

Wildlife Express!



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Terrific Turtles

photo by William Mullins©



Let's Look at... the Painted Turtle

A beautiful turtle lives in Idaho. It has yellow lines on its head and legs, and the underside of its shell is usually an orange-red color. It's the painted turtle.

Painted turtles (*Chrysemys picta*) are the only native turtles in Idaho. They like to live in streams, ponds, lakes and marshes. Not just any lake or stream will do. The water needs to be shallow and move slowly. The bottom of the pond or stream also needs to be soft, like mud, and there should be plants in and around the water.

Painted turtles also need logs or rocks, so they can get out of the water. These are called basking sites. Lying in the sun is important for painted turtles. They are cold-blooded animals. They are always the same temperature as their surroundings. Basking helps turtles to keep their bodies warm.

Basking also helps to get rid of parasites, like leeches. Leeches dry up and die in the sun.

During the day, painted turtles eat and bask in the sun. They will eat just about anything dead or alive. Plants, insects, frogs and fish are just some of the things on the menu. At night, they swim down to the bottom of the pond and rest in the mud. This is also where painted turtles spend the winter – buried in the mud. They don't really hibernate, but their body functions do slow down. Turtles still need oxygen to live, but they can't breathe in the mud. Turtles get the oxygen they need from their skin. They can absorb oxygen through their skin and the lining in their throats!

Painted turtles start their lives in a nest dug in moist soil near the water. Usually a painted turtle is six or seven years old when she lays her first eggs. The female will lay eight to 19 eggs in the nest. In about 76 days, the eggs hatch. Usually the hatchlings stay in the nest all winter long. They don't come out of the nest until spring.

The temperature of the nest determines if the baby turtles will be males or females. If the nest is warm (87 degrees or warmer), all the hatchling turtles will be females. If the nest is cooler (below 77 degrees), the hatchlings will be males. At around 84 degrees, both females and males are produced.

Many turtle eggs and hatchlings are eaten by predators. Raccoons, otters, mink and foxes are just some of the animals that like to eat turtle eggs and hatchlings. Turtles need to watch out for danger. Turtles don't hear things very well, but they do have a good sense of smell and color vision. If a turtle survives its first years of life, it may live several decades.

Look for painted turtles next time you are around a pond, lake or stream. You'll be able to see how they got their name!



What is a Reptile?

When people think of a reptile, they may think of a snake or turtle. Maybe a lizard pops into their minds. Usually they think of an animal that is scaly, cold-blooded and lays eggs.

Some scientists that group, or classify, animals are starting to look at reptiles a bit differently. Some divide reptiles into four groups. The first group includes turtles. The second group is lizards and snakes, and the third group would be crocodiles and their relatives. The last group is the birds! Some scientists put birds in this group because bird skulls and eggs are so similar to reptiles. They are not as concerned about the fact that birds are warm-blooded, and all other reptiles are cold-blooded.

Believe it or not, when we look at the cells of crocodiles, birds and other reptiles, crocodiles actually have more in common with birds than they do lizards. You may be wondering about the feathers on birds. They don't look much like scales, but they really are scales that have changed over time to help birds fly.

If we leave birds out of the reptile group, reptiles are found on every continent except Antarctica. Most reptiles have a hard time staying warm. They can't make heat inside their bodies, so Antarctica would just be a giant freezer and graveyard for them. It is too cold for them there. Since Idaho has pretty cold winters, we don't have as many reptiles as some other states. We have one turtle, the painted turtle, 10 kinds of lizards and 11 kinds of snakes.

Reptiles have been on the Earth for a long time. About 250 million years ago, the first reptiles appeared. They ruled the planet for 200 million years. All of our birds and mammals have reptiles as their ancestors. I bet you can guess who their ancestors are. They were the largest land animals ever - dinosaurs!

Reptiles come in all shapes and sizes. They can be really big. Saltwater crocodiles can grow to be over 23 feet long. Other reptiles are small. A gecko that lives on the British Virgin Islands is less than an inch long!

Reptiles may come in different shapes and sizes, but they are all fascinating creatures! Look for Idaho's reptiles next time you are out in nature.

Terrific Turtles

What makes a turtle different from all other animals? It's shell! No animals have shells like turtles.

A turtle's shell is part of its skeleton. A turtle can't remove its shell like you might see in cartoons. You can't remove your skeleton, so a turtle sure can't!

Turtle shells may have up to 60 bones. The top part of the shell is called the **carapace** (KAR-a-pas). It has the largest number of bones, about 50. The turtle's ribs and backbone are attached to the carapace. The bottom part of the shell is called the **plastron** (PLAS-tron). Some ribs and the turtle's collar bones are attached to it.

Most turtle shells are covered by hard scales, called **scutes** (skyuts). Scutes are made out of **keratin** (KER-a-tin). That's the same thing your fingernails are made of. Some people think that you can tell the age of a turtle from its scutes. Some turtles have scutes that grow as the turtle grows. Growth rings form on the scutes. Growth rings may help some turtle experts guess the age of a turtle, but it's not always easy. Some turtles have scutes that fall off every year, and turtle scutes will wear down as the turtle gets older. Some turtles that live in the water don't have scutes at all. Their shells are covered by a leathery skin.

There are more than 200 different kinds of turtles in the world. They may be tiny and weigh less than one-half a pound, or they may be huge. Leatherback turtles can weigh 1,500 pounds!

There are three main groups of turtles - freshwater turtles, sea turtles and tortoises. Freshwater turtles live in rivers, lakes and ponds. They have webbed feet and flat shells. Sea turtles live in oceans. Their legs and feet are shaped like flippers for swimming long distances. Tortoises are special turtles that live on dry land. Their shells are dome shaped, and they have large, round legs for walking.

No turtle has teeth. Their jaws have a hard covering just like a bird's beak. The edge of a turtle's jaw is very sharp. Some turtles have sharp points at the middle of their jaws that let them grab and hold onto animals.

Turtles are terrific! Grab a book and learn more about them.



Warm-Blooded

Warm-blooded animals have body temperatures that don't change with the weather. Their temperatures stay about the same in cold weather and in hot weather. Mammals and birds are warm-blooded.

Warm-blooded animals can make heat if they are cold, and cool themselves if they are hot. To make heat, warm-blooded animals turn the food they eat

into energy. Only a small amount of the food a warm-blooded animal eats is turned into muscle. The rest is used to keep its body temperature even. Some animals can shiver to help stay warm. You may also hear people call warm-blooded animals **endothermic** (en-do-THER-mik). Endo means inside, and therm means heat. So, an endothermic animal makes heat inside its body.

To keep cool, endotherms sweat, pant or move to a cool place. Only mammals can sweat. People and monkeys have sweat glands all over their bodies. Dogs and cats only have sweat glands on their feet, so they need to pant if they get too hot.

Warm-blooded animal can be found in almost any habitat on Earth. They can be found in arctic regions and hot tropical areas. As long as they can find enough food, a warm-blooded animal probably lives there.

What's Herpetology?

Have you ever heard of **herpetology** (her-pe-TOL-e-jee)? In Greek, herp means creeping, so herpetology is the study of creeping things. It is the study of reptiles and amphibians. Many people just call them herps for short.

Amphibians and reptiles may look a bit alike and share a few things in common. They are both cold-blooded, most have legs and most lay eggs. But they really are quite different. In fact, birds have more in common with reptiles than amphibians. Let's look at some of the differences.

Amphibians have a thin, moist skin. Reptiles have a tough, thick skin covered with scales. Amphibians have different stages in their development – egg, larvae and adult. They go through a metamorphosis. Reptiles do not go through this sort of change. Amphibians need a wet place to lay their eggs. Reptiles lay their eggs in dry places.

With so many differences, how did amphibians and reptiles get grouped together? They were grouped together before people knew much about them.

If you want to go "herping" to look for reptiles or amphibians, here are some things to keep in mind. You are more likely to see an amphibian or reptile in the spring during breeding seasons. Use a good sturdy stick to flip things over. Many herps hide under rocks, logs and leaves, so looking under things is a good place to start. Look for amphibians at night and reptiles during the day.

If you would like to get a close look at an amphibian or reptile, place the animal in a clear plastic box. Amphibians will probably need a bit of water in the box. Herps can bite! Use a net or wear thick leather gloves when handling animals and never handle a rattlesnake. Once you are done looking at your herp, put it back where you found it.

Although it may be fun to keep herps as pets, it can be tricky keeping them alive. There are also laws about keeping wild animals as pets. Check with your local Fish and Game office about the rules.

Cold-blooded

Cold-blooded animals really don't have cold blood. It means they are the same temperature as their surroundings. If a turtle is sitting in water that is 60 degrees, the turtle will also be 60 degrees. Turtles, insects, snakes, fish and frogs are cold-blooded animals.

Some people call cold-blooded animals **ectothermic** (ek-to-THER-mik). Ecto means outside, and therm means heat. Ectothermic animals get heat from outside their bodies. You may also hear people call them **poikilotherms** (poi-KEE-lo-therms).

Cold-blooded animals are most active in warm weather. Cold weather slows down their muscles. That's why cold-blooded animals lay or bask in the sun. The sun helps to warm them up. If they get too warm, they need to move to a shady spot. They could also dig down in the dirt to get out of the sun. Colder weather can kill cold-blooded animals. They need to migrate to warmer places or move underground. Some cold-blooded animals, like bees and dragonflies, shiver to stay warm.

Cold-blooded animals have a real advantage in deserts. Deserts are warmer and food is often harder to find. Cold-blooded animals don't need to eat as much as warm-blooded animals. Sometimes they can go months between meals. This is why you often see more cold-blooded animals living in deserts.



Clever Defenses

Can you think of an animal that has a clever way of protecting itself? Animals may use color, armor, or even poison to protect themselves.

Armor is something turtles have. Turtle shells are hard and tough. The outside of the shell looks just like dirt or rocks to help camouflage the turtle. Turtles' necks are very flexible, and the skin around the neck is loose. This allows the turtle to pull its whole neck inside the shell when danger is near. Most turtles fold their necks in an "S" shape inside the shell.

Some lizards also have armor. Horned lizards come to mind. They are covered by sharp, pointy scales. Horned lizards have another way to protect themselves. They can squirt blood out of the corner of their eyes! The blood may go as far as three feet. This definitely will startle a predator!

Poison's a good defense, too. Sometimes an animal might not look dangerous. Many frog, toads and salamanders have glands on them that make poison. If they aren't poisonous, they may taste awful. Poisonous animals are sometimes bright and colorful. Their bright colors are a warning to stay away. Other animals may try to copy the way a poisonous animal looks. They pretend to be nasty, so predators will leave them alone, too.

Think of a skunk. The stripes on a skunk are a warning to stay away, and boy, do they smell bad! Once an animal has had a run in with a skunk, it most likely won't get too close to one again.

Can you think of other clever ways animals protect themselves? There are just about as many ways as there are animals.



Divine Turtles

Turtles are part of many cultures and religions. They are mentioned in Native American, Hindu and Buddhist stories, legends and myths. All around the world, turtles play roles in how people see the world.

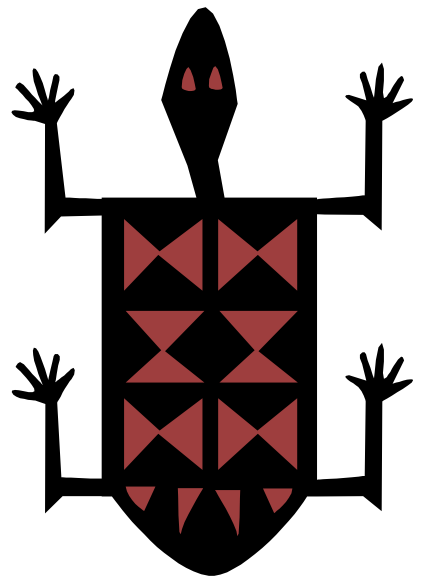
Some Native Americans think a big turtle helped to create the Earth. They believe that the Earth was once covered completely by water. The Earth Diver, the turtle, swam to the bottom of the water and came back up with dirt on its shell. The creator of Earth used this dirt to make the world. The world is supposed to be on top of the turtle's shell. When the turtle gets tired and changes his position, earthquakes happen.

Some people saw a connection between the moon and turtles. Each year we have either 13 full moons or 13 new moons. The full moons and new moons alternate every other year. Many turtles also have 13 sections on their shells. Some ancient cultures noticed this. They thought turtles were Mother Earth controlling nature's cycles.

In China, turtles are viewed in many different ways. They are one of the four divine animals, along with the dragon, phoenix (FEE-nix) and chimera (KI-mer-a). Out of the four divine animals, only the turtle is a real creature. They are worshipped in temples. Don't ever say turtle in China, though. Turtle is a curse word!

Many cultures see the turtle as a connection between heaven and Earth. The round top of the shell is heaven. The flat bottom is Earth. They believe turtles remind us to slow down and look at our connections to nature. Turtles cannot separate themselves from their shells, so we cannot separate ourselves from what we do to the Earth.

Who would have thought turtles could mean so much to people!





Spring is Here!

The grass is green. Birds are singing. Flowers are popping up. It's a sure sign. Spring is here!

Spring is a refreshing time of year. It is a time to take a deep breath and soak in the warm sun after a gloomy and cold winter.

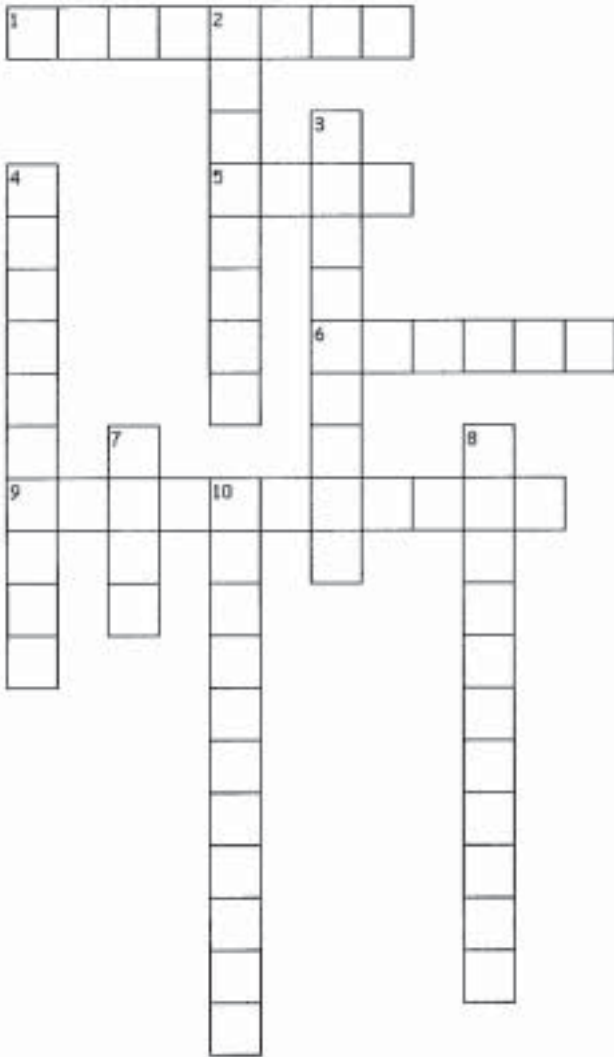
For wildlife, spring can also be refreshing. Now is the time when grass starts to sprout. Trees start to get new leaves, and wildflowers begin to poke out of the ground. For animals that eat plants, the new plant growth is great. It is like walking into a candy store. The plants are sweet and full of water. This is just what elk and deer need after months of eating dry grass and branches off bushes.

Spring is a time when some people do some serious house cleaning. Does your family "spring clean" your house? What about animals? Do they clean out their homes? Many birds do! Right now birds are busy making places to lay eggs and raise a family. Some birds, like sparrows or robins, go to work building a new nest. They collect grass, twigs, mud and fluff to build their nests. Other birds clean out their old nest and add to it. Osprey and bald eagles may use the same nest year after year. They just keep adding new sticks. Their nests can get huge. Bald eagle nests can sometimes be six feet across!

Many animals seem to be busier in the spring. You may notice that you see more wildlife, too. Animals that left for the winter are coming back, and animals that slept through the winter are waking up and moving about. Every animal is busy finding food and shelter. They may also be looking for a mate.

Spring can be a busy time of year - both for people and wildlife. If you are out working in your yard or playing in the park, look for animals, too. You might see birds singing or bees buzzing. Maybe you will see ants collecting bits of plants to take into their nests. Spring is a great time to see wildlife!

Turtle Time



Words

scutes
ectothermic
herpetology
camouflage
leatherback
bask
skin
dinosaurs
carapace
plastron

Across

1. The top of a turtle shell.
5. Turtles can absorb oxygen through this.
6. These cover a turtle's shell.
9. This turtle is one of the heaviest.

Down

2. The bottom of a turtle shell.
3. Ancestors of reptiles.
4. Blending into a background for protection.
7. Painted turtles do this to help stay warm.
8. Another word for cold-blooded.
10. The study of reptiles.

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