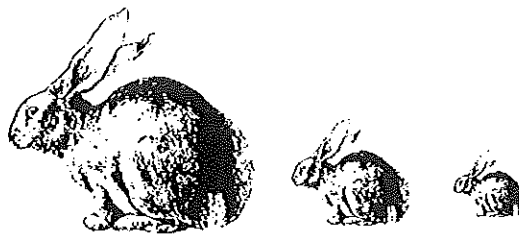


NATURE KIDS



SCIENCE PROJECTS JUST FOR FUN.

Make a Model Grass

What makes grass so special? How can you tell which plants are grasses and which aren't? Think you already know? Try building this model grass and find out if you were right!

Materials: 3 (or more) paper towel tubes

clear packing tape

green paper (construction paper, poster board, pretty much any kind will do, the bigger the better)

cardboard - one piece 6" square or so will do

string - several pieces at least 6 inches long - longer is fine)

chenille sticks, 2 or 3, green, yellow or brown are good colors

Procedure:

1. Paint or color your paper towel tubes green.

(tubes are used because grass stems are round and hollow)

2. Cut out a circle of paper to fit over one end

of each tube, tape it on. *(grass stems have solid joints called NODES)*

3. Cut 4 or 5 slits in the bottom tube and tape a

piece of string to each. Then tape them to the cardboard.

(grasses have many small roots, not one big one)

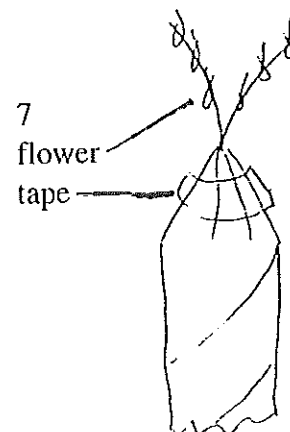
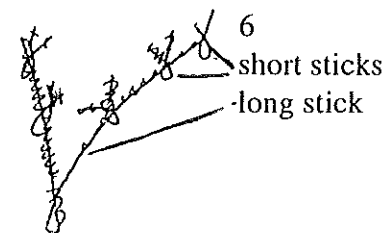
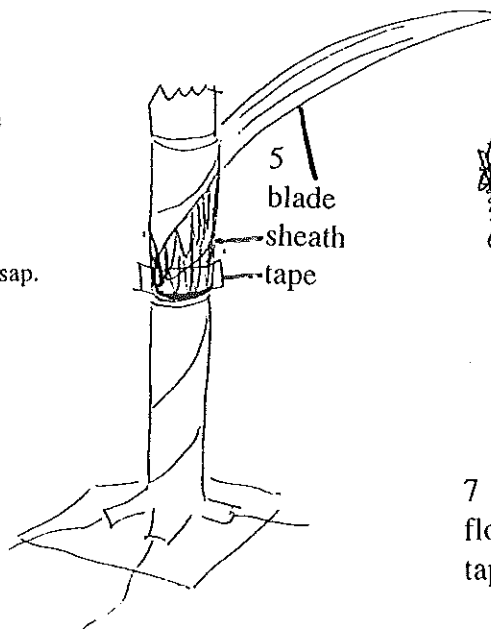
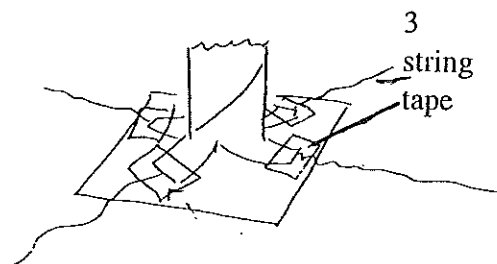
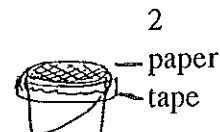
4. Cut long triangular leaves from the green paper. The base should be wide enough to wrap around the grass stem.

(grass leaves have two parts: the SHEATH, which wraps around the stem, and the BLADE, which grows away from the stem) You can draw long lines from base to tip if you like to show that grass has parallel veins to carry water and sap.

5. Attach each leaf of grass to the stem by taping it with the base at a node. *(grass leaves grow only from the nodes)*

6. Bend one chenille stick in half, cut the others in small (2") pieces and twist them around the folded one. These will be your flowers or seeds.

7. Cut some slits in the top stem section, insert the fold of the chenille stick and tape together. *(the flowers and later the seeds they produce grow from the top of the stem)*



Now you can go out side and check out some living grasses! Do they match your model?



TEACHER'S CORNER

by Jenni Malone

Getting it on with Grass

In the spring Texans look forward to the annual exuberant wildflower display: in backyards and gardens, along the highways, creeks and bayous of our state. Amongst the showy blooms are numerous inconspicuous, wind-pollinated flowers of a plant group supremely important to our existence, but for the most part overlooked aesthetically: grasses. (Of the twelve most important food plants in the world, four are grasses: wheat, rice, corn, sugarcane.)

Grasses form a surprisingly diverse and hardy group of plants (*Graminae*, & *Poaceae families*) which blanket the interiors of most continents in areas of moderate rainfall: 10-30 inches. (Less than ten inches of rainfall a year results in desert conditions, more than 30 inches usually allows for forest growth.)

Grasses have round, usually hollow, stems with solid joints called *nodes*. (see illustration) The leaves have two parts: a *sheath* which encircles the stems and the *blade* which extends out from the stem. Grasses produce inconspicuous flower heads called *spikelets*. The arrangement of the flowers (and later the seeds) on the spikelet is a major factor in organizing grasses into genera. Each small flower consists of a single pistal with an ovary, two styles and three stamens. There are no petals or sepals.

Grasses range in height from less than 20 inches to 5 and 6 foot tall prairie grasses and the even taller

bamboo. They all have several adaptations which enable them both to survive and to create a biome of surprising diversity. They generally have very extensive fibrous root systems, made up a great numbers of small filaments, rather than one taproot (like a carrot). On some grasses, the root system makes up 90% of the plant's mass. These roots help create and hold soil. Unlike most plants, grasses grow from the base of the stem and from the leaf joints, rather than at the tips. This

means that when they are grazed or burnt (or mowed) down, their growth parts are not destroyed. Both the stems and the leaves tend to grow vertically, letting the sunlight through almost to the ground. All of these adaptations combine to form a plant that produces a tremendous amount of biomass that can be eaten by animals. The largest land animals on earth since the emergence of flowering plants have been grass eaters. It was grass that

