathering plants to prepare and cultivate: learning techniques like air layering, rooting in water, and grafting. Students will complete final projects of designing and planting their own planter garden.

$55 material fee.

6-12 students in each age group.

The Wonderful World of Plants

9-12 years old

The science of plants based on professional nursery certification curriculum, taught by a Florida certified nursery professional covering topics like structure and function of plant anatomy, plant cells, plant identification, diagnosis and treatment of common plant diseases, harmful and beneficial insects, ornamental horticulture, hands on garden projects and much much more.

$40 material fee

6-12 students in each age group.

Projects in 5th grade science: from atoms to stars

Ages: 10-12

Perfect for preparing for the California science test, students will learn a wide variety of interesting scientific concepts based on the 5th grade standards. Topics like basic atomic structure, chemical reactions, plant and animal anatomy, systems and mechanisms, the water cycle, weather systems -- causes and effects, our solar system, the scientific method and classification will be explored with lots of hands on projects and activities to make learning fun and help it stick.

$55 material fee.

6-12 students in each age group.

More Projects in 5th grade science: from atoms to stars (second semester -- more new fun!)

Using 5th grade California science text book, students will perform a wide variety of interesting scientific experiments based on the 5th grade standards. Students will be requested to do reading at home during the week to support the concepts from the text to be demonstrated in class. Second semester topics include plant and animal anatomy, systems and mechanisms, the water cycle, weather systems -- causes and effects, our solar system, ecology, the scientific method and classification will be explored with lots of hands on projects and activities to make learning fun and help it stick. Projects like: make a microscope, chart the growth rates of yeast colonies, make an energy reaction, model how a nonvascular plant works, observe and model the effects of melting polar ice caps, create condensation, explore the density of water and displacement calculations, build and aqueduct, observe air pressure, This is a class designed to complete projects

$40 material fee.

Text: Houghton Mifflin California Science , 2007

ISBN 061868619-3

Animals!
Ages: 7-10
Experience the art and science of working with a wide variety of wild and domestic animals, with a professional wild animal trainer and keeper. Using games, model building, play acting, and other interactive methods, we will uncover the mysteries of taxonomy, the sensory systems of different animals, model to foster empathy and perceive differences, delve into animal behavior, habitat needs -- students build the ultimate zoo enclosure for their animal, veterinary care-- listening to heartbeats with real stethoscopes, learning proper vaccination techniques, training and handling techniques through role play, Our final project will be: students select one animal and apply all of the learning in each class to their animal. The result will be a booklet with detailed information on care and handling and scale model of a habitat.
Students will be able to apply their knowledge to pets at home, diagnosing problems, improving habitats, nutrition and training.
$25 material fee.

Flaming Kitchen Chemistry
Ages 11 and up
Prerequisite: basic cooking class and chemistry suggested.
So you think you can cook! You like cooking on the edge and you want to know why stuff works... or doesn't. This is a class for you! Not only will we unravel the capricious protein molecule by subjecting it to different temperatures and humidities-- for example, we will scramble eggs under high heat and form velvety sauces cooking slowly; explore how bubbles in food happen and how to keep them-- make baking powder bubbles in bread, whipped cream and meringues, The maillard reaction, why foods take on that crispy golden coating what it is and how you make it-- making doughnuts, but also, we will explore the chefs most exciting tool, the flame! We will ignite whiskey in steak au poivre vert, rum in bananas Foster and use a torch to create a crust on a creme brule and more. We will have a hands-on exploration of the mysteries of food preparation chemistry. Weekly assignments with notes will be required for each 1 1/2 hour class. At the end of the semester, each student will have a cookbook.
$40 material fee

Science Modules:

Ages 5-8

Monthly modules: *Wild Weather, Geology, Physics, Plant Biology*

Each unit will touch upon the major points in each area focusing on one major aspect per week. We will build models, go on expeditions around the center, perform experiments, play games and look in microscopes. Each module will give students a basic understanding of each topic.

$35 material fee

6-12 students

Second semester modules:

Cells, atoms, stars, niches and biomes

More **Science All Around Us : Monthly Modules:**

Ages 5-8

Monthly modules:

Spring:

- Marine Biology: Kinds of life in the ocean, classification, special adaptations like beaks and blow holes, life at different depths, life cycles and food web, red tides, fishing techniques and ecology
- Sound physics, play with compression waves, slinkies, sound travel, nodes, experiment with making noise, decibel level and hearing, how the ear works.
- Pond science, what makes a pond, visit a pond, make a pond, watch water develop life, what lives in ponds, types of ponds, the jobs ponds do in our environment, gasses produced in ponds
- the water cycle: make a terrarium, model erosion, make a cloud, observe the phases of water, the earth as a closed system,

Each unit will touch upon the major points in each area focusing on one major aspect per week. We will build models, go on expeditions around the center, perform experiments, create interpretive dances, play games and look in microscopes. Each module will give students a basic understanding of each topic.

6-12 students

Chemistry

Ages: high school

This 2 semester class covers the standards for high school chem. The first semester will deal with atomic theory, the second with chemical reactions, examining the nature of atoms and how they interact to form the stuff of our world. We will perform many experiments to learn the principles of each lesson. We will write up experiments using the scientific method. We will blow things up, make things freeze, create colorful flames, make electricity with vegetables. We will examine larger molecular chains by building organic chemicals with gumdrops and toothpicks and create our own polymers – slime! Note taking skills will be developed.

6-12 students

(second semester -- more new fun!)

This 2 semester high school chemistry class. Students read the text at home. The text is: Chemistry Concepts and Applications, Glencoe Science, 2009 (isbn# 978-0-07-880724-4. We assess learning through games, perform labs and projects in class. The first semester will deal with atomic theory, the second with chemical reactions, examining the nature of atoms and how they interact to form the stuff of our world. We will perform many experiments to learn the principles of each lesson, writing them up using the scientific method in class. We will perform activities like:

- determine freezing point and boiling point of substances,
- calculate latent heat of phase change and specific heat of a substance
- create colorful flames and analyze their spectroscopic emissions
- make electrochemical battery cells
- model organic chemicals
- create our own polymers – slime!
- separate water into component gasses
- measure and compare the pH of household chemicals
- analyze and determine the composition of pennies
- make gunpowder
- model radioactive decay
- measure the energy content of food

Note taking skills will be developed. Homework and lab work are mandatory to meet the requirements for high school.

Everyday Chemistry

Ages: 8-11

Explore questions about how things work from a chemical perspective. This is a full course in chemistry covering everything from subatomic structure to bonding, compounds, molecules, modeling, organic, redox reactions, the 6 kinds of chemical reaction etc. This is a hands on, project based course. We will document the class in our notebooks so that each student will end up with a record of learning. We will apply this knowledge to every day situations: How does a water softener work? How does soap clean things? How come Sharpies don't come off clothes? What makes bubbles? We will perform many experiments to learn the principles of each lesson, like: bubbleology to explore surface tension, working with magnets to understand ionic polar bonds, mixing every day chemical to produce endothermic and exothermic chemical reactions, writing-up our experiments using the scientific method. We will blow things up, make things freeze, create colorful flames, make electricity. We will examine what molecules might look like using gumdrops and toothpicks, legos and juggling balls. Note taking skills developed. The final project will be developed by the students.

Astronomy

Rocks Around the Sun first semester

The Universe and Beyond second semester

Ages: 9 – 11

A fun filled romp through the universe, in this class we perform experiments, engage in activities, and design art to understand the cosmos. We learn ways to figure out stellar distance by observing motion of the stars in the sky, how telescopes work by building one. We learn about the composition of stars by looking at the colors in their spectra. Performing experiments we demonstrate Newton's laws, learn about the Doppler effect and how it relates to stellar motion. We learn about the life cycle of stars (nebulae, sizes of stars, main sequence, binary, white dwarfs, neutron, pulsars, black holes, quasars) We build models of galaxies, and our solar system, comets, parabolic shapes and elliptical orbits. We learn about the composition of our solar system and its origin. We examine relativity and build a model of space bent by gravity. What is the future of space? We will make an educated guess.

Projects in Biology (6-8th grade level) **(second semester -- more new fun!)**
This class is project based, designed to deepen the studies the students undertake at home. Students will be required to read and understand the material presented in the text at home. In class, we will assess learning through games, complete projects and experiments, writing them up using the scientific method.
Topics include: classification of life, cells, molecular biology, cellular respiration and other processes, genetics, plant biology, animal diversity, human systems, and ecology.

Activities include
First semester:
- Designing experiments
- Classifying seeds
- Grow fungus
- creating a garden
- making models of cells
- Separating out DNA
- heart and respiration rates of fish relative to temperature
- Dissection: plant, flower, egg
- Model biome, habitat and niche
- making a model of erosion

Second semester:
- Experiment with levers, fulcrums and force
- Blood type reactions
- Saliva analysis
- Model diaphragm
- Artistic representation of circulatory system with string
- Genetics with drosophila
- Model absorption and filtration
- dissection: eyeball, fetal pig
- There will be required lab work at home as well as homework assignments to make sure that learning has occurred to the grade level. It is recommended that you get a student copy of the text book.

The text is Glenco Life Science , 2002 (with National Geographic).
Isbn#0-07-823695-9.

SPOTS & DOTS - MODERN ART EXPLORATION & PROJECTS

Ages: 5 - 11

Art is more than just putting the right color in the right place to make a representation. It is a way of delving into the soul and expressing a part of the human condition. In this class, we explore, through the medium of paint and glue, what colors and images feel like to us. Some classes, we play a wide range of music. Other times we paint inspired by different senses like smell or taste, or with our eyes closed! Incorporating physical movement to loosen up our bodies and our minds, we learn to express what we are feeling in color, line and stroke. Abstract or realistic, we learn the therapeutic value of tapping into our feelings and putting them on canvas. "Maitress" (Elizabeth Johnson) uses her time tested techniques to use all of the senses to ignite children's love of learning to provide deep and lasting experiences. Each experiment and demonstration illustrates standards.

Psych 101: High School Psych intro

age: High School

Learn the basics of the operating system of the human mind, the people who have explored psychology and developed the theories we use today. Apply these tools to develop your own theories of personality, cognitive processes of the human psyche, non verbal communication, psychological disorders-- diagnosis and treatment. We play games, role play and draw diagrams and artwork to elucidate each lesson. Note taking will be required for each 1 1/2 hour class.

French 1

ages 8 and up.

This class is more than just the nuts and bolts of the French language: vocabulary, grammar, and sentence structure, through games, conversation, a French snack. Students also learn about French culture, what French kids do, what is important to people in France. We read aloud from French story books to practice our pronunciation and experience their sense of humor. We listen to popular French music, sing along and understand the words. Note taking skills will be developed. Weekly assignments will be required for each 1 1/2 hour class.

6-12 students

Pleine aire painting

No age limit -- parents welcome too

Find a spot on the grass, plop down and paint what you see. Walk around and see what others are doing. Talk about what you see and give each other ideas. Explore, embolden, and enjoy painting without limits. Practice painting what you see, not what you think you see. Enroll for the semester or come when the spirit moves you. Acrylic or oil on canvas, Bring your own, or materials will be supplied.

Philosophy

Big Questions for Young Minds : Socrates and friends Salon

11 and up

Look at the big questions of life and the human condition by reading the words of Ancient Chinese philosophers, through Greek, Baroque, and modern day philosophers, students learn how to think logically and ask questions about beliefs, ethics, natural law and more. We learn about great philosophers, like Seneca, Kant, Locke, Plutarch, Lao Tzu, and many more, discovering our own theories by asking and discussing our answers to questions about our lives using the tools of debate and logical assessment. Students develop strategies to be on purpose and enjoy every day. We learn the tools of logical assessment to test theories, for example the 3 Cs test: is an argument coherent, complete and correct? We play games, write essays and letters, role play, create art, learn techniques of note taking, and listen to music to illustrate points. Weekly reading assignments with note taking will be requested for each1 1/2 hour class. The book to which we will refer, Philosophy for Dummies will be provided through the material fee.

Some of the activities in class include debate. We practice developing our skills and understanding of philosophical arguments. We write and deliver oratories, using the tools from the reading to substantiate our premise. We use concept mapping to organize tools and vocabulary.

6-12 students.

History of science, the ancients **(second semester -- more new fun!)**
Using Joyce Hakim's The Story Of Science, ISBN # 1-58834-251-4, here is a link for the text, http://www.amazon.com/Story-Science-Aristotle-Leads-Way/dp/1588341607

We will explore the development of scientific thought and accompanying body of knowledge, performing a wide variety of activities, experiments and discussions to experience the learning on a deep and memorable level.
For example, students will learn:
- Identify the constellation depicting the Pythagorean Theorem
- Aristarchus's model of the solar system
- Hero's simple machines
- Recognize the lever in one constellation
- Fibonacci's numbers will lead students to understand the significance of the Nautilus constellation
- Activities will include: creating constellations, making 3 kinds of levers and testing their force, modeling the fibonacci sequence out of graph paper and sugar cubes
- The scientific method

Art through history, the ancients **(second semester -- more new fun!)**
This innovative class is designed to be a cross curriculum reinforcement of the classical study of history of the ancient world. We will follow the general timeline and geography in Story of the World, using an interactive study of the arts of the times, the history of the time and region, and the artifacts that have survived to the modern age. Although this class is meant to augment a study of the history of the time period, it is a stand-alone class in artistic techniques in a historical context. Elizabeth Johnson is an artist with a minor in studio art from Harvard University.

Each class will include discussions and activities on topics like: time period, culture, art forms of the time, like: petroglyphs, frescos, sculpture, silhouettes, etc. For example, our first class is Paleontology and Archaeology. We learn how to excavate artifacts, clean and glue together pot shards to identify the designs, time period and origins. Discuss how to identify potential archeological sites, midden piles, sub cellular evidence to identify diet, hygiene, extrapolation and much more.

Cooking Through History

This innovative class is designed to be a cross curriculum reinforcement of the classical study of history of the world. We will use an interactive study of the cooking of the times, the history of the time and region, and the artifacts that have survived to the modern age. Although this class is meant to augment a study of the history, it is a stand-alone class in culinary techniques in a historical context. Discussing how to identify potential archeological sites, midden piles, sub cellular evidence to identify diet, hygiene, extrapolation and much more we will emulate the diets of different historical times. They the class will prepare raw food like the first nomadic people ate, and learn how to cook over fire in the most primitive ways. We will move through history, each week examining a different era and preparing a dish in the manner of that time.

Cooking in the 50 states **(second semester -- more new fun!)**

Using The United States Cookbook, we will continue our jolly romp around the kitchens of the 50 states, and produce a cookbook of our own. Students will learn about the geography of the states as well as the cultural influences of the people who settled there, studying the recipes, geographical migration of food, and cooking techniques, like: knife skills, sautéing, baking, measuring, poaching etc., taught by a gourmet cook. Each class will include a discussions of topics like: climate, geography, origin of the settlers, culture, etc while students explore the recipes of the state, cook and eat delicious food.

Second semester we will make dishes including peanut soup and peach cobbler from Georgia, cheese fondue from Wisconsin, maple fudge from Vermont and so much more. If there is a special dish from a state you want to visit, just say the word. Maitress takes requests.

This project-based class is perfect for students who have already joined Mrs. Johnson in Cooking Around the World or Flaming Kitchen Chemistry as well as students who are eager to learn how to cook!

Design technology classes:
We Built a Zoo
Beyond Botany: Urban sustainability project
Let the games begin
Game on