



WILD Kids



Wildlife and Their Young

Young animals develop and grow in different ways. The type, and length, of care provided for young animals varies from one species to another.

Animals that bear live young are called **viviparous**. All mammals are viviparous, except for the echidna and platypus, of Australia, which are egg-laying mammals. Mammal *embryos* (the developing young) receive food and oxygen through the mother's blood, and warmth and protection from her body. Some reptiles and fish

retain the young in their body, in a membrane sac, until they hatch. They are considered to be viviparous (in the past, this was called *ovoviviparous*).

Birds, and some fish and reptiles, are **oviparous**. Oviparous animals produce eggs which hatch after leaving the female's body. In birds, the eggshell is hard, but in reptiles the eggshell may be soft and leathery. The egg yolk within the shell contains food for the growing embryo.

Mammals

The young of small mammals, such as mice and rats, may stay with their mother for only a few weeks. Larger mammals, such as mountain lions and bears, usually stay with their mother for a year or more while they learn to hunt and fend for themselves.

Black bears mate in May or June, but there is almost no development of the fertilized egg until the female prepares for hibernation in the fall. (Although bears are not considered to be true hibernators, they enter a hibernating-like state). At this time, if the female has enough fat reserves in her body, the fertilized egg is implanted and begins to grow. If implanted, the embryo only develops for about six weeks before it is born in January. (If the mother does not have enough fat reserves, the female's body reabsorbs the fetus.)

One or two cubs are born without fur and weigh only about ½ a pound each. The tiny cubs cannot see, hear, or smell but are attracted to heat. They nestle up to the mother's warm body and begin to feed. The mother and cubs stay in the den for about three months. During this time, the mother neither eats nor drinks, but she produces milk for her cubs. Her body recycles water from her own and her cubs' body wastes, and breaks down fat to produce milk. The cubs weigh 5-7

pounds when they emerge from the den with their mother in April. They are weaned by late summer, but den with their mother this first year.

Wolf and coyote pups are raised in a family-like structure or pack. The male and female provide care for the pups by regurgitating food for them. In a wolf pack, the alpha male and female are the leaders, and are the only ones that breed.

The young of many ungulates (hoofed mammals) can stand and run within an hour after birth. Bison and elk form large herds at birthing time. This increases the likelihood of survival for the young animals.

Jackrabbits and cottontail rabbits may look very much alike, but their young develop differently. The *gestation period* (the period of time for which the mother carries the young inside her body) for a jackrabbit is 32 to 40 days. The young, called leverets, are born fully furred with their eyes open and are able to move about soon after birth.

Cottontails have a shorter gestation period (28 days). The young cottontails, called kits, are born at an earlier stage of development. They have little fur, cannot see, and stay in the nest for a while.

Birds

Some birds are **altricial**. This means they are born helpless and need to be fed and kept warm in the nest for a while after hatching. Birds of prey are altricial. The female, and in some cases both the male and female, *incubate* (sit on) the eggs and feed the nestlings. Whereas most altricial young stay with their parents for less than two months bald eagle chicks, called eaglets, stay with their parents for three or more months.

Gambel's quail, ducks, and geese are **precocial**. The young hatch in a later stage of development than altricial young, and can move about and follow the mother soon after hatching. The mother doesn't feed the young, but protects them from predators.

Reptiles

Turtles, tortoises, and some snakes lay eggs. The shell of tortoise and turtle eggs is hard, whereas snake eggs have a leather-like shell. To keep the eggs from drying out, snakes usually bury them. Although most reptiles don't protect their eggs, desert tortoises have been known to chase a hungry Gila monster (Gila monsters eat eggs) away from their nest. In some reptiles, temperature determines the sex of the hatchlings.

Two lizards, the Desert-Grassland Whiptail and the Plateau Striped Whiptail, have an interesting method of reproducing. All of the lizards are female, so no mating takes place. The females lay fertile, but unfertilized eggs, which hatch into more females!

Newborn rattlesnakes emerge from their mother in an enclosed membrane. The membrane breaks during, or a few minutes after, birth. Young rattlesnakes, fully equipped with venom, stay with their mother from one hour, up to a few days.

Amphibians

Frogs, toads, and salamanders can lay hundreds or even thousands of eggs. The eggs are usually laid in water, or moist soil, because they are soft and lack a protective shell. Frog and toad eggs may hatch into tadpoles, which mature and transform into young frogs or toads. Some species bypass the tadpole stage and hatch directly into a miniature frog or toad.

Bullfrogs may take up to two years to transform from tadpole to frog, but spadefoot toads develop much quicker. Couch spadefoot toads lay eggs in temporary pools that form during the summer rains. Before the pools dry up, the eggs hatch and tadpoles transform into toads, in only 2 to 4 weeks!

Fish

Most fish lay eggs. Generally, they do not protect the eggs or the hatchlings, called fry. But the Apache trout, Arizona's state fish, covers her nest with gravel to hide the eggs from predators. The Gila Topminnow, an endangered species, gives birth to up to 15 live young. By being born live, the young topminnows have avoided the first stage of depredation that occurs before the egg hatches.

Insects

The young of some insects look like miniature versions of the adults. A young grasshopper, called a nymph, looks exactly like an adult except smaller. But some young insects look quite different from the adults. Butterflies go through **metamorphosis**. They begin life as a caterpillar, which eats plants. In the next stage, the caterpillar enters an inactive state called a pupa. A protective shell called a chrysalis forms over the pupa. Inside the chrysalis, an amazing change takes place as a butterfly develops. The butterfly that emerges feeds on nectar and is an important pollinator of plants.

Activity: Research An Arizona Animal and How Its Young Develop

Include the following information: Is the animal viviparous or oviparous? How many young does it have? What is the gestation/incubation period? Are the young altricial or precocial? Is care provided for the young? If so, what kind of care is provided (food, warmth, protection)? Does the female, male, or family group take care of the young? How long do the young stay with the mother, parents, or family group? What animals prey on the young? What is the survival rate of the young? Include any other interesting facts you may find.
