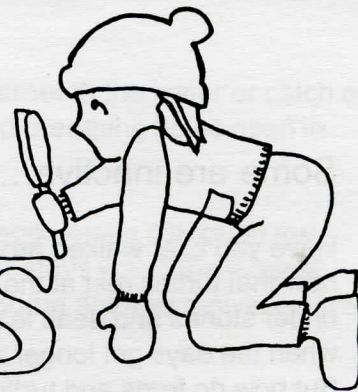


NATURE DETECTIVES



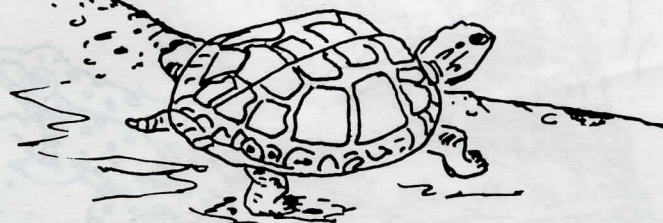
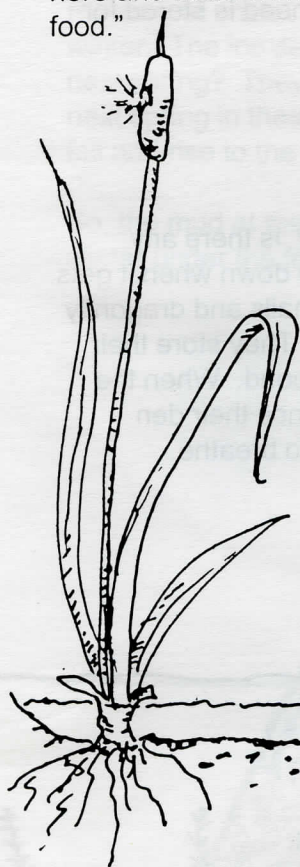
How Turtle Flew South for the Winter

A Native American Tale from the Dakota Tribe

It was fall. Turtle was watching the birds gather noisily in the trees. "What is happening?" asked Turtle. The birds answered, "We're getting ready to fly south for the winter. Soon it will be very cold here and there won't be much food to eat. Down south it will be warm and there will be plenty of food."

At the mention of food, Turtle begged to come with them. He begged and pleaded until finally the birds agreed to take him with them. The plan was for Turtle to grab onto a stick with his mouth while the birds carried it. Soon they were off and Turtle was high in the air. He was amazed at the view below him. But he was also curious about what the lake was below them. He couldn't open his mouth to ask because of the stick, so he tried waving at the birds and rolling his eyes. He even tried making mumbling noises to get their attention. But nothing worked. Soon Turtle became so angry that he yelled, "Why don't you listen to .."

But that was all he said because as he opened his mouth, he let go of the stick and began to fall to the ground. He landed so hard that he ached all over. He crawled to a nearby pond and he swam to the bottom and dug into the mud to get as far away from the sky as possible. Then he fell asleep and slept all winter long. This is why today, even though birds fly south, turtles all sleep through the winter.



Winter 1999-2000

Pull Out and Save

Pond animals in the winter

Some are inactive...

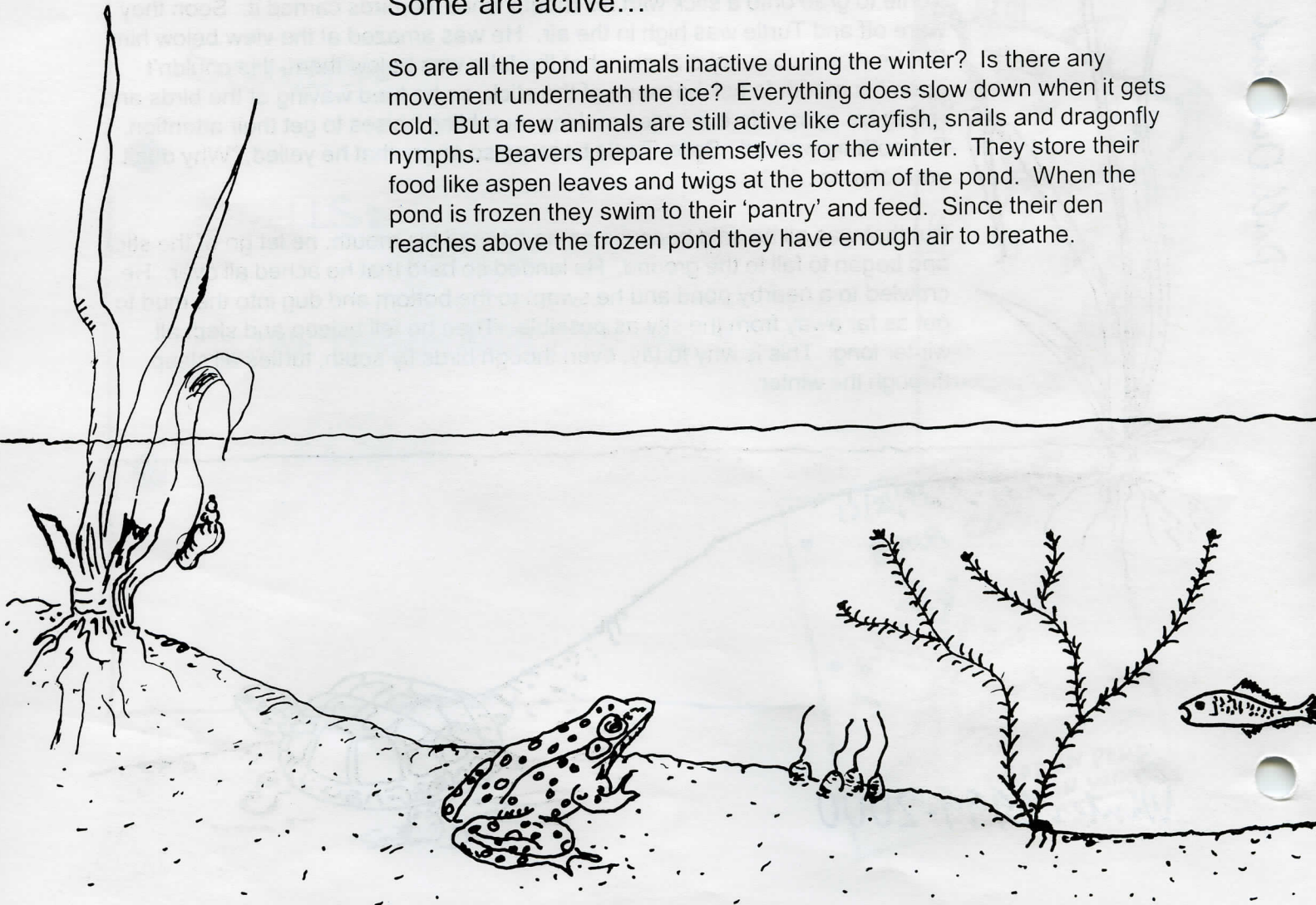
Have you ever walked around a frozen pond and wondered where all the animals are? We know now that turtles rest at the bottom of the pond. Next to the turtles, burrowed in the mud or hidden under stones and dead leaves, you will find frogs too. They remain in a sleep-like state until spring when the days get longer and the pond water gets warmer.

But how do frogs and turtles breathe under water? Since they are not moving around and the cold water slows down their heartbeat and lowers their body temperature, they do not need a lot of oxygen. They get all the oxygen they need from air pockets in the mud. Frogs actually absorb oxygen through their skin as they sleep!

Where are all the other animals that live in and on the surface of the pond? They 'move' from the surface to the bottom of the pond too. It's here where you find one-cell organisms, sponges, algae, clams, leeches and flatworms in the summer. During the cold season they are still here and are joined by beetles and other insects from the surface - but not all as grown-ups. Winter is the time of immature stages. Most little pond dwellers are now eggs, larvae or nymphs sheltered among dead leaves. The eggs are protected by a shell. And inside that shell everything they need is stored for growing as soon as the sun warms up the surrounding waters in spring.

Some are active...

So are all the pond animals inactive during the winter? Is there any movement underneath the ice? Everything does slow down when it gets cold. But a few animals are still active like crayfish, snails and dragonfly nymphs. Beavers prepare themselves for the winter. They store their food like aspen leaves and twigs at the bottom of the pond. When the pond is frozen they swim to their 'pantry' and feed. Since their den reaches above the frozen pond they have enough air to breathe.



Muskrats do not store food for the winter. They eat plants that grow underneath the water or catch a fish. They need to come to the surface to breathe. And for that they keep breathing holes open in the ice by packing leaves and grasses around the opening.

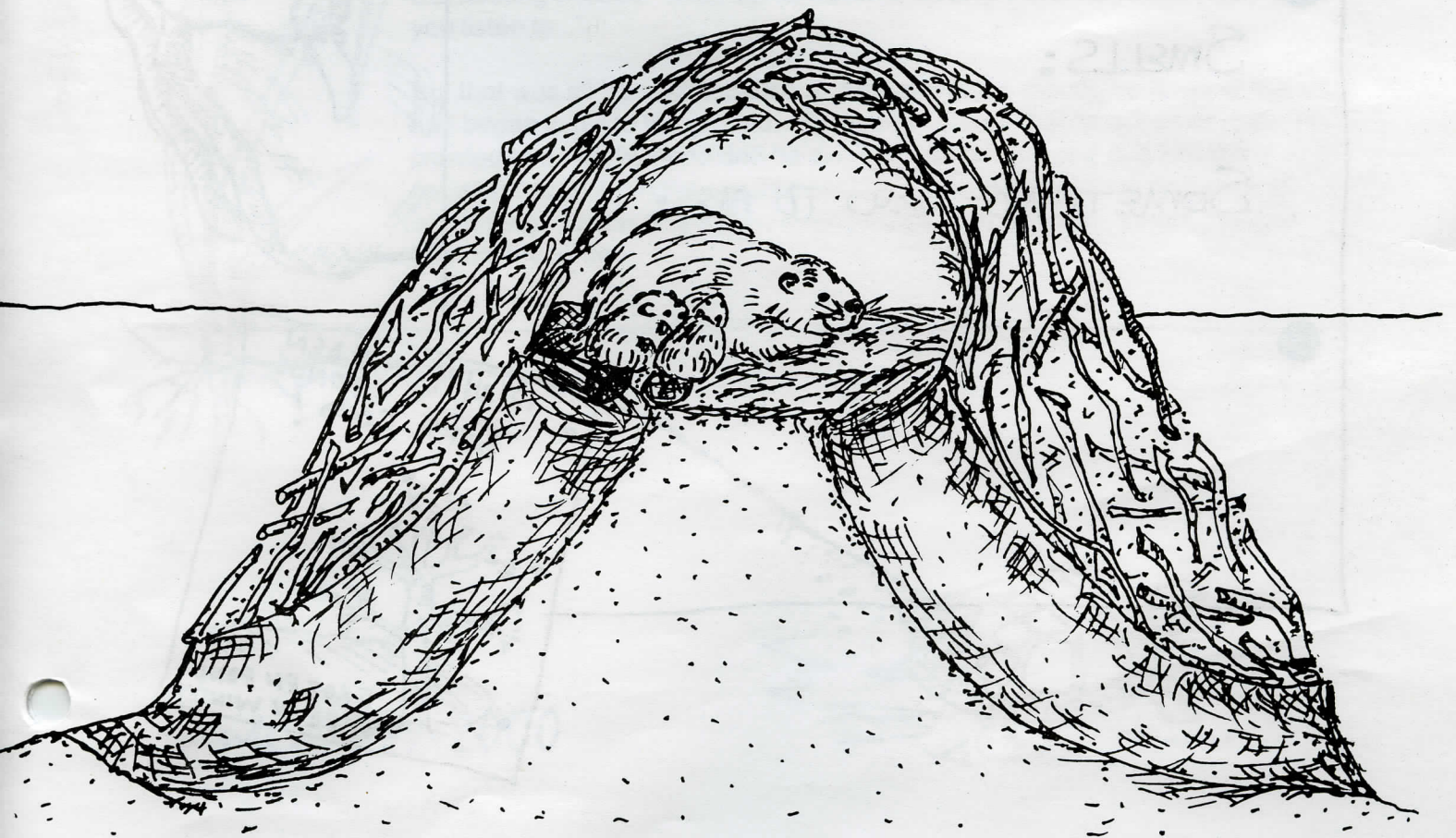
Where are the fish during this time of the year? Some die and only their eggs make it through the winter. But others stay alive and move into deeper water. Here the water stays warm the longest. Some fish are more active in cold water, like the trout and the pickerel. Some are less active like the carp who sinks into the mud and falls into a sleep-like state.

What about the plants?

The plants that are completely in the water, like algae, continue producing oxygen through photosynthesis even when the surface of the pond is frozen. They do it more slowly but as long as there is no snow on the ice, plants are fine. And often there is more light in the pond in the winter when there are no leaves or vegetation on the shore casting shade.

Plants that anchor their roots into the pond's mud and flower above the water surface die down in winter. The ice destroys their plant tissue. But you might ask, where do the plants come from in the next spring? They do not die completely. Some plants store all the energy they need for growing next spring in their roots. Other plants form 'winter buds', little plants that sink to the pond bottom in fall and rise to the surface in spring as soon as they use up their stored energy and get lighter.

So, the mud at the bottom of the pond is a nice shelter for plants and animals to get through the winter under the frozen surface of the pond.



Nature Notebook

Visit a pond this winter. If you walk slowly and quietly, you may see birds near the pond. Look for footprints and holes in the ice. Do you see other clues animals left behind? Take a notebook along to record your observations. What does the pond look like in winter? What do the plants look like? What does the sky look like? Draw pictures of what you see. Take a few minutes to listen quietly. Do you hear ice cracking, the wind in the trees, or geese honking? Then visit the pond again as spring arrives. Take your nature notebook along. What do you notice as the seasons change?

DATE:

PLACE:

TIME OF DAY AND WEATHER:

WHAT I SAW:

SOUNDS:

SMELLS:

SOMETHING NEW TO ME:

