

For Creative Minds

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Animals and Summer Adaptation Fun Facts

Animals have many different ways to stay cool when summer temperatures soar. Which of these might YOU do to stay cool in the summer heat? Have you ever seen an animal do any of these?



Some mammals pant, or breathe in and out very quickly with their tongues sticking out. The moisture on their tongues cools the air going into their bodies, helping them to cool down.

All kinds of animals jump into or spray themselves with water or mud to cool down. The cooler temperature of the water or mud helps to cool off their bodies.

Some animals release water onto their outer skin (sweat). The evaporating water then cools the animals' bodies. Other animals don't make their own water or sweat so they have to put water onto their skin by licking themselves (spit bath).

Other animals might burrow into cool soil or hide under rocks. The cooler dirt helps to lower body temperatures.

Some animals hide in the shade where it is cooler.

Some animals migrate to higher elevations or cooler climates.

Still other animals might sleep or nap during the day and be more active in the evening or at night when it is cooler.



Summer and Winter Adaptations: Compare and Contrast

These animals are also featured in the companion book, *A Warm Winter Tail*. By looking at the images below, can you describe:

- How do the animals look the same or different in the summer and the winter?
- After reading both books, can you describe some of the differences that we might not be able to see?
- How does the surrounding area (the habitat) look? Is it the same or different in the summer and the winter?
- What are some things that might be different between the two seasons that you don't see in the illustrations but might be able to feel?



Summer Animal Matching Activity



painted turtles



grey squirrels



black bears



white-tailed deer



honeybees



black-capped chickadees

Match the animal to its description. Then match the colors to identify the animal classes. Which animals are **insects**, amphibians, **reptiles**, **birds**, or **mammals**?

1 These **mammals** don't have sweat glands like humans so they lick their forearms where their hair is thinner. The saliva evaporates and carries heat away from their body.

2 On a hot day, these **mammals** often lie on their backs, exposing their bellies with thinner fur. Their body heat escapes.

3 To lower their temperature, these cold-blooded **reptiles** look for the cool water found in ponds, lakes, and streams.

4 You can find these tough, little **birds** hiding from the hot sun under the shade of leafy trees. They also might stand with their feet in puddles of water or open their beaks and breathe quickly.

5 In late spring, these **mammals** shed their heavy winter hair and grow a new coat of fine, short, reddish hair. This special coat allows air to move over the animals' bodies.

6 During the day, these **insects** fan their queen to cool her. At night, they may hang from the outside of the hive to catch the cooler air and fan it inside the hive.

Answers: 1) grey squirrels, 2) black bears, 3) painted turtles, 4) Black-capped chickadees, 5) white-tailed deer, 6) honeybees
mammals: grey squirrels, black bears, white-tailed deer
reptile: painted turtles
bird: Black-capped chickadees
insect: honeybees

and Animal Classes



black swallowtails



garter snakes



humans



Costa's hummingbirds



wood frogs



red foxes

7 These **reptiles** are good at keeping their temperature just right, but if it gets too hot, they might den up during the heat of the day and come out at night to eat when it is cooler.

8 When the weather is hot, these **mammals** turn on fans or air conditioning in their homes; wear light weight clothing; go swimming in cool lakes, rivers, ponds, or pools; and sweat to cool their skin.

9 These **insects** use the warmth of the sun to keep their bodies the right temperature. If they get too hot, their outstretched wings can be used as umbrellas to shade their abdomens.

10 To cool off, these **mammals** rapidly breathe air in and out of their open mouths and across their damp tongues (pant). The heat from their body evaporates with each breath.

11 Although these **birds** are tiny, they are able to fly great distances to cooler weather. They will fly from the Southwestern Desert to the Pacific Coast in search of cooler temperatures.

12 These amphibians must keep their skin moist, even when it is hot and dry outside. So they dig under leaves and sticks to rest where it is cool and damp.

Answers: 7) garter snakes, 8) humans, 9) black swallowtail, 10) red foxes, 11) Costa's hummingbirds, 12) wood frogs
mammals: humans, red foxes
reptiles: garter snakes
birds: Costa's hummingbirds
insect: black swallowtail
amphibian: wood frogs