WELCOME TO IMAGINE THAT! BLAST FROM THE PAST CAMP!

This curriculum has many exciting activities involving geology, paleontology and space travel. We are very excited to guide your child through our exciting adventures! In addition we have added Ozobots to make it even more fun!

Imagine That! Headquarters has just received news that Dr. Lipid has once again been up to no good.

The OXYS (Only eXcellent Youth Scientists....that is you!) will have a busy week protecting the planet from Dr. Lipid and his Magical Ogres Reshaping our Natural Systems (better known as M.O.R.O.N.S.). The OXYS will have to become experts in geology, paleontology and space travel to foil Dr. Lipid and his greedy plans.

PART 1 CAVES AND MINERALS



On the first day of camp, we will learn all about rocks and minerals. We will practice classifying and identifying rocks and minerals. The OXYS will also learn about crystals. We will make lots of crystals in our lab!

During the second half of the day, we will become spelunker as we learn about caves and the animals that live inside caves. The OXYS will create a cave model with stalactites. We will also experiment to find out how caves are formed.

As we go deeper into the cave we learn about bioluminescence and how animals have adapted to the dark.

PART 2 DINOSAURS AND FOSSILS

On the second day of camp, the OXYS will travel in a time machine to Prehistoric Times. We will visit the Mesozoic Era and learn about the different dinosaurs that walked the earth during this time. The OXYS will also learn about fossils. We will make our very own Fossils! We will also go on a Fossil Hunt were we find fossils buried inside a cast material! We will make our own "amber" to take home.

PART 3 VOLOCANOS AND GOLD

On the third day of camp, we will investigate volcanoes and the layers of the earth. The OXYS will make volcanoes to take home, magic mud (you don't want them to take this home!), and sediment layers. We will also pan for gold! We will go on a scavenger hunt!

PART 4 BOOT CAMP

On the fourth day of camp, the OXYS will attend Astronaut Boot Camp. We are going to simulate some of the things that astronauts go through in order to be chosen to go into space. Each camper will be assigned a space crew position. The space crew will be made up of the engineering/science, security, navigation and communication departments.

We will learn about gravity and what it takes to launch into space. Students will perform inertia fun inertia experiments.

We will also launch our giant black bag that uses thermodynamics and expansion to fly.

PART 5 BLAST OFF!



On the last day of camp, we will have Blast Off! Activities. We will start the day by learning how things can fly in our atmosphere. After learning how things can fly, we will watch a variety of rockets launch. The OXYS will also construct Rocket Racer Cars, and have Rocket Racer drag races.

Activities include:

- Performing Gravity Experiments due to drag
- Testing our Newton's Car
- Making a Pop Can Hero Engine
- Paper Rockets
- Rocket Racer Car
- Rocket Balloons
- Film Canister Rocket
- Bottle Rockets
- Chemical Rockets
- Estes Rockets

EVIDENCE TABLE

We will also be completing a variety of other activities each day. The OXYS will be displaying their Time & Space activities and creations on the Evidence Table. Parents please feel free to stop by the Evidence Table to check out all the different activities and creations we worked on.

OZOBOTS



When your camper takes a break from fun science experiments and activities, they will be learning how to code with Ozobots! Ozobots are tiny robots that follow commands written in the form of color codes. Each code is written in a specific series and sequence. Students will learn this form first.

There is a second method to program the Ozobots. Using OzoBlockly, campers drag and drop commands in the tablet screen. When they complete the program, Ozobot downloads the program and then performs it!

At the end of camp your student will have completed OzoTown! As they design the town layout, students incorporate color codes along the travel lanes. Some will help to speed up, slow down or maybe give a Nitro burst of power to go over the bridge.



This is a small sample of the color

codes used to complete projects that include:

Drive to School: Handout worksheets printed with different pathways to get from Ozobot's home to his school. Can the students get him to school on time?

Ozobot Sees: Students will be read Dr.Suess's "My Eyes See". After reading students are asked to compare their eyesight to Ozobot's sight, or how he sees. They will complete worksheets to show they understand the idea that the bot sees through color.

Ozo-Dash: Students will design their own race track at least 100 centimeters long. At least 10 codes should be used when designing and running the race track.

Ozobot Maze: Ozobot needs to get to the store from his home, but it's across the river. Using codes students must help him find the way without getting stuck.

Ozo Town: Students will have the best time creating a town for their ozobots to live and travel in. Color Codes must be implemented throughout the streets and buildings drawn. Creating bridges and tunnels for the route to work, parks and pools for home; this is the most fun! The project should be worked on throughout the camp week. By the last camp day, the town should be complete and played with. For the town project, supplies should be asked for from the kids from home. Anything they can think of that will help complete their project.

OZOBLOCKLY



Your student will use the

tablets or computers to learn with OzoBlockly. It works the same with either. The lesson plans work with student worksheets and handouts. OzoBlockly is free! If you like, look at what your child is working on.

Lesson 1: Students will practice putting movement and light blocks together: then practice downloading correctly.

Lesson 2: Students play games that teach about loops and movements.

Lesson 3: Students become Drivers and Navigators with Pair Programming.

Lesson 4: Because of its' small size Ozobot has trouble traveling straight. Students learn to "set wheel speeds" to move each motor and help it go straight.

Lesson 5: Students learn how to turn accurately with "turn by n degrees".

Lesson 6: Students will learn to save their commands using Functions.

By the time your student leaves camp this week they will be well versed in Ozobots and OzoBlockly. Coding and Programming will be a breeze!!