

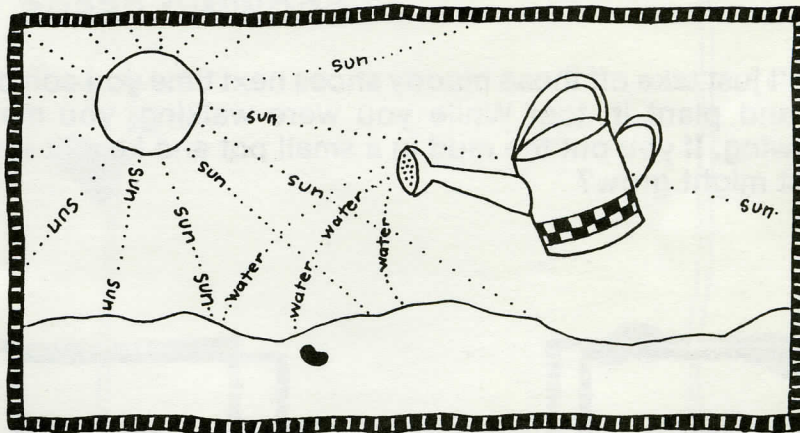
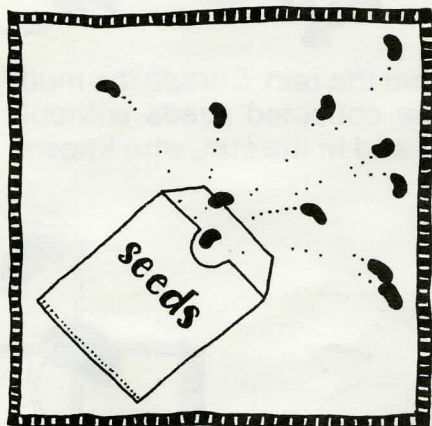
NATURE DETECTIVES

SUPER SEEDS

You can hold 1000 carrots in your hand, fit 100 apples in your pocket, and 50 maple trees in your shoe! Inside every seed there is a tiny plant, complete with leaf, stem, and root parts. So, inside of each carrot seed there is a carrot plant. In each apple seed there is an apple tree. And in each maple seed there is a maple tree. Every seed is a special package of life just waiting for the chance to grow.

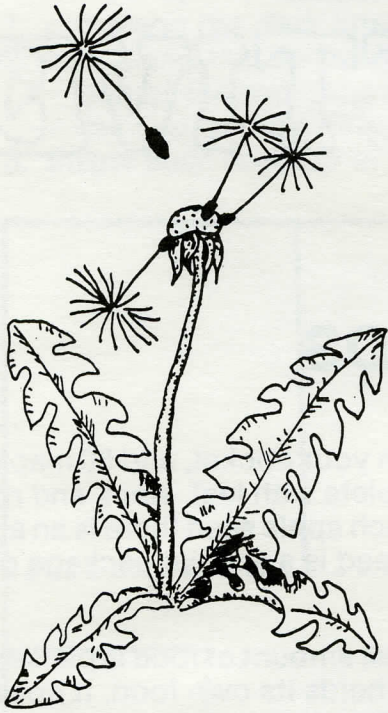
Each seed has a coat that protects the plant parts. A small amount of food is packed into the seed to help the plant start to grow. Because the seed holds its own food, it doesn't need nutrients from the soil at first. But, it **does** need three other things in order to sprout — air, water, and just the right temperature. When a seed ends up in just the right spot, at just the right time, the growing starts.

During the winter, the seed waits, covered by dead leaves and maybe some dirt or dead grasses. When spring rains fall, the seed reacts by taking in the rain water and swelling to a larger size. Then a tip of root pokes through the coat and digs into the earth. Soon, tiny hairs begin to sprout along the root. These hairs "drink up" water and minerals. Finally a shoot breaks through the ground, reaching for the sunlight. Leaves appear. A new plant is growing!



TRAVELLING SEEDS

If all seeds fell to the ground directly below the plants that made them, few would survive. The "mother" plants would shade them or crowd them. There might not be enough water and minerals in the soil for a new plant. So, plants travel!

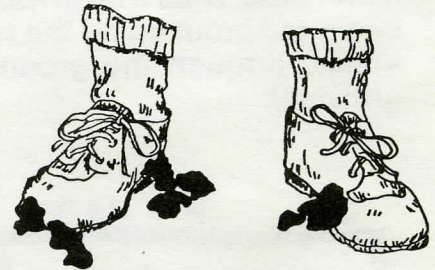


The size, shape, and texture of a seed helps determine how it travels. A dandelion seed can fly! It is small and light, with a feathery "parachute" attached to one end. The wind lifts the parachute into the air and carries it away.

A sand bur seed is a "hitch-hiker". It is round and about the size of a pea, but is covered with tough, sharp points that stick to animal fur or people's clothing. A dog or coyote or rabbit, even you, can carry a sand bur from one place to another.

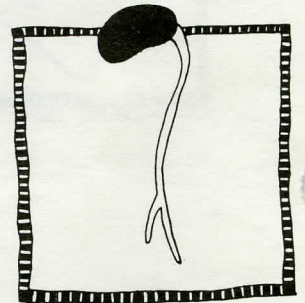
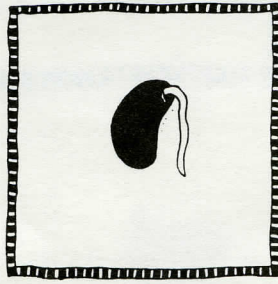
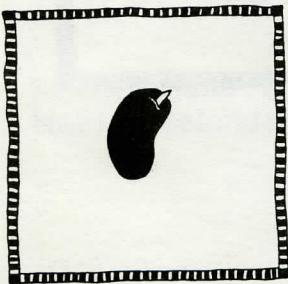
A coconut seed floats on water like a boat. Inside its smooth, waterproof coat is a husk — a layer of air and fibers that acts as a life preserver. Inside the husk is a hard shell, and inside the shell is the seafaring seed.

Examine the seeds you find this fall, and try to figure out how they travel.



GROWING SEEDS

Don't just take off those muddy shoes next time you come in from the rain. Scrape the mud off and plant it, too! While you were walking, you may have collected seeds without knowing. If you put the mud in a small pot and keep it watered and in the sun, who knows what might grow?



SEEDS AS FOOD

When you are eating your Grapenuts or Wheaties did you know you are eating seeds which have been processed from grass-type plants? People use grain seed of wheat, oats, and rice to make breads and cookies too.

People share seeds with animals. The pinon nut is a tasty treat for jays, pack rats, chipmunks, porcupines, squirrels, mule deer, and people!

Weed seeds can be found in vacant lots, alleys, and roadsides. These seeds are a favorite food of pigeons, house sparrows ("parking lot birds"), and starlings.

Berry shrubs and trees are often planted to attract wildlife. These seeds attract small mammals as well as birds.

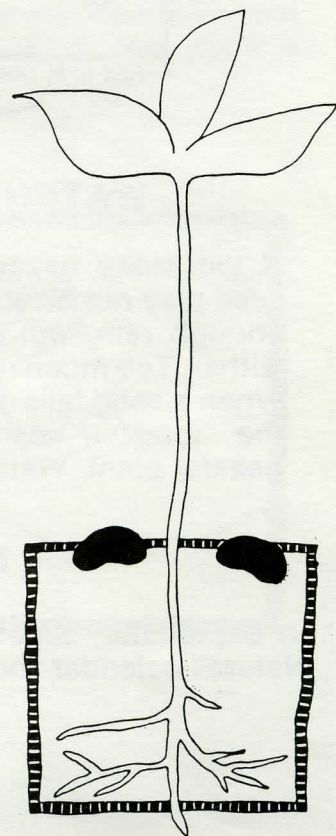
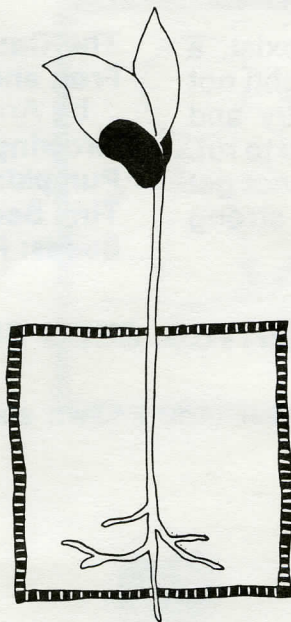
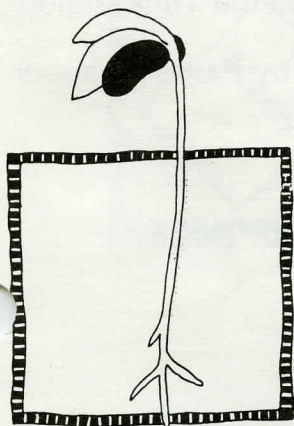
Pods protect some seeds, such as milkweed, evening primrose, and yucca. Look for these pods in the fall and see which animals are attracted to each. Look for insect holes drilled in the yucca pods.



THEY COME IN ALL SHAPES AND SIZES



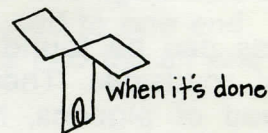
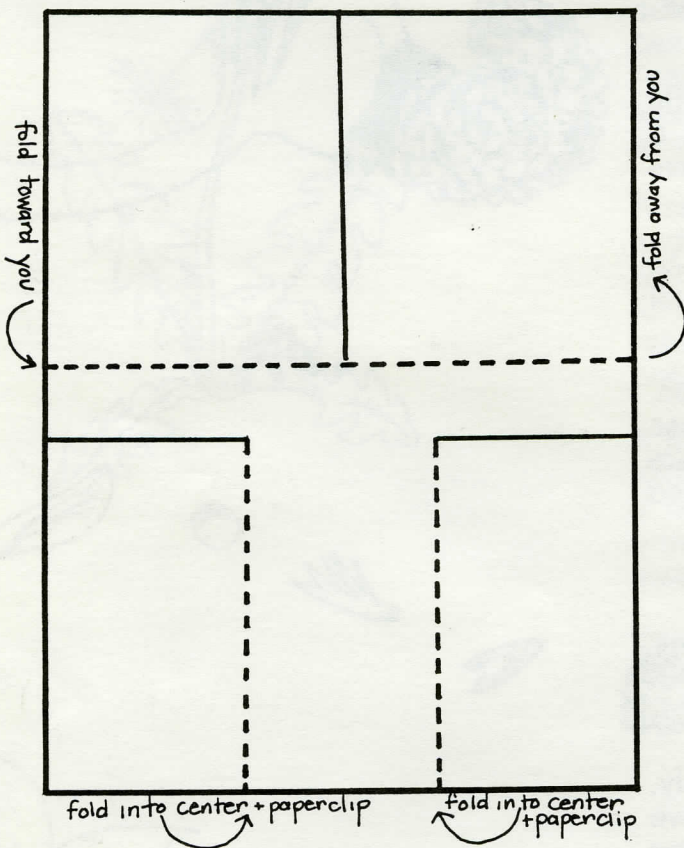
Seeds can be round or flat, silky or prickly, yellow or purple or black. Seeds can have hooks or wings, stripes or dots. They can be as small as a speck of dust, or as large as a football.



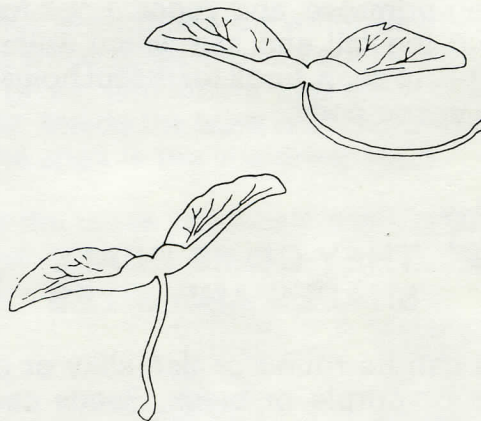
MAKE A MAPLE SEED

Maple seeds move like helicopters. To make your own "seed helicopter":

1. cut along the dark lines
2. fold along the dotted lines
 - one of the top flaps should be folded toward you, one away from you,
 - the two bottom flaps should be folded in and paper clipped in the center
3. throw your seed up in the air and see where it lands!



it should look like this (only bigger!)



WATCH OUT SEEDS!

If too many hazardous conditions exist, a seed may not be able to grow. A drought, not enough rain, will cause a seed to dry and wither. Too much rain can cause a seed to rot. When a seed falls onto poor soil it cannot get the "food" it needs to grow into a strong healthy plant. Watch out, seeds!

READ ON . . .

The Carrot Seed, by Ruth Krauss
Frog and Toad Together and **The Garden**,
by Arnold Lobel
Growing Vegetable Soup, by Lois Ehlert
Pumpkin, Pumpkin, by Jeanne Titherington
Tiny Seed, by Eric Carle
Seeds: Pop, Stick, Glide, by Patricia Lauber

NATURE DETECTIVES: SEED SLEUTHS

In September, super sleuths will discover little known seed secrets. See the "Discover Nature" calendar for details!

