



March 2010 – Animal Babies

Did you know that baby seahorses are born from a special pouch on a daddy seahorse's stomach? Or that a baby giraffe can walk about an hour after it is born? Learn more about lots of different animal babies in this issue.

Animal Science Projects

Observing Baby Animals

Spring is a time when many baby animals are born. It is a great time to visit a zoo and see if you can spot any newborn baby animals. Even if you don't see any brand-new babies, it is fun to see older babies that were born last year. If you get to visit a zoo this spring, take this list along to help you observe the baby animals and their parents. Watch to see how much they depend on their parents and how they are different from adult animals. You can also ask zoo keepers some of your questions if you can't find out just by watching the animals.

Even if you don't live near a zoo or can't visit one, you can watch animals in your yard or at a park. Common animals like squirrels, rabbits, chipmunks, frogs, and birds have babies in the spring, too!

(**Note to Parents:** [This website](#) lists many zoos and wildlife centers around the US.)

Questions about Baby Animals:

- Do the babies stay close to their parents? Do they sometimes wander away on their own to play or look for food?
- Do the mother or father animals feed their babies and take care of them? (Most birds and mammals do but reptiles and amphibians usually don't.)
- What do the baby animals eat? Do they eat the same food as their parents?
- Can the babies walk, run, or swim on their own?
- Do the parents carry their babies around? (Monkeys and koalas do. Even cats and dogs sometimes carry their young!)
- Do other adult animals, besides the mother or father, help take care of the baby animals? (Families of gorillas and elephants usually help with baby animals.)
- Can you think of some ways that animal babies are similar to human babies?
- What are some ways that animal babies and human babies are different?



Night Eyes

Some animals sleep all day and wake up when it gets dark! Raccoons, hedgehogs, owls, some kangaroos, snapping turtles, tigers, foxes, seals, opossums, and lots of other animals are most active at night and are called **nocturnal**. How well can you see at night? How do nocturnal animals see to hunt and find their way around in the dark? Do these simple experiments to learn more about eyes and seeing in the dark.

What You Will Need:

- a lamp
- a small mirror
- a dark room

Part 1 - What To Do:

1. Look at your eyes in the mirror. Look at the dark spot, called a pupil, in the center of each eye. Notice its size.
2. Make the room as dark as you can by turning off the lights and closing the shades. It's okay if there is some light, but if it is still very bright, try going in a closet or room with no windows.
3. Plug in the lamp and sit near it but don't look at it. Look at your pupils again in the mirror. Now hold your mirror towards the light and look in it (don't look directly at the light bulb as it may hurt your eyes). Did your pupils get smaller?
4. Now turn so that your back is to the lamp. Look in the mirror again. Did your pupils get larger after you turned away from the brightness of the lamp?

What's Happening?

A *pupil* is the part that allows light into the eye so that another part, called the *retina*, can create an image of what the eye is looking at. When pupils look largest, they are open the widest. More light goes into the eye and reaches the retina when the pupil is open wide. Less light goes in when the pupil is closed more and looks smaller. The retina is very sensitive to light, so part of the pupil's job is to protect the retina from getting more light than it needs.

When you looked toward the lamp, your pupils got very small because they were exposed to a lot of light. They didn't need that much light in order to help you see clearly in the darkened room, so they got smaller to adjust how much light got to your eyes. When you turned away from the light, not as much light could get into your eyes, making it harder to see clearly. Your pupils reacted by opening wider to let more light come in to help you see better in the darker part of the room!

Part 2 - What To Do:

1. Go into a very dark room, like a closet or bathroom without windows. It should seem pretty black in there. (You can take a friend, sibling, or parent with you!)
2. Sit for a few minutes and see if you can start to see some of the things in the room.

3. Once you feel like your eyes have adjusted to the darkness, turn on a light. Does it seem brighter than normal?

What's Happening?

After being in the dark room for awhile your eyes adjusted to the darkness and you were probably able to find your way around and see the shapes of objects in the room. When you turned the light on, it probably seemed a lot brighter than it would have if you had been in a room with some light. Did the light hurt your eyes or make you squint? Was it harder to focus on things when the light first came on? Your eyes got used to the dark and were more sensitive to light than normal, making it hard to see clearly.

That's exactly what it is like for nocturnal animals all the time during the day when there is lots of light. Their eyes just can't handle the brightness like ours can.

After a few minutes, you probably noticed that you could see just fine in the light. If you went back into the dark room, you would have found that it was again very dark in there and hard to see anything. This is because your eyes work better in the light, even though they can adjust to help you see when it's dark.

Something similar happens in reverse after being outside on a very bright, sunny day. When you come inside, even if all the lights are on, it might seem like it is very dark. That's because it *is* dark inside compared to outside. Your eyes had gotten used to the extra light while you were in the sun and had to re-adjust to less light when you came back inside.

Nocturnal animals' eyes aren't able to adjust to bright lights the way ours can, and our eyes can't adjust to darkness as well as theirs can. Their eyes are designed for seeing very well when there isn't much light, but they don't work very well for seeing in really bright light! To help protect their eyes from even small amounts of bright light, some nocturnal animals have a special second eyelid that they can close to cover their eyes and completely block out light. This helps them sleep during the day and also helps protect their eyes if they are exposed to bright light by accident.

Fun Facts

- When a giant panda is first born, it is smaller than a mouse and only weighs about four ounces (5 US quarters weigh about one ounce, so four ounces weigh about the same as 20 quarters)!
- A mother elephant can be pregnant for up to two years before her elephant calf is born!
- A new baby dolphin usually swims behind and to the right of its mother, because the currents created by the mother as she swims help pull the baby along so it doesn't have to swim as hard.

Silly Science

- Where do kittens go on a fieldtrip?
 - To a *"mew-seum."*
- What do you call a lazy baby kangaroo?
 - A *pouch potato!*

Way Cool Websites

- Read [fact sheets](#) about animals from around the world. Many of them include video and audio clips of the animals.
- See pictures and videos of [baby animals](#) that are born in zoos around the world. Animals vary from aardvarks to wombats and just about everything in between!
- Play this fun baby animal [memory game](#).

Teacher Tidbits

Spring is the perfect time for baby animals to be born! Many animals have babies in the spring since the warmer weather makes it is easier for them to find food to feed them. Warmer weather also makes it easier for small babies to survive. Polar bears, who live in climates that are always very cold, actually have their babies during the winter while they are hibernating. When spring comes and warms things up a little, a mother bear will bring her cubs out of their cozy den for the first time and teach them how to find food for themselves. Other kinds of bears and some other large mammals also have babies during the winter, since they can nurse their babies and not have to leave their den to find food.

There are lots of different kinds of animals living on earth. That means that there lots of very different kinds of baby animals! Even though we usually think of babies as being small and helpless when they are first born, that isn't true for all animals. Some animals are very large even when they're first born. Sometimes even the smallest ones are able to live on their own without any help from their parents when they are born. Keep reading to learn about some different kinds of animals and different ways that their babies are born and cared for.

Mammals are animals that have hair or fur, are warm-blooded, and feed their babies with milk. Mammals give live birth, meaning that their babies are born from the mother's body instead of hatching from an egg. However, there are two animals that lay eggs but are still considered mammals! They are echidnas and platypuses.

Humans, elephants, cats, mice, pigs, rhinoceroses, gorillas, and many other animals are all mammals. Some are huge and some are tiny. Can you think of some other mammals?



Marsupials such as kangaroos (pictured to the left), koalas, wombats, and opossums are mammals, too! When baby marsupials are born, they are very tiny and not as well developed as other mammal babies. They live in a fur-lined pouch on the outside of their mother's belly where they nurse (drink milk) and stay safe and warm until they are big enough to come out. Even after the babies can come out of their mother's pouch, they will still ride around on her back while they grow and learn how to survive on their own. Marsupial babies are called joeys. Almost all marsupials are nocturnal, which means they are awake at night and sleep during the day. Australia is home to most kinds of marsupials, but opossums do live in other parts of the world. In fact, the only marsupial that lives in North America is the Virginia Opossum, which can have up to 13 babies at once!

Reptiles are cold-blooded, have backbones, have skin covered with scales, have claws on their feet, and baby reptiles hatch from eggs. A few kinds of snakes and lizards give live birth

to their babies, but most lay eggs. Reptiles, such as this sea turtle, are born looking like smaller versions of their parents and are on their own almost as soon as they hatch. Their parents do not stay around to take care of them, because they aren't really needed.



Amphibians are similar to reptiles, but they live in water for part of their lives and on land for part of their lives. They have moist, slimy skin instead of scales. All amphibians lay eggs and babies look very different from their parents when they first hatch. They go through different stages of life in a process called **metamorphosis**. For example, a baby frog is a tadpole that lives in water and looks like a fish. It gradually grows arms and legs and becomes an adult frog!

Fish are cold-blooded, have backbones, and lay eggs, just like reptiles and amphibians. Fish's bodies are covered in scales. They do not have any arms or legs, so they use fins to swim. Fish have gills instead of lungs to help them breathe in water. Some female fish can actually give birth to live fish instead of laying eggs! Many kinds of fish do not wait for their eggs to hatch and do not take care of their babies once the eggs hatch. However, some types of fish lay eggs in a nest and guard them very carefully and then take care of the babies until they are big enough to take care of themselves. A baby fish is called a fry and a group or family of fish is called a school.

Birds are warm-blooded and have skeletons and backbones, like mammals. Birds' wings even have bones that are very similar to bones in human arms. However, unlike mammals, birds are covered in feathers instead of fur or hair and hatch from eggs. Mother birds build nests to lay their eggs in, then they carefully sit on their eggs to keep them warm while the baby birds inside grow and develop. Once the babies hatch, mother and father birds have to work hard to collect enough food to keep their hungry babies fed.

Insects do not have backbones, or any bones for that matter! Instead they have exoskeletons that give their bodies shape and protection. Insects have three body sections, six legs, two antennae, and two eyes. Many insects also have wings. Insects hatch from eggs. Some baby insects look like smaller versions of their parents and will shed their skin as they grow bigger and others go through metamorphosis and look and act very different from their adult parents when they first hatch. For example, did you know that a caterpillar is a "baby" butterfly? When a butterfly lays an egg, it will eventually hatch into a caterpillar, which is called a larva. Then it will change into a pupa by spinning a chrysalis around itself and later emerge as an adult butterfly! Many insects, including bees, flies, and beetles, go through metamorphosis. Other insects, like grasshoppers, and arachnids (spiders) molt or shed the outer layer of their skin to grow bigger.

Science Words

Nocturnal - an animal that is awake and active mostly at night and sleeps during the day.

Metamorphosis - a transformation that many insects and animals go through before becoming adults. The changes that take place are very dramatic.

Helpful Links:

Learn names of animal groups, males, females, and young [here](#) and [here](#).

Printable baby animal [coloring sheets](#).

Learn about baby animals that live in [Wind Cave National Park](#) in South Dakota.

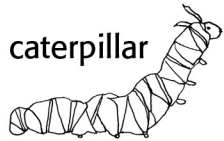
Printable Coloring Sheet

Match the baby animals to their mothers and take the opportunity to review the names of a few different animal babies with your kids. Did you know that a baby platypus is called a puggle?

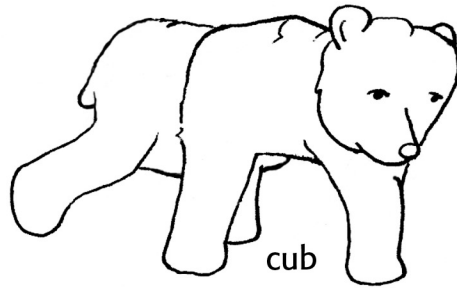
Frogs and butterflies have young that are significantly different from the adults, so this is a great time to review metamorphosis as well.

Baby Animals

Can you match each baby to its mother?



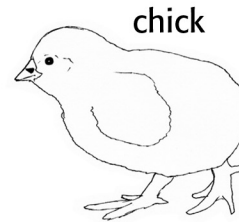
caterpillar



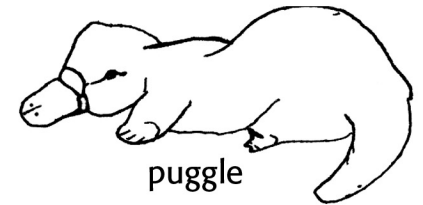
cub



tadpole



chick

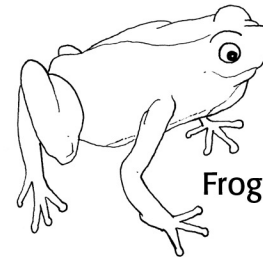
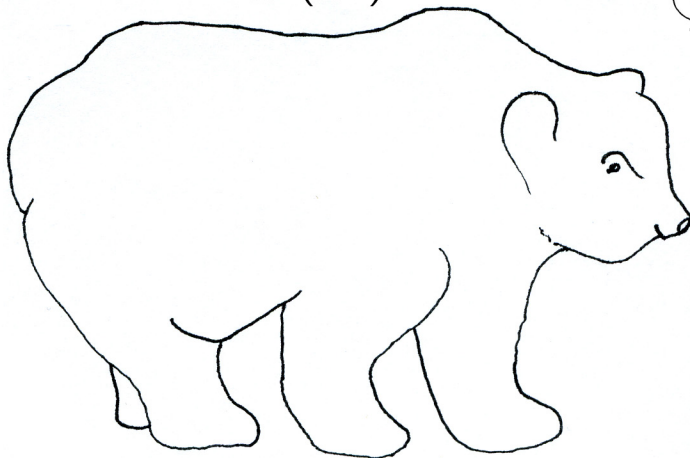


puggle

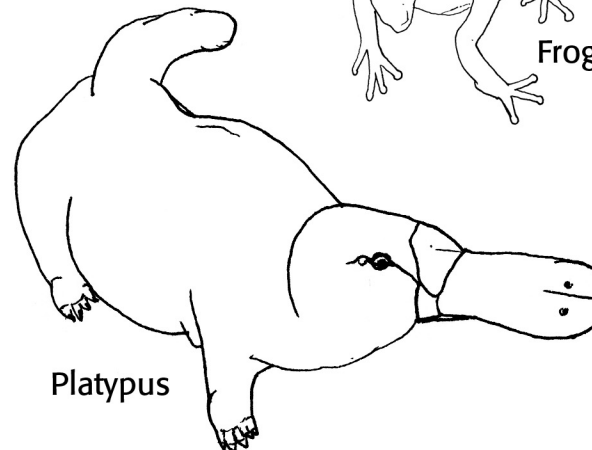
Butterfly



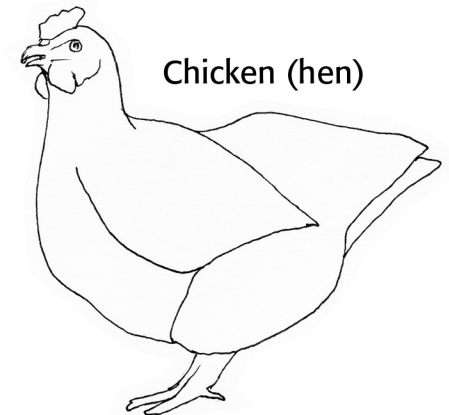
Bear (sow)



Frog



Platypus



Chicken (hen)