ISSUE 2: Radical Reptiles

Manatee Weekly

A Special Release Packet of Fun Activities for Families

Explore.
Educate.
Inspire.

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Our mission is to promote understanding and responsible actions for the protection of the Treasure Coast’s fragile ecosystems and their inhabitants, including the Florida manatee.
What is a Reptile?

An animal is a reptile if it possesses these six characteristics (or, most of them):

**Vertebrate** – animals have backbones. All reptiles are vertebrates.

**Breathe with lungs** – rather than gills or skin. All reptiles breathe through lungs.

**Scales or Scutes** - are made of a hard substance called keratin, the same protein that is found in our hair and fingernails. Reptile scales develop in the outermost layer of the skin, the epidermis. Scales protect the reptile’s delicate skin from sun exposure and cuts and scrapes. The scales also help reptiles retain water.

**Cold Blooded** – animals are also called ectotherms. The body temperature of such animals is regulated by external sources. This means that when it is cool outside, an ectotherm is cool. And when it’s warm, an ectotherm is warm.

**Oviparous** – means egg laying. Most reptiles lay eggs, although there are a few that have live birth. Reptile eggs are generally softer than bird eggs. Most reptile eggs are buried in the soil or leaf litter.

**Tetrapod** – is an animal with four feet. Some reptiles, like snakes, do not have legs or feet. However, reptiles that do have legs are all tetrapods. Can you think of other animals that are tetrapods?

Where in the world do reptiles live?

Reptiles can be found in almost every type of habitat on earth. Every continent, except Antarctica, is home to at least one species of reptile. Look at a map or globe. Can you find Antarctica? Why do you think no reptiles live on this continent?
How many different kinds of reptiles live on earth today?

There are more than 8,200 living species of reptiles on earth today. All of these species are divided into just four groups, called orders. The Crocodilia includes species familiar to Floridians, the alligator and the crocodile. The order Sphenodontia includes only one living species, the Tuatara. The tuatara is a very primitive, lizard-like reptile that can be found only in New Zealand. Squamata are lizards and snakes and Testudines are turtles.

So what about dinosaurs?

Are dinosaurs reptiles? Are today’s reptiles modern dinosaurs? The simple answer is, Yes. But, like most science questions, it is a bit more complicated. Biologists use two methods of grouping organisms, the Linnaean and the phylogenic. The Linnaean system groups organisms by their characteristics, the phylogenic by their ancestry.

The Linnaean system groups dinosaurs together with reptiles. They share many characteristics: back bones, breathe with lungs, scaly skin, hatch from eggs, most have four feet. Even the word dinosaur means “terrible lizard.”

Wait, what about being cold blooded? This is an area of much debate among scientists today. New research has brought to light information that suggests that dinosaurs may actually have been warm blooded, like mammals!

According to the phylogenic system, dinosaurs are still reptiles and modern reptiles are still related to dinosaurs. But, it gets a bit more interesting when we think about what other organisms have dinosaurs in their family tree. Let’s see how it works.

About 350 million years ago, some amphibians became less dependent on water. They developed thicker skin that didn’t dry out and their eggs developed harder shells that didn’t need to be in the water to grow. These guys were the earliest reptile-like creatures.

This group later split into two branches, early mammals and reptiles.

The first reptiles then split into several branches such as turtles, swimming reptiles, lizards, snakes and archosaurs.

Archosaurs split again into flying reptiles, crocodiles and dinosaurs. And then, a group of dinosaurs branched off and became birds.

So, if we look at the dinosaur family tree we can see that not only are they related to reptiles, but also to birds!
**Learning Lineaen Classification**

This is a great game for the whole family.

*Materials Needed: paper & pencils for each team*

1. Divide up into teams of two or three people.
2. Choose a room in your house to classify.
3. Each team should decide what categories they will use to classify items.
4. Use the paper and pencils to list items by category.
5. Compare and contrast the way teams have categorized items.
6. Did you all classify items in the same way?
7. Do you think it is difficult for biologists to decide how to group organisms together? Why?

**3D Lizard**

Create a 3D lizard like these two with the pattern on the next page.

**Paper Plate Dino**

1. Cut paper plates in half. 2. Cut out triangles to make the dermal plates on the dinosaur’s back. 3. Cut out a head and neck. 4. Cut out a tail. 5. Glue together and color or paint.

**Paper Chain Snake**

Create and decorate a cool paper chain snake like the ones to the right.

**Lizard Hike**

How many different kinds of lizards live in your yard? Take a walk around your yard to find out. Lizards are most active on warm sunny days. Visit the Florida Museum website for help identifying the lizards you see.

[https://www.floridamuseum.ufl.edu/herpetology/florida-amphibians-reptiles/lizards/](https://www.floridamuseum.ufl.edu/herpetology/florida-amphibians-reptiles/lizards/)
Our Volunteers Mean the World to Us
Join our Volunteer Coordinator, Trish Parker, for a special Facebook Live presentation to see just how important MOEC volunteers are to us! There are many ways to volunteer at the Manatee Center. Visit our website to learn more!

2020 Volunteer Awards Ceremony

Wednesday, April 29 at 2:00 pm

Reptile Encounter
Join us for a Facebook Live presentation to meet our red rat snake, Diego. You’ll learn even more about reptiles and how important snakes like Diego are to our environment.

Live from the Lagoon

Saturday, May 2
12:00 pm
Put the names of these Florida native reptiles in alphabetical order.

alligator  indigo snake  Florida box turtle
Carolina anole  corn snake  southern toad
gopher tortoise  pygmy rattlesnake  squirrel tree frog
sand skink  American crocodile  gopher frog

1. ____________________________________________________________
2. ____________________________________________________________
3. ____________________________________________________________
4. ____________________________________________________________
5. ____________________________________________________________
6. ____________________________________________________________
7. ____________________________________________________________
8. ____________________________________________________________
9. ____________________________________________________________
10. ____________________________________________________________
11. ____________________________________________________________
12. ____________________________________________________________
ACROSS
3. A serpent, whether harmless or venomous
6. A large venomous lizard with black, orange and yellow scales.
7. A cold blooded animal with scales and a backbone. They breathe with lungs.
8. A lizard with hornlike spines on the head, a flattened scaled body, a short tail, and feeds on insects.
9. A large carnivorous reptile of the Crocodile family with a short, broad snout with large teeth in the lower jaw that shut into pits in the upper jaw.

DOWN
1. A turtle with a hinged plastron that can be tightly closed.
2. A lizard capable of changing the color of its skin and has a projectile tongue.
3. A turtle with a flat, streamlined shell, no teeth, a strong jaw and a hooked beak.
4. A large arboreal lizard, usually green in color with a spiny crest along the back, and feeds chiefly on fruits.
5. A large reptile of the Crocodile family with a long, tapering jaw.
6. A small lizard with toe pads, immovable eyes, and capable of climbing on smooth, vertical surfaces.

<table>
<thead>
<tr>
<th>Reptile</th>
<th>Crocodile</th>
<th>Gecko</th>
<th>Gila Monster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snake</td>
<td>Box Turtle</td>
<td>Chameleon</td>
<td>Iguana</td>
</tr>
<tr>
<td>Alligator</td>
<td>Sea Turtle</td>
<td>Horned Lizard</td>
<td></td>
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</tbody>
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KOMODO DRAGON

The Komodo Dragon is the largest living reptile in the world!

It can live to be fifty years old.

If it loses a tooth, the tooth will re-grow.

It has big muscles and sharp claws.

The Komodo will eat deer, horses, and buffalo.

The people who live near the dragons call the Komodo dragons "oras".

Decorate the komodo dragon with scales. Body: grey, brown, red, and tan. Tongue: yellow. Or make up your own colorful komodo dragon!

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