

PARENT LETTER FOR MACHINES MUMMIES AND MORE, AN ARCHEOLOGICAL ADVENTURE!

What a great week we have in store for your child in this exciting combination of Science, Technology and Art! Each area of study will be described below.

SCIENCE AND ART

On the first day of camp your child will become a member of the O.X.Y.S. (**O**nly **EX**cellent **Y**outh **S**cientist) Organization. Students will then learn about our arch enemy, Dr. Lipid and how other O.X.Y.S. from all over the world have spotted Dr. Lipid looking to find a way to confuse the archeologist of the future! As a new member of the O.X.Y.S. your child will explore many ancient civilizations!

During this amazing adventure, your child will participate in a wide variety of Science, Art and Craft activities in each destination:

To start with we will learn what an archeologist is and about the unstable earth which allowed many ancient archeological sites to be buried. We will blast off a volcano and make metamorphic rocks from candy. We will learn how to classify rocks and learn about plate tectonics.



Next we will investigate ancient humans as we look at pictographs and petroglyphs and make our own cave art. We will learn about prehistoric tool and make one of our own. Then into the trash, oh, I mean a midden, where we learn how trash is treasure to an archeologist. Just our luck we found the midden Dr. Lipid left behind and know some archeological areas he may be disturbing! We are off!



In Egypt, students will become architects, scientists, and engineers learning the culture of the ancient Egyptians, the science behind making mummies, creating hieroglyphics, and solving structural problems to figure out how did the pyramid workers create those amazing pyramids!

We will learn Egyptian Hieroglyphics. We will also create and paint a sarcophagus for the mummies we create.



Now we are on to ancient Greece where we mint our own coins, make a catapult and pottery.



On our final day we will learn about the amazing Vikings as we work with woven textiles, decode ruins and learn how they navigated with stars.

Finally, we will have our **big dig** and find out how Dr. Lipid was trying to mess with the time line!

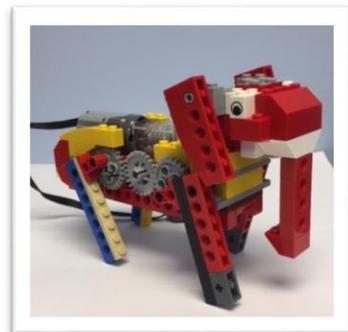
TECHNOLOGY



Our Machines, Mummies and More camp will encompass science, art and technology that relates to archeology. With our technology portion, we have decided to concentrate on animals that have evolved over time. Each of these activities will take an hour or more to build. While we will try to complete every one of the builds, we may not be able to get to all of them. We will also strengthen the science curricula by adding a catapult and a boat.

Each of these activities or “builds” will use gears as the simple machine focus. By the end of the week your student should be able to discuss how gears use and transmit power from the first gear to the last.

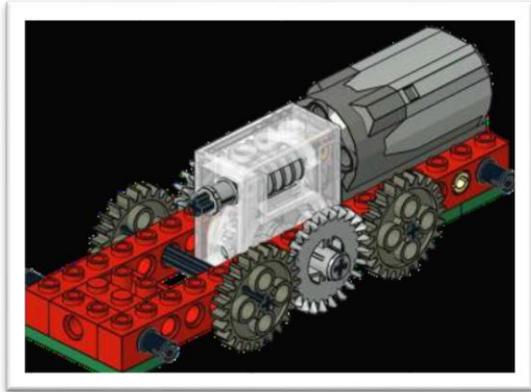
Because each of the builds has four legs and walks or moves, the basic gear assembly is very much the same. We will address all the builds in the same way reinforcing the gear concepts.



The “Elephant”, “Ostrich”, “Giraffe”, “Wolf” and the “Turtle” can all be built using the Lego® WeDo® Construction set and programming software. Additionally, these can be built **without** using the programming software so children can experience both options. We hope that our students will take away the knowledge that the same outcome can be achieved using different methods.

The animals will all use the same type or set up of gear transmission.

In our camp/class we will discuss the following:



What is Gear Transmission? The force created when the driver gear moves the second gear and the third gear and so on.

What is Gear Housing or a Gear Box? Usually the gears are enclosed in a case of some type, allowing the gears to be bathed in the oil or lubricants needed to keep them operational. It provides support for the moving components and keep them safe from the outside world.

Idlers, Drivers and Followers and how they work to transmit energy from one gear to another.

All of these are pictured above!!

Vocabulary:

Idler Gear: Is usually enmeshed between 2 gears

Driver: This is the gear that starts the transmission

Follower: This is the gear that receives the transmission

What is a Gear Train?

A gear train consists of gears that are mounted, usually in a straight line, so that the teeth of one gear mesh with the teeth of a second gear, which mesh with the teeth of a third gear and so on. In this way motion is transmitted from one gear to the next.

At the end of the week your student will have a clear idea of what a gear does.

We know your child will have a wondrous and memorable time in the camp! Come along and join in the fun!