

Pull out and save in your NATURE DETECTIVES FOLDER.

Fall
1989



Nature Detectives

Who's been here? What were they doing and why were they doing it? When did it happen? Nature detectives try to answer questions like these by looking for clues and evidence of the activities of creatures in the outdoors.

Have you ever wondered about teeth marks on the trunk of a tree, or strange footprints in the snow or mud? If you have, then you are already a nature detective.

Theme:

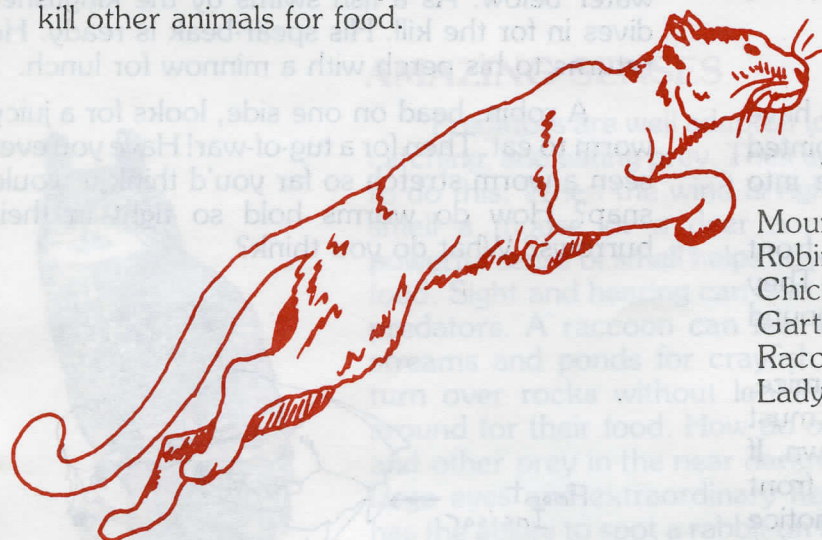
Predator and Prey

Imagine . . . a crouching animal. She feels sharp hunger pains. It's a long time since this predator caught her last meal. At last her quarry comes within reach, unaware of the killer lurking in ambush. With a mighty lunge the fierce predator grabs her prey with her sharp claws . . .

How did you imagine the predator in this story? Did you picture a large animal, like a mountain lion, waiting to pounce on a mule deer? You could be right.

Or did you think of a small animal, like a praying mantis, waiting to catch a greenfly crawling on a flower? You could be right.

We usually think of big, fierce mammals or birds of prey when we think of predators. But predators come in all shapes and sizes. The one thing they have in common is that they all hunt and kill other animals for food.



Which of these animals are predators?

Mountain lion
Robin
Chickadee
Garter snake
Raccoon
Ladybug

Bear
Chipmunk
Bullfrog
Dragonfly
Shrew
Trout

ANSWER: They ALL are! They all get some food by killing other animals.

WHO'S WHO AMONG THE ANIMALS

Predator: An animal that hunts and kills other animals for food.

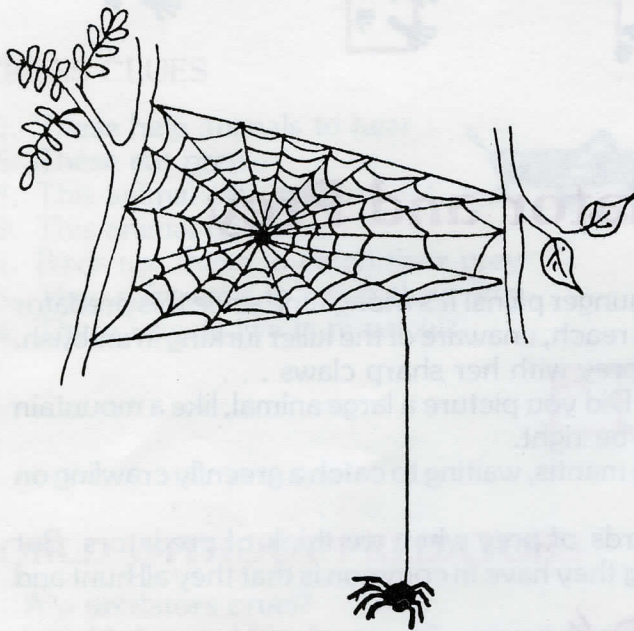
Prey: An animal that is hunted and killed for food by another animal.

Animals are not neatly divided into groups called "predator" or "prey." Predator or prey describes what an animal is at a certain moment.

A chickadee hunting for inchworms in the top of an aspen tree is a *predator*. A chickadee caught in the talons of a sharp-shinned hawk is *prey*.

A leopard frog zapping a fly with his long, sticky tongue is a *predator*. A leopard frog struggling to escape the clamped jaws of a hungry garter snake is *prey*.

Can you think of other animals who might be predator one minute and prey the next?

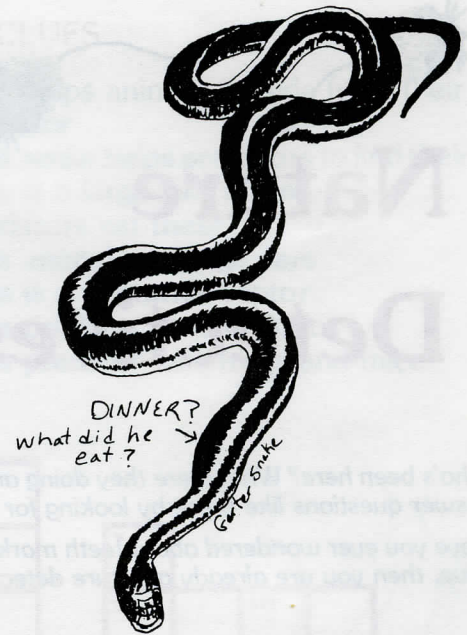


TALENTED TEETH

Teeth tell the story of diet. Carnivores have sharp canines to tear at meat. They have pointed molars to grind the fibrous animal tissue into pieces that they can swallow.

Herbivores have sharp incisors at the front to nip off bite sized pieces of vegetation. They have flat, ridged molars at the back to pound grass and leaves into a mush.

Rodents, such as beavers, rats and mice, have incisors that keep on growing. Rodents must keep nibbling to keep their teeth worn down. If you find a prairie dog skull, test the yellow front incisors. If they are loose, pull them out and notice the curve. The tips are like chisels that are constantly sharpened with use.



WAYS TO KILL

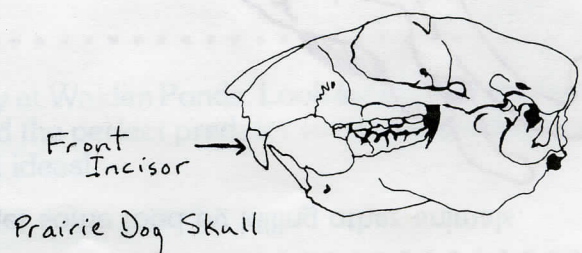
A spider lurks off-stage, waiting. She has a line of thread, her "telephone," which vibrates when her dinner guest arrives. She rushes out to wrap her guest in silken ropes. Then she eats him.

A sapsucker pecks neat rows of holes in tree bark. They ooze sticky sap. The sapsucker returns to feast on insects stuck in the sap.

Phalaropes (a type of shorebird) are whirling swimmers. As they circle they stir up insects on which to feast.

The kingfisher waits on a snag and eyes the water below. As a fish swims by the kingfisher dives in for the kill. His spear-beak is ready. He returns to his perch with a minnow for lunch.

A robin, head on one side, looks for a juicy worm to eat. Then for a tug-of-war! Have you ever seen a worm stretch so far you'd think it would snap? How do worms hold so tight in their burrows? What do you think?



NOBODY WANTS TO BE PREY

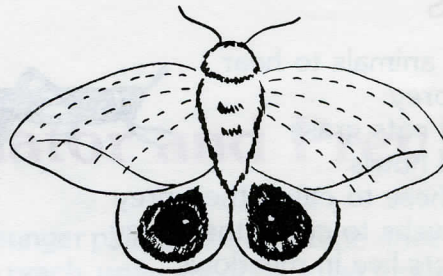
Animals play a deadly game as they go about their lives. They must find food, make homes, and raise their young. They must do all this without becoming prey to other animals. How do they do it? Here are some ways. Can you think of others?



Jackrabbits rely on speed to escape enemies. Their tawny fur blends with the dry, prairie grasses as they forage for food. Their eyes, set wide apart and sideways looking, let them see almost all round — even when their heads are down, munching. When danger threatens, they run.



Ladybugs are bright, not camouflaged. Why don't they all get eaten? Their black and red markings are warnings. They say, "bad taste, do not eat." A bird may taste one ladybug. Yuck! Never again!



Some moth underwings flash bright, imitating eyes. They startle predators long enough to let the moth fly to safety.

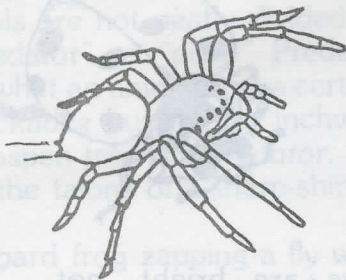
AMAZING SENSES

Predators are well adapted to a life of finding, catching, and eating prey. Their senses help them to do this. When the wind is right, a coyote can smell a moose or a deer a mile away. This powerful sense of smell helps coyotes to find their food. Sight and hearing can also be important to predators. A raccoon can feel with its paws in streams and ponds for crayfish. Raccoons can turn over rocks without looking, and just feel around for their food. How do owls locate mice and other prey in the near darkness? They have large eyes and extraordinary hearing. An eagle has the ability to spot a rabbit on the ground from one-half mile up in the air. Predators use all their senses to locate their prey.



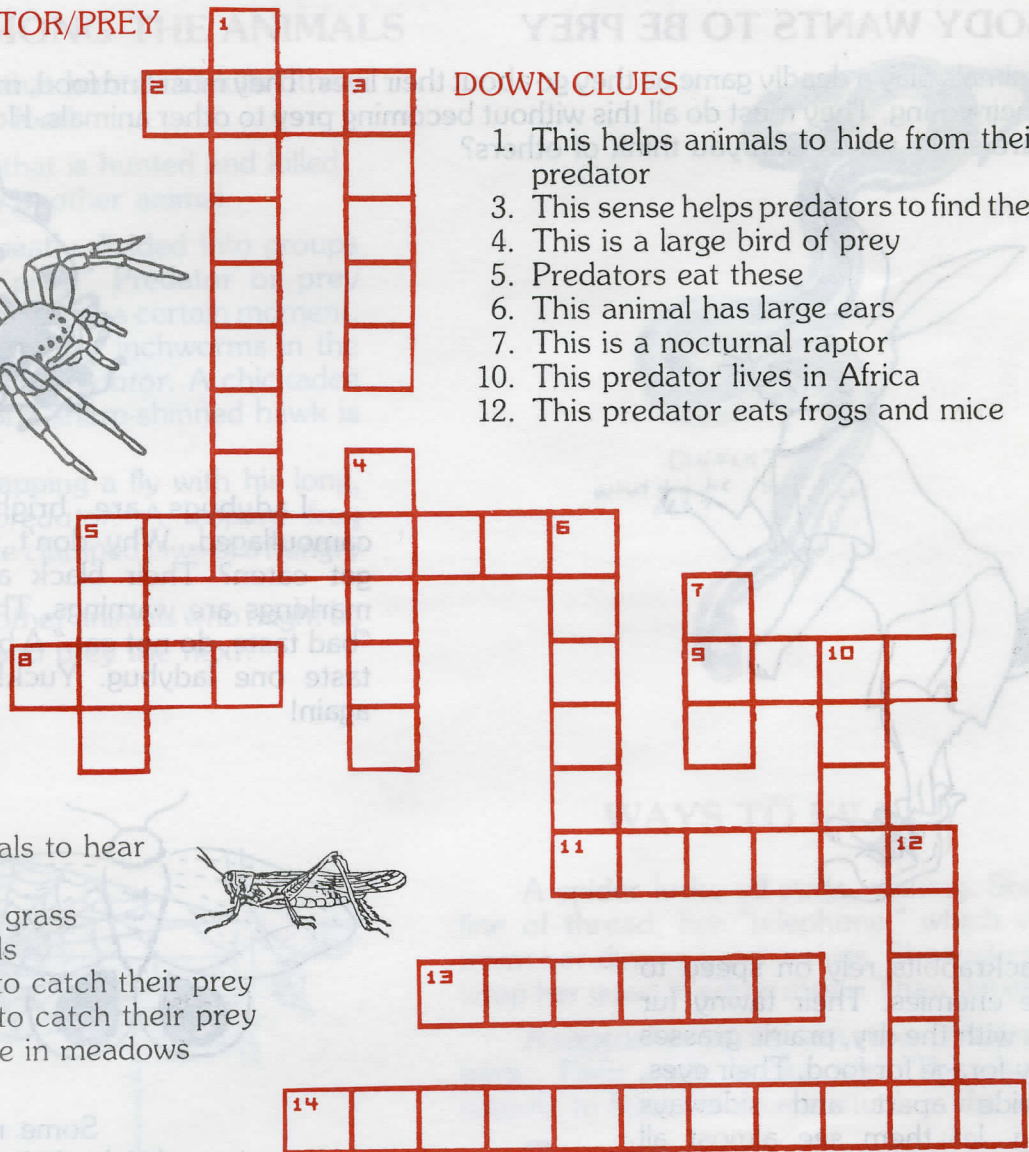
WORD LIST: PREDATOR/PREY

Camouflage
Deer
Ears
Eagle
Grasshopper
Lion
Owl
Predator
Prey
Rabbit
Smell
Snake
Spider
Talons
Wolf



DOWN CLUES

1. This helps animals to hide from their predator
3. This sense helps predators to find their prey
4. This is a large bird of prey
5. Predators eat these
6. This animal has large ears
7. This is a nocturnal raptor
10. This predator lives in Africa
12. This predator eats frogs and mice



ACROSS CLUES

1. These help animals to hear
5. These eat prey
8. This animal eats grass
9. This animal howls
11. Birds use these to catch their prey
13. They spin webs to catch their prey
14. These insects live in meadows



WORLD WITHOUT PREDATORS

Are predators cruel?

Would the world be better off without them?

Predators are not cruel in the way humans mean. They hunt to stay alive. They hunt to take food to their young. They are part of nature like any other animal trying to survive.

Both predators and prey are needed to keep nature in balance. Suppose nothing ate rabbits? How many would there be? How would they all survive?

Predators like coyotes and foxes feed on rabbits. They go for the most meal for the least effort. They don't waste energy going after fit, fast rabbits. They catch old, young, sick or injured rabbits first. That way the general rabbit population is kept healthy by the predators.

NATURE DETECTIVES: Join a predator-prey party at Walden Ponds. Look for signs of the hunt and learn to figure out who was there. Design and build the perfect predator to catch a certain kind of prey. Start thinking now and come with your best ideas!

See "Discover Nature Calendar" for details.