

# Horsetail



Most horsetails alive today only grow to a height of about 30 centimeters (1 ft.).

## Math Moment

Ancient horsetails were 30 meters tall. The tallest horsetails today are only 8 meters tall. How many living horsetails would you have to stand on top of each other to be taller than an ancient horsetail?

## Giants From the Past

Imagine you are on a nature walk. You see plants with long stems and thin leaves. These plants are called *horsetails*. Millions of years ago, giant horsetails grew in thick forests. They were as tall as pine trees are today.

Horsetails grow around ponds and other wet places. They have stems that are empty on the inside, like a straw. A horsetail is made of many cells. Cells in its leaves and stem use air, light, and water to make food for the plant. This process is called *photosynthesis*.

So why aren't there horsetail forests anymore? Millions of years ago, Earth's climate changed from wet to dry. The giant horsetails couldn't survive. Most species died out. Some horsetails still live in wet places today. But they're not nearly as tall as the giant plants of long ago.



Scientists study fossils to learn about horsetails that are no longer living.

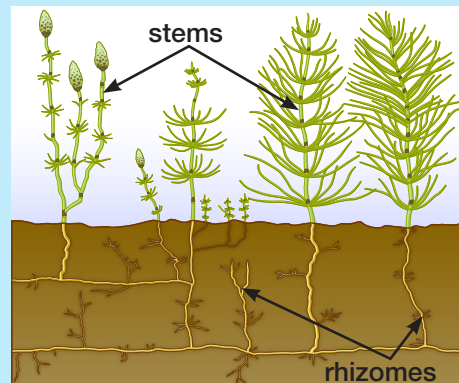
# No Flowers and No Seeds

You can study horsetails for many years but never see a flower. Why not? They don't have flowers—or seeds!

Horsetails have many kinds of cells. They can reproduce by making cells called *spores*. Unlike seeds, spores only have one cell. But spores can grow into new plants. Horsetails make spores at the tip of their stems.

Horsetails also reproduce by growing underground parts called *rhizomes* (RY-zomes). A stem grows from each new part.

## SPREADING HORSETAILS



Horsetails can spread quickly by growing rhizomes underground.

Not all horsetails have leaves. Some just use their stems for photosynthesis.

## Think About It

Why do you think people called these plants *horsetails*? What name would you give them and why?

# Tough Plants

What if you go on a camping trip and forget to bring a kitchen scrubber? How will you clean your dirty pots? You can use horsetails!

Horsetails feel rough. That's because they have *silica* in them. Silica is the same mineral that's in sand. Horsetails have a lot of silica in the outer layer of their cells, called *cell walls*. The silica is strong and helps get your pots clean.