



GROWING,
GROWING, GONE

CHALLENGE

Grow a plant without soil.



GET
YOUR
GEAR



water



paper towels



sponges



clear plastic
cup



quick-sprouting seeds
(grass or chia)



HINT:

Make sure the seeds have everything else they need to grow: air, sunlight, and water.

WHAT'S GOING ON?

Plants need four things to grow: air, water, soil, and sunlight. They get energy to make food from sunlight. Soil gives them nutrients and a place to grow. They use carbon dioxide from the air to make food. Water carries moisture and nutrients to all parts of the plant. Without one or more of these, a plant will die, or a seed will not sprout.

Plants can grow in surprising places. NASA has grown plants on the International Space Station. Next up, Mars!



Plants usually need soil to grow. Why do you think these seeds sprouted without soil? Would they sprout on only a plastic cup?



Gardeners use tools to loosen the soil and prepare it for seeds. What tool could you use to break apart your "soil"?



Create a building or statue with your "soil" so the plants grow in a certain shape.



Landscape architects use their knowledge of plants to build beautiful spaces. Design a garden people would like to visit.



Measure the height of your sprout every day for a week. Make a graph to show how tall