Attachment 3: MYGEMS Program Description List

2019-2021

MYGEMS Science Center

HANDS-ON STEM/STEAM ADVENTURES

Science Technology Engineering (Art) Math

"Creating Future Scientists, one test tube at a time."

Look at the selections below and determine which package(s) would best serve your group. If you need more information about any of the lab sessions call MYGEMS at 704-796-1501 and we can assist you with your decision. You will find several packages with a brief description to help you make your choice. **Remember, at the end of any of our programs, each science scholar will receive our free e-book of science experiments from the Two-time award winning Excellence in Teaching College Professor Tabelech "T.K. the Chemist" Shipp!**

All of our programs are safe, hassle free and easy to set up. The maximum number of science scholars per lab session is 25 in order to maximize the hands-on science experience. **Our affordable costs include travel to and from your site, all materials and equipment for each child to participate in the hands-on science adventure. The cost per child is less than a field trip off site!** Each lab session lasts for 40 minutes with a 5-minute set up time in between classes.

SHORT ON TIME? Assemblies are also available for schools that have late dismissal times. We would combine two grade level groups if time permits, with each session lasting for 40 minutes. Two different groups is the maximum for this program. The maximum number of students per assembly session is 50 to ensure a safe, yet educational and fun learning experience. The same program would be done for BOTH GROUPS.

There are more than 30 hands-on science adventures to choose from as your scholars have fun with Professor T.K. the Chemist!

We have Hands-On Science Adventures for any grade levels! All of our programs incorporate DEXTERITY! KINESTHETIC LEARNING! and INTERACTION!

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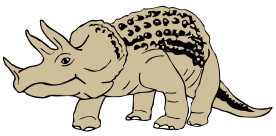
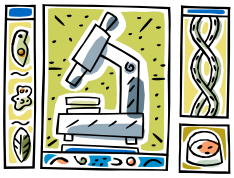
Theirs's NEVER a dull moment! These fast-paced science activities will promote positive self-awareness in learning more about STEM/STEAM education!



Package A: MYGEMS Paleontologist **Interactive and POPULAR for K-2!**

Dig through the dinosaur pit and organize the dinosaurs according to their characteristic traits, play dinosaur bingo, create a dinosaur fossil and more! The science scholars are exploring their dexterity as they dig through the pit and determine Tyrannosaurus Rex from Triceratops!

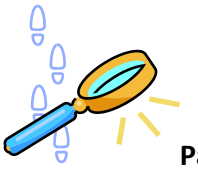


Package B: MYGEMS Jr. Surgeon **GREAT for any grade level!**

Complete and solve a human body case as we examine a cow's heart, a sheep's eyeball and other organs, xrays, fingerprint samples and bones. We will also do an observation test to see who has the best memory as a doctor by examining "specimens". Will the boys or girls reign in the memory test? These fun science activities will have your children surprised and dazzled as we explore the human using hands-on science detective skills!

Package C: MYGEMS Bugs R Us **Interactive and POPULAR for K-2!**

Your science scholars will be able to learn some unusual facts about different bugs and insects. Can you look at an object with compound eyes like a bug? Try on the special glasses to decide! Look at bugs encased in 3-D boxes and various bug body parts underneath the microscope and more!



Package D: MYGEMS Junior CSI I- **Very Popular and Interactive for Grades 3-8!**

If you've seen CSI, then you'll be happy to engage your students with this hands-on science sleuth program. Can you solve a case through blood and bones analysis? How observant are you? Your students will learn about blood types and solve a medical case using blood analysis.

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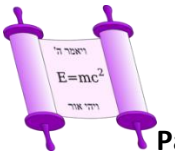
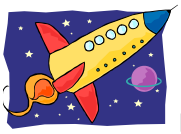
Package E: MYGEMS Junior CSI II- Very Popular and Interactive for Grades 3-8!

If your group has completed Part I, then get ready for Part II as your students complete and solve a case through blood, bones and fingerprinting analysis. Are you observant, use all of your senses to solve a special case. An extra bonus to this program has been added! Produce facial composites of a suspect and complete teeth and foot imprints to determine the identity of a suspect or victim.



Package F: Let's Get Fizzical with Physics! –NEWLY CREATED and VERY INTERACTIVE!!

Explore simple physics reactions and the use of scientific tools by creating spinning objects with one simple trick! The science scholars will be able to make a special fog appear as rings across the room. Experience the Bernoulli effect with a ping pong! Use music to learn the Newton's Laws of Motions!



Package G: MYGEMS Space Explorations Level I- Very Interactive and Popular for K-2!

Get your cameras ready for this space exploration as the space scholars travel through this interactive science program. It will energize the children as they race against the space clock of knowledge. See how the astronauts view the stars through our solar system fun packs! Selected "astronauts" from each group will be able to try on Space Suits and take pictures with them on.

Package H: Designer Genes- Surprising results!

What does DNA look like? Each child will extract DNA from fruit while using the same tools and techniques that forensic scientists use it to solve crimes. This program will allow students to analyze DNA in the same manner that REAL LIFE scientists do. **OPTIONAL:** Students can swab their cheeks and get their OWN DNA!!!

Package I: Optical Illusions with Mathematical Superstars- Mind Boggling! Very Popular!

Can a coin sit on top of water? Try it out! Will your eyes play tricks on you when you complete a series of magical math and science tricks with liquids that turn weird colors? How does Ms. T.K. the Chemist guess magic numbers? Don't step on the PRIME number or else! What happens when you touch the electrical wand? Can you rearrange a set of toothpicks in a triangle without picking them up? Watch some amazing coins become magnetize and form weird shapes. Can magnets move in oil or water? Do coins have magnetic power? Try this and more as we learn the science behind these magical optical illusions.

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Package J: Scientific Bling! Bling! **Nice activity for early fall & spring time!**

What happens when you expose these colorful beads to the sunlight? Can they detect the best sunscreen value for the summer heat? Just how powerful is that bright star? Is it enough to turn nail polish a different color? Make special UV bead jewelry that will determine if your sunscreen is sufficient. Bonus experiment: Make a solar print to keep out of unique objects.

Package K: Rock Stars **Great for Grades 3-8**

For those rock lovers, learn cool facts about them. Can rocks glow in the dark? What is rock candy? Can rocks float on top of water? Indulge in an edible treat as you learn about the rock cycle and how important it is to the environment. Complete a series of rock experiments to explore all of the fascinating things about rocks!

Package L: MYGEMS Science Carnival Fun! **Another TOP & POPULAR Adventure!**

Have you ever wanted to know the science behind those carnival games and how to win them? If you enjoy watching *Minute to Win It!* You will enjoy completing science explorations with a fun carnival theme. Take a scientific journey through traditional carnival games and activities that are science related including egg in the bottle, plasma car racing, optical illusions, cake walk with a scientific twist, and more!

Package M: Fear Factor **Mind Boggling! Very Popular!**

Are you prepared to make yucky, sticky, slimy science experiments? What about making fake snot that does something special in the dark. Can you use your facial muscles to get a cookie in your mouth? Would you like to touch the chemical substances that are made in baby diapers? You will be able to complete several activities that will cause you to squirm including digging through a bowl of unknown items. What are you afraid of? Test your fears with Ms. T.K. the Chemist!

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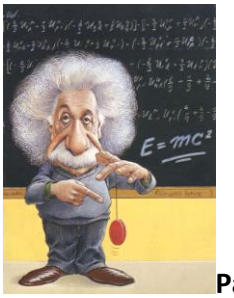
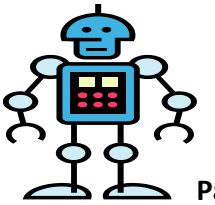


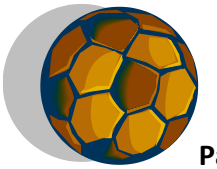
Package N: Wacky Weird Science! OUR TOP & Very Popular and INTERACTIVE adventures!

Watch as your body comes alive with these weird, wacky and unusual scientific expeditions! Would you like to make your hair stand up and look like Einstein with a Van de Graff Generator? Can you make ice melt by staring at the block? Which sphere will float on top of water if they both weigh the same? Which brand of soda will sink or float in water? All of this and more wacky weird science experiments will be performed by the student! All of this and more wacky weird science experiments will be performed by the children!



Package O: MYGEMS Robotic Engineers! Our VERY Interactive & Popular Program

Think like an Engineer! How do engineers use robots for technology, medicine, space rockets or even as teachers? Use your investigative skills and pick up objects with Robotic devices and then carry them to another location all while beating the Engineers clock of time! These fast paced challenges will focus on engineering and designing processes while using math skills to calculate destination points. The young scientists will also be able to create circuits, sound, and electricity with our "Electronic playground".



Package P: Glow in the Dark Poly Sci! Nice experiments to take home!

Welcome to the world of polymer science. Science scholars will be able to learn how polymers are found all around us. From tires to pudding. We will create a unique polymer that will bounce and glow in the dark! Science scholars will take home a packet of invisible ghost crystals with instructions. These crystals can be recycled in plants because they keep plants naturally hydrated.

Package Q: Sol Power! Great for spring and summer camps!

- Watch a cool way to explore how the sun produces solar energy to make a solar car move. The science scholars will also be able to explore how a hydrogen fuel cell car converts hydrogen and gas to electricity and water. They will watch the car move with just water! A special bonus experiment will include either cooking a special sweet treat (Smores) in a solar oven or making solar prints with special solar paper using unique objects.

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Package R: MYGEMS Rocket Science! Blow your scholars AWAY with this ONE!

10, 9, 8, 7, 6, 5, 4, 3, 2, 1, ……Blast off! This is an extension of one of our oldies but goodies Space Exploration Experiments. Students will have the entire time blasting off water and air rockets over 200 ft in the air. This experiment must be done outside with an open space to see the exhilarating effect of the rocket. Who can shoot their rockets the farthest? Which type of rocket produces the highest blast: air or water? You decide! Trajectory, force and motion will be your deciding factors for this one!

Package S: Solar System Explorations (THE STARS!) Level II OUR TOP & Very Popular Program!

This program is guaranteed to BLOW your students mind with a STAR GAZING show! Each student will receive a pair of Solar System glasses and watch the colorful light show of stars! Music will be integrated with this program as the future astronauts explore the names of the galaxies, constellations, famous astronauts and perhaps other "life" forms in the solar system! A dark room is needed for this one!

Package T: Circus Science Explorations – Very Interactive!

How does a cannonball work during the circus? What's the science behind the acrobatic tricks that circus performers do on the thin ropes? Can you get a walk on a bed of nails without getting poked? Can a balloon really scream? Try these and other cool circus experiments to see!

Package U: MYGEMS Chemical Concoctions – OUR TOP & Very Popular Program!

Explore simple chemical reactions and the use of scientific tools by making a special liquid change colors mysteriously right before your eyes. The science scholars will be able to make a special fog appear with colorful magic bubbles and dry ice. Make magic powders do something tricky and more! Can you make 3 salts turn cold, hot or stay at room temperature?

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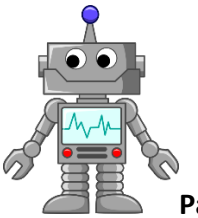

Package V: Code R2-D2? Star Wars and Robots! Level II – Very Interactive!

How do robots move? How do engineers use robots for technology, medicine, space rockets or even as teachers? Use your investigative skills to build and program your robot to follow a black line or react to motion, light, or touch all while beating the Engineers clock of time! These fast paced challenges will focus on engineering and designing processes while using math skills to calculate destination points.

Package W: Who's Who in Science! VERY engaging for inside the GYM

This interactive Powerpoint Presentation with science experiments will pay homage to the scientists since the beginning of times! From Ancient Egypt to Greek scientists, all the way to today! We will discover the important roles women have played in science as well as the evolution of technology and how it affects us daily! Music and excitement will be experienced during this presentation!

Package X: X-ercise with Scientific "Musical" Chairs VERY engaging for outside or in the GYM

This is a GREAT way to **MOVE** and **USE** science at the same time! Professor T.K. the Chemist will explore the use of over 600 muscles in the student's body with the musical chairs concept AND learning science facts! Don't get caught standing or you'll have to explode a science fact! The winners will be SLIMED!!!

Package Y: Fruity Veggie Ice Cream! Shocking results for the kids!

What does Cheetos, cheerios and cherries all have in common other than the letter C? They are all CHEMICALS that we eat! All foods contain chemicals. Become a food detect to analyze the nutrient chemicals found in food. In this activity, you'll use simple tests to determine their presence of fats, sugars and starch in some of your favorite foods! Sample a healthy treat at the end of our experiments! This is a classic EXOTHERMIC reaction where students will learn how to make a healthy alternative to ice cream! We will show students how to make a healthy cool treat using frozen fruits and vegetables in less than 5 minutes! The science behind this experiment involves physical and chemical changes, exothermic reactions and freezing point depressions!

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Package Z: Act like a Patient! Think like a Doctor!

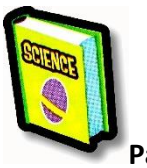
What does a stethoscope, running and CO2 have to do with science? Students will do a series of physical activities and then measure their pulse, breathing and heart rate like a doctor. How many beats per minute does your heart pump BEFORE and AFTER the activity? They will make model lungs and other respiratory devices to try out at home! You'll also be able to discover if you really have acid breath at the end of the activity with scientific devices like the Olympians use! **Bonus: Each child will be able to touch a cow's heart, a sheep's eye and more!**

Package AA: Aggies on the farm

Agricultural scientists have helped shape how we eat, live and work. Students will explore agricultural life by learning about the science, business and technology of plant and animal production along with the environmental and natural resources systems. Students will learn how crops are grown and how they go from the farm to the table over a period of time. Student will be able to identify various produce and animals and learn the importance of them to our livelihood.

Package BB: MYGEMS Poly Sci with Shrinky Dinks

The world of polymers is very expansive, yet when you take those take out plastic containers and create a design on them, you are able to draw pictures that emphasize what a polymer does on a nanoscale. This is a fun and creative experiment that children will be able to use art and science as they explore the world of polymers.



Package CC: CHEM-IS-STORY

We all know that reading is fundamental, however when you incorporate STEM with Reading, the students will be enthralled with Professor T.K. the Chemist storytelling style with several chemistry experiments during the story. There will be a series of stories told while connecting science, math and literature together.

Package DD: Whooo Whooo says the Owl

Nature is very unique with all of the animals you can find in your very own back yard. What happens once we explore an owl pellet? Will we see what it ate? Will there still be food leftover or will we see other parts of the owl's life? The contents of the owl pellet depend on its diet, but these mystery pellets can include the exoskeletons of insects, indigestible plant matter, bones, fur, feathers, bills, claws, and teeth.

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Package EE: Electrical Einstein Sand

Albert Einstein was a mathematical genius and used science and math to understand energy. We will explore how sand has electricity along with playdough. Using real life science probes, we will explore a variety of different sands from the beach and even your school's backyard to see how living organisms survive underground. What does sand, playdough and earthworms have in common? We will explore that on this adventure.

Package FF: Electrical Birthday Card

We all love getting birthday cards that are special. When we receive one that makes noise or light up, that's even better with those STEM connections. Students will be able to create a card that will either make noise or light up. The other options are to create a moving robot or ballerina.

Package GG: Magnetic Tile Art

Students love to place their own art creations on the refrigerator at home for family members to see. What happens when your scholars create one that changes colors every time they touch it! Explore the science and art connections with magnetic tile creations they can take home.

LET US HELP YOU COME UP WITH A SCIENCE ADVENTURE FOR YOUR SCIENCE SCHOLARS!

We have ASSEMBLY programs for sites that are SHORT on TIME. All of are programs are designed to use KINESTHIC, AUDITORIAL and VISUAL LEARNING STYLES! Any of our programs can be created into an ASSEMBLY STYLE session! If you are looking for something odd, fun and interactive, check out these NEW CREATIONS from Packages AA -GG.

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