



Brevard County Libraries

We are shaking things up a bit with our Summer Reading Program 2021!

In this week's STEAM Packet, our theme is FANTASY ANIMALS! We are digging up legends surrounding some giant mythical, gold loving, winged lizards and their habitats. Can you guess what creature it is? — DRAGONS!

STEAM Packets can be picked-up at any branch within Brevard County and are available for curbside service.

All STEAM Packets are developed to be take-home based projects. Most supplies will not be provided by the library and will be listed as 'Supplies Needed.' Supplies that is provided will be listed as 'Provided Supplies.'



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Storytime, STEAM, Craft, and Teen Packets developed by the Youth Services Department

Dragons: A History



What is a dragon?

What do you think of when you hear the word 'dragon?' Does it create an image of a large, leathery winged, fire breathing lizard? Or perhaps instead of fire, they can call on massive storms or are obsessed with gold? Well, these large serpentine creatures appear in the folklore of many cultures around the world.

Some of the first mentions of dragons are in Chinese and Japanese lore. In eastern cultures, dragons are depicted as wingless, four-legged, serpentine creatures with above-average intelligence. This means they believe they are super smart and clever! Draconic (dragon-like) creatures are first described in the myths of the ancient Near East and appear in Mesopotamian art and literature. Stories about storm-gods slaying giant serpents occur throughout nearly all Indo-European and Near Eastern mythologies. As explorers traveled east, they brought back these legends and myths about terrifying reptiles. In western cultures, since the High Middle Ages, dragons have often been depicted as winged, horned, four-legged, and capable of breathing fire.

Can you think of some dragons you may have heard of from movies, TV shows, books, or video games? Are they always portrayed as the bad guy or a villain?

Different kinds of Dragons?

In different cultures, dragons have different abilities and traits. Rain-bringing dragons in Asian tales can shrink so small they fit in a teacup--or grow so large they fill the sky! They have many powers, such as breathing clouds, moving the seasons, and controlling the waters of rivers, lakes, and seas.

Dragons in Europe can overwhelm people with their putrid breath, or spit fire and set cities ablaze. They are powerful, wicked and dangerous. Some nest in caves and guard marvelous treasures. When hungry, they may snatch and devour sheep or cattle that wander too near. They may also eat humans, particularly young girls-- *Eek!*

Epic poems from the Middle Ages tell of warriors and knights who battle cruel and greedy dragons. The earliest dragon legends date back thousands of years, and the creatures still haunt our

imagination today, appearing as great reptiles with amazing abilities; able to talk, breath fire or ice, spit acid or poison, and typically obsessed with all things shiny!

What did early archaeologists mistake dragon bones for?

DINOSAUR BONES! People believed early on in history that when they had discovered large, otherworldly bones that these must have belonged to dragons. But, in fact, they were dinosaur bones!

Not all dragons had wings!

Some dragons were sea serpents that controlled the raging seas and consumed sailors lost in their waves, whirlpools, and hurricanes. A sea serpent or sea dragon is a type of dragon described in various mythologies, most notably Greek (Cetus, Echidna, Hydra, Scylla), Mesopotamian (Tiamat), Hebrew (Leviathan), and Norse (Jörmungandr).

So where is the Origin of the Dragon myth from?

There are several theories as to where the dragon myth could have come from.

Existing Creatures: This idea is highly likely. Especially when looking at stories like 'Thakane, the Princess Dragon Slayer.' To most Folklorists who study this story, the water dragon in question is actually a crocodile! Other creatures who are thought to have inspired various stories include snakes, eels, and monitor lizards.

Fossil Remains: Remember the dinosaur bones? Well, there are those who believe our ancestors were inspired by the fossil remains of dinosaurs and other megafauna. Many of the cultures with dragon tales are in areas where many dinosaur fossils have been discovered.

Religion: It was so common for Mesopotamian and Near Eastern cultures to have stories of storm gods overcoming mighty serpent beasts. One of the most popular of these myths to survive in modern day is the tale of Yahweh and his prophesized battle with Leviathan.

Fear: It is possible that our own fear and primal instincts inspired the legends. Many scientists hypothesize that humans may have a pre-programed fear instinct towards snakes and other reptiles. This theory, combined with the places that dragons were said to exist (oceans, lakes, dark caves, and other perilous locations) could suggest that dragon myths were created as a cautionary tale to man.

Famous myths of Dragons

China: One of China's most subtle delicacies is Longjing (Dragon Well) tea, named for a tea-growing region near Hangzhou, in Zhejiang Province. It is said that centuries ago, people believed that a rain-bringing dragon lived in the area at the bottom of a clear-running spring.

Vietnam: According to Vietnamese legend, the rocky islands of Ha Long Bay were spat out by a dragon that guarded the country in ancient times. The name of the bay means "descending dragon."

Korea: A long, low mountain in the shape of a blue dragon lies to the east of the old city center of Seoul, South Korea. A higher one called the white tiger stands to the west. The Korean capital was founded some 600 years ago below these peaks, an auspicious spot according to the principles of spatial planning known in Korea as p'ungsu (feng shui).

Judaism: Leviathan is a creature with the form of a sea serpent from this belief. It is referenced in the Hebrew Bible in the Book of Job, Psalms, the Book of Isaiah, and the Book of Amos. The Leviathan reflects the older Canaanite Lotan, a primeval monster defeated by the god Baal Hadad.

Greece: In the Greek Aeneid, a pair of sea serpents killed Laocoön and his sons when Laocoön argued against bringing the Trojan Horse into Troy.

Babylon: Stories depicting sea-dwelling serpents may include the Babylonian myths of Tiamat, a primordial goddess of the salt sea. Some sources identify her with images of a sea serpent or dragon.

Scandinavia: Jörmungandr (or Midgarðsormr) was a sea serpent so long that it encircled the entire world, Midgard. Some stories report sailors mistaking its back for a chain of islands. In 1028 AD, Saint Olaf is said to have killed a sea serpent in Valldal, Norway, throwing its body onto the mountain Syltefjellet. Marks on the mountain are associated with the legend even today.

Suggested Reads: Books available through your library!

"Dragons" By Hinds, Kathryn

"Dr. Ernest Drake's Dragonology handbook: a practical course in dragons" By Drake, Ernest

"A field guide to dragons, trolls, and other dangerous monsters" By Sautter, Aaron

"Discover dragons, giants, and other deadly fantasy monsters" By Sautter, Aaron

"How to raise and keep a dragon" By Topsell, John

"The water dragon: a Chinese legend" By Jian, Li

"A practical guide to dragons" By Trumbauer, Lisa

"Mythopedia: encyclopedia of mythical beasts and their magical tales" By Good Wives And Warriors

"Children's book of mythical beasts & magical monsters" By DK Publishing

"Dragons" By Petrini, Catherine M

"Dragons: magic, myth, and mystery" By Loh-Hagan, Virginia

Suggested Videos:

"Serpents and Dragons: Crash Course World Mythology #38" by CrashCourse

<https://youtu.be/SWXNSkE3YEK>

"Dragons - The Origin of Dragons - Extra Mythology" by Extra Credits

<https://youtu.be/rL8qSfXIo4M>

Be sure to look on the Brevard Libraries YouTube for the accompanying video to the experiment on the next page!

<https://www.youtube.com/channel/UCnEvql1o2UxcSiONd9h5cGw>

Foaming Dragons



Supplies Needed:

Colored paper, tape, glue, google eyes, plastic bottle (wide-mouth bottles work best), vinegar, dish soap, liquid food dye, baking soda, tray or cookie sheet.

Predictions:

What will happen if you mix baking soda and vinegar together?

What will adding the food coloring likely cause? What about the dish soap?

Directions:

This activity is intended for you to do at home with your family.

1. Draw a tail on your paper and cut it out, taping it to one side of your bottle.
2. Draw and cut out two arms and two legs, taping them onto the bottle also.
3. Glue or tape on two googly eyes so it looks as though the dragon is looking up.
4. Fill the bottle **half-way** of vinegar.
5. Add a squirt of dishwashing liquid.
6. Add a drop or two of food coloring. Any color will do!
7. Gently mix the contents of the bottle and place in the middle of a large cookie sheet or tray.

WARNING: This will be messy

8. Add a teaspoon or more of baking soda to the bottle.
9. Watch the dragon foam!

Reflection:

When you added the ingredients together, what happened?

If you were to have a bottle with a smaller mouth, what would happen to your foam?

Optional Experiment for the More Advanced: Elephant Toothpaste

Supplies Needed:

Dry yeast, warm water, liquid dish soap, 3% hydrogen peroxide, measuring cups, measuring spoons, tray to catch the foam, and your dragon bottle.

Optional Supplies:

Protective eyewear (encouraged) and liquid food coloring

Note: although the product of this activity resembles toothpaste, it is not toothpaste. Do not use it!

Directions:

1. Measure (1/2) cup of hydrogen peroxide, and carefully pour it into the bottle.
2. Add a big squirt of dish soap into the bottle, and swirl gently to mix.
3. If you want to make your foam a single color, add a few drops of food coloring directly into the hydrogen peroxide, and swirl the bottle gently to mix. If you want to give your foam stripes like some toothpastes, put the drops along the inside rim of the bottle's mouth. Let them drip down the inside of the bottle, but do not mix.
4. In a measuring cup mix together (1) tablespoon of yeast and (3) tablespoons of warm water. Stir for about 30 seconds.
5. Pour the yeast mixture into the bottle then quickly step back, and watch your reaction go!

Reflection:

What happens to your dragon?

How long did the reaction last?

Extra: Try each activity without dish soap. What happens? How is the result different?

What just happened?

Did you know you caused chemical reactions? Well, you did!

In the first experiment, when you mixed the vinegar and baking soda, the reaction gave off carbon dioxide. This forms bubbles in the vinegar, causing it to expand, and the gas bubbles react with the dish soap to make the foam rise.

In the second experiment, what makes the foam appear is when the hydrogen peroxide comes into contact with the yeast. It starts to break down into water and oxygen molecules. Oxygen is a gas and wants to escape the liquid. The dish soap that you added, however, traps these gas bubbles, forming a foam. The reaction continues so long as there is some hydrogen peroxide and yeast left. Once one of them runs out, the creation of new foam stops.