

Oxford Virtual Academy Syllabus – Dinosaur Hill

Exploring the pursuit of being inquisitive we will be changing our syllabus for the Fall semester to cover a much broader assortment of topics all beneath the umbrella of curiosity. Each topic will consist of observable moments, educated guesses, experimentation and sheer fun as we take a look at some unique topics that only Dinosaur Hill would be brave enough to tackle! We will be using tools of the trade to investigate animals beneath the surface of the water, producing (and eating) our own replicas of animal scat, shining rainbows through stones, attempting to start a fire with flint and steel, and learning how pioneers survived in the woods in 1817.

- 1) Introduction to Science
- 2) Stream Dipping
- 3) Rockets
- 4) Catapults
- 5) Poop
- 6) Slime
- 7) Swords
- 8) Planets
- 9) Rainbows
- 10) Matter
- 11) Native Americans
- 12) Pioneer Survival
- 13) Magnets
- 14) Ice

Introduction to Science and Experimentation

Scientists love to ask questions and then run experiments to see if their predictions about those questions come true and that's exactly what we're going to be doing this semester. We will be asking questions about a variety of topics before getting hands-on with at least one experiment a day.

Stream Dipping

We will be gathering up our dipping nets and some waders to venture out into the Paint Creek in pursuit of the critters that call the gently moving waters home. Whatever we do find we will be taking back with us to the nature center to place beneath microscopes and record in our own journals of science.

Participants are encouraged to bring a change of clothes, water shoes, and a towel. We don't plan on getting soaked this day but accidents happen!

Rockets

Nothing screams science more than rocketry and it's about time we had a class focused on our attempts to completely obliterate the sky. We will be learning all about the basic components of a successful

rocket before putting our own water rockets together to launch outside and take home. Depending on the wind this day we will also be launching a real model rocket far up into the clouds.

Catapults

Since we've already launched something straight up into the air, it is only fair to see if we can launch something on an arc. We will be learning a little about siege equipment that was used throughout the history of man before putting together our own miniature catapults to take home to lay waste to our friends and family with mini marshmallows. We will also be taking a trip outside with some miniature pumpkins to launch on our larger catapult.

Poop

We are rarely told that our programs stink so we're going to be making up for it today. Everybody poops and our poops can tell us so much about our lifestyles. We will be examining animal scat from across the kingdom to uncover hidden secrets about the animals that laid their waste. Afterwards we will be donning some smocks to produce our own edible versions of animal scat to take home and gross our families out!

Slime

We will be getting our hands awfully sticky today as we dive deep into the world of non-Newtonian fluids, or slimes. Whether a glossy layer upon the back of a frog or the boogery trail left behind from a slug we are going to be taking slime to the next level by learning its purpose in nature. Obviously we will have to make some cool variations on slime to take home as well.

Swords

There's something timeless about holding a sword. Whether it's in the hands of a child, an adult, a warrior or a peasant one just wants to swing it. There's an art to their construction however, and an art to the swing. Join us on a very special day where we learn a little bit about the history of the ancient weapon, craft our own foam PVC swords, and spend an active afternoon learning a little about cinema choreography.

Planets

There are eight official planets orbiting our sun and each has distinctive traits and personalities that make our solar system seem more like a planet than a simple planetary system. Join us as we explore the surfaces of all eight of these planets from the comfort of our own planetarium. Afterwards we will be putting together our own planets to take home!

Rainbows

What's the most interesting way to talk about the power of light? Through the beautiful rainbow! Join us as we refract light, bending it to our will, to produce rainbows in a variety of ways before putting together our own rainbow craft to take home.

Matter

What's the matter? Well, the matter is everything. Join us as we experiment with pressure, density, and buoyancy on different states of matter for a very scientific day of experimentation and laboratory fun!

Native Americans

How did the original inhabitants of Dinosaur Hill survive without metal, electricity, or plumbing? Join us as we put on the moccasins of Potawatomi tribe and learn a little about technology and culture that are deeply rooted in our woodlands. We will get hands-on with authentic artifacts, attempt to start a fire with only sticks, and sample foods that would have been available!

Pioneers

Could you survive the Michigan winter of 1817? We will be taking the role of western pioneers while searching for resources to help us survive out in the wilderness. We will be opening up our historic little house to see just how much room you need in a cabin in order for a family to make it in the woods while playing authentic pioneer games and using real tools.

Magnets

This is a topic that really is the polar opposite of boring, in fact, it'll really stick with you. We're going to be spending a little bit of time learning about magnetism and magnets before learning how to trick our friends with a few clever magnet tricks. We will even be teaching a lone piece of iron how to BE a magnet!

Ice

With our final class this semester we are going to be taking things a little easy by having a science party all about ice. We will be making our own ice indoors, attempting to paint with ice cubes, and even strategically melt our own ice sculptures! This fun day is our way to congratulate you on getting through another fun semester!