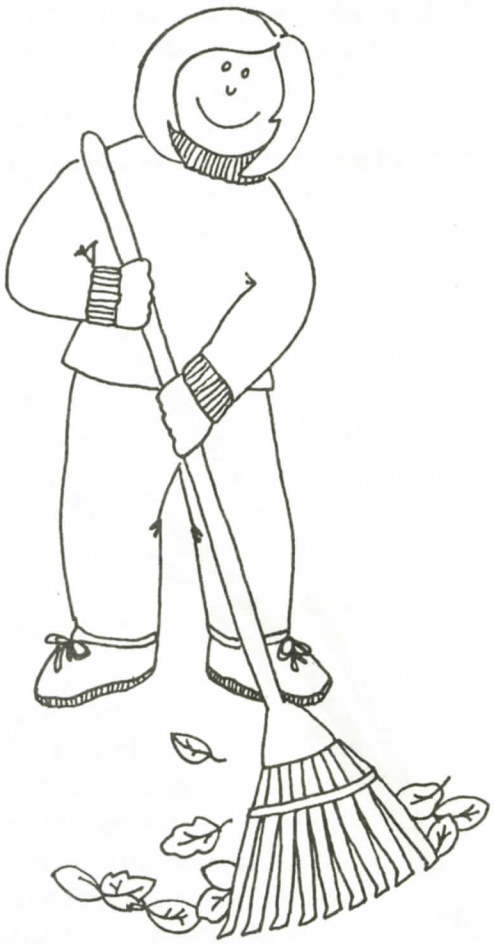
NATURE DETECTIVES

LEAVES



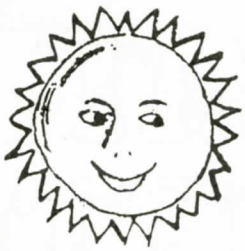
Look at that one! It's shaped like a hand. And that one is thin and pointed like a needle. This one looks like a heart with little teeth all around the edges. And there's a smaller heart-shaped one that really dances in the wind.

I'm talking about tree leaves of course! There are so many different kinds. I think I'll make a leaf book. I can collect them when they change color and fall off the trees - as many varieties as I can find. Then I'll put them between the pages of a big book until they dry, paste them on paper, and write the name of the tree each one came from.

And I could make a leaf rubbing too. Just put a leaf under a sheet of paper and color over it with a crayon. Look at that one float and twirl as it falls to the ground. I want to write a poem about that one . . . or do a floating, spinning sort of dance.

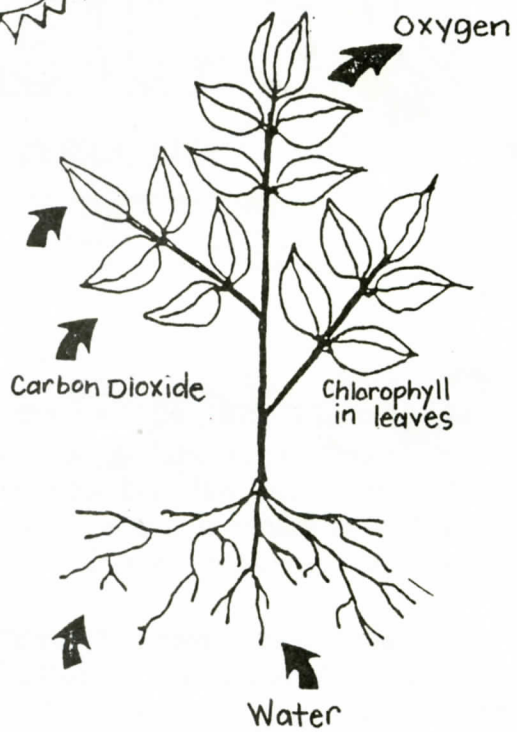
There are so many things to do with leaves! Which one shall I do first? Maybe I'll go jump in that pile of leaves that Mom just raked!

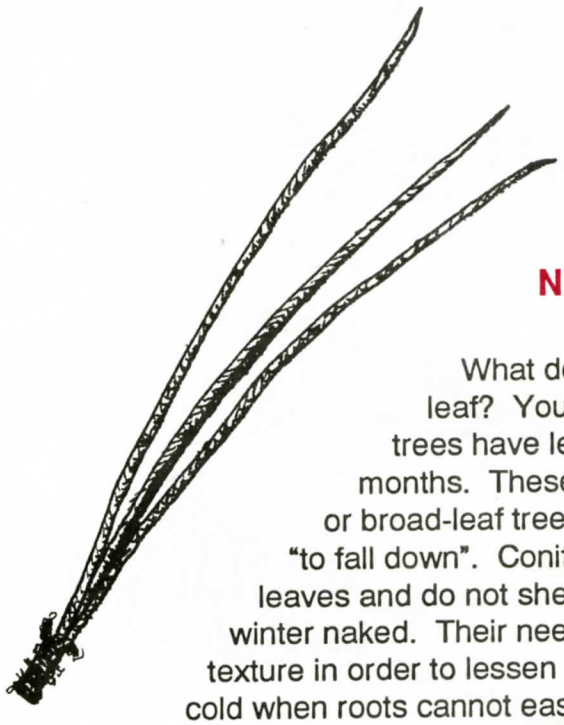
WHY DO TREES HAVE LEAVES?



Do leaves have a job? They certainly do! They make food for their trees. First they need the right ingredients. Air provides carbon dioxide. Roots bring water up from the soil. And sunlight provides energy. Leaves have their own special ingredient to absorb this energy. It's called chlorophyll and it's what makes a leaf green.

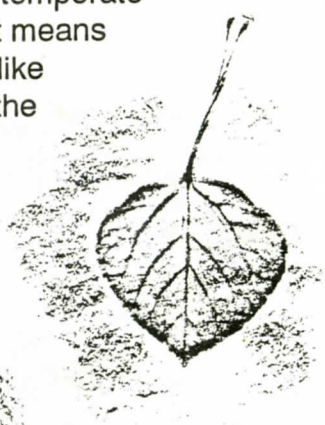
With all of these ingredients present inside the leaf, a food-making chemical reaction called photosynthesis takes place. The products of photosynthesis are glucose (a type of sugar) and oxygen. Glucose is the tree's food and oxygen is released into the air for people and other animals to breathe. Thank you leaves!

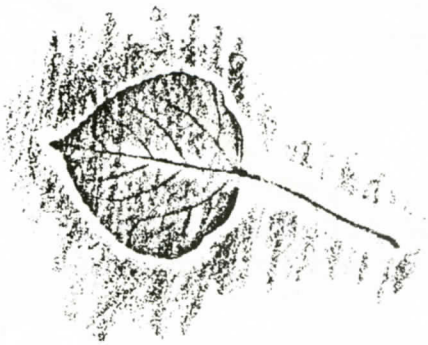


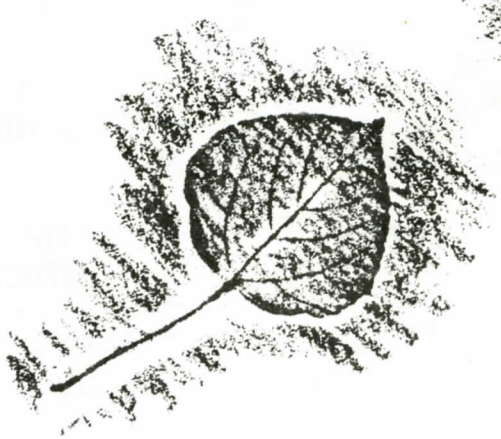


NEEDLE LEAVES ???

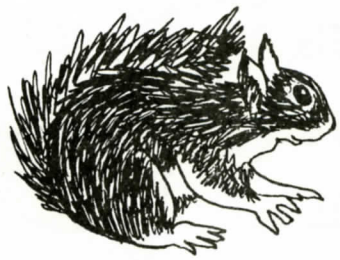
What does a pine needle have in common with an aspen leaf? You guessed it! They're both leaves. Sometimes trees have leaves that fall off before the cold winter months. These deciduous trees are also called temperate or broad-leaf trees. Deciduous is a Latin word that means "to fall down". Conifers, or evergreens, have needle-like leaves and do not shed their leaves all at once to face the winter naked. Their needle-shaped leaves are waxy in texture in order to lessen moisture loss - important in the cold when roots cannot easily take in water. And some needles have their own natural antifreeze!



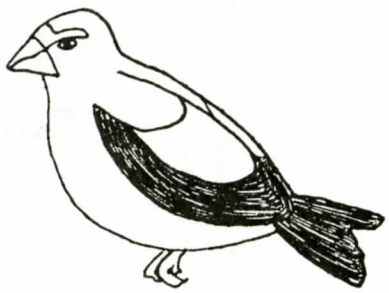




HELPING LEAVES



Leaves provide shelter from wind and rain for many animals. Birds huddle among leaves during storms and at night to sleep. Squirrels use leaves to make their nests in high tree branches. Insects use leaves as food and as shelter. Grasshoppers...chomp! Caterpillars...chomp! Leaf miners...chomp! Moths use leaves like umbrellas, tucking themselves under to get out of the rain. Insects will also inject their eggs into leaves. Evidence of this are the tiny bumps or swellings on leaves. Some insects even mimic leaves as a way of protecting themselves.



HEY! DID YOU KNOW. . .

Ancient Greeks used laurel leaves as victory crowns for athletes.

Olive leaves were symbols of hope and peace.

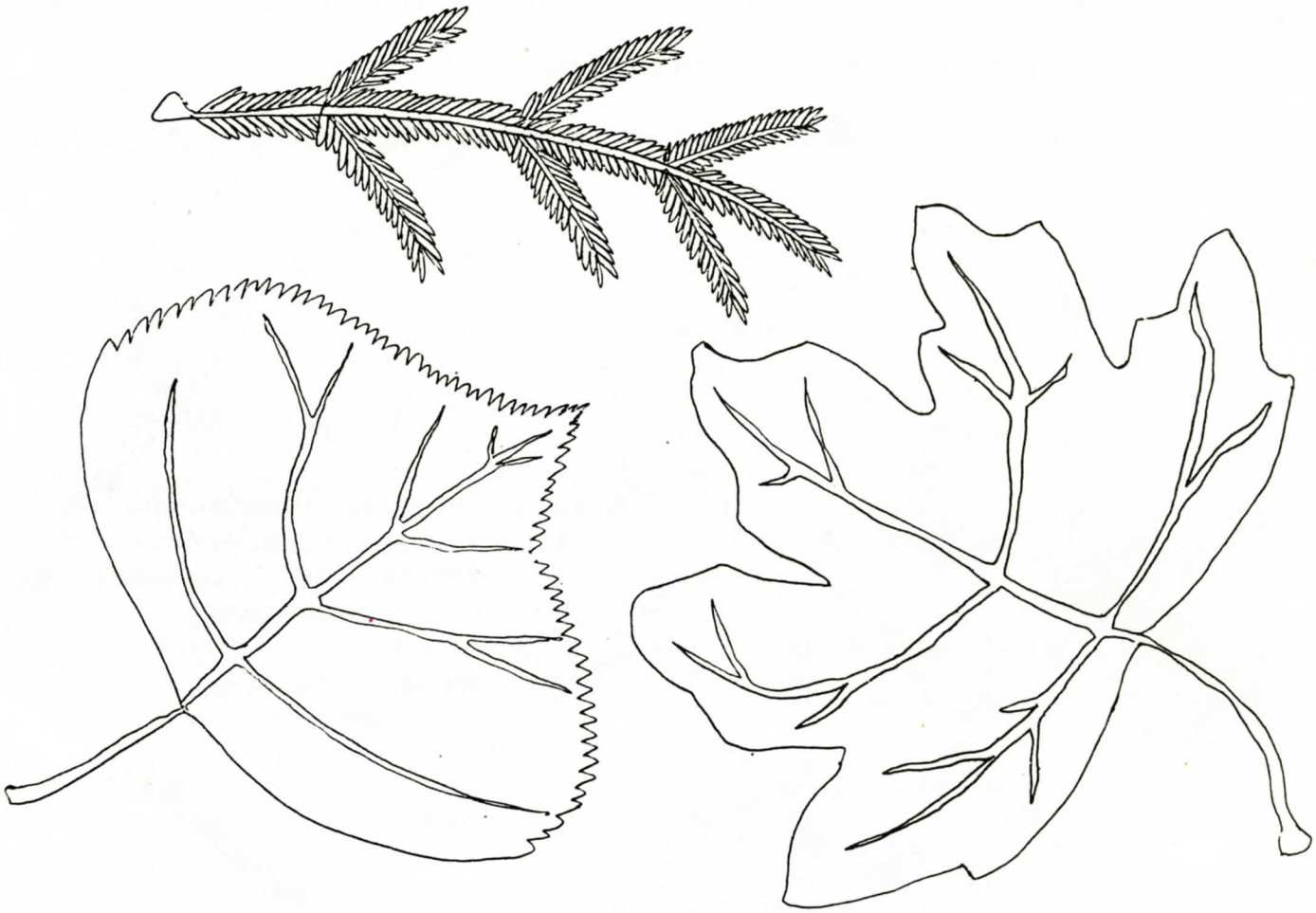
The Romans decorated their heros with oak leaves to honor their strength and glory.

FALLING LEAVES

In parts of the world where winter is brr cold, ground water freezes. This makes it hard for roots to absorb enough water for photosynthesis. So deciduous trees don't make food during winter, they rest. Without food, leaves die and fall off. As they are dying, they change colors. Their green pigment, called chlorophyll, breaks down and other pigments appear - red, yellow, and orange!

I LOVE TO WATCH THE LEAVES
THEY FALL WITHOUT A SOUND
THEY SCATTER HERE AND THERE
DROPPING COLORS ALL AROUND!

LEAVES TO COLOR



NATURE DETECTIVES: LEAF IT TO US!

Celebrate the falling leaves with games and a hike. See the "Discover" calendar for details.

Boulder County