



Plant Planet

So far, scientists have identified some 265,000 species of land plants, from mosses to orchids. About 90,000 of these live in rain forests, and scientists estimate there are at least 30,000 more species they don't know about. Most of these probably live in rain forests, too. Read on for some more amazing facts and figures.

Putting Plants in Their Place

Here's how scientists organize land plants.

Soft and Springy

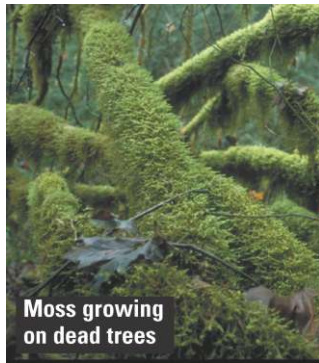
Group name: Mosses and moss allies

How many species: 10,000

Key ID points: small; cushiony; no flowers; no roots or stems

Examples: moss, hornworts, liverworts

Favorite hangouts: damp spots and bogs; grows on rocks and other plants



Moss growing on dead trees

Gone with the Wind

Group name:

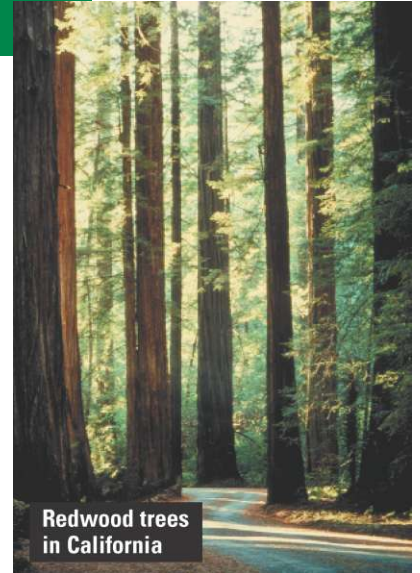
Gymnosperms

How many species: 800

Key ID points: cones; needle-like or scale-like leaves; no flowers

Examples: evergreen trees (pine, fir, spruce, cedar); some deciduous trees (larch, ginkgo, bald cypress)

Favorite hangouts: forests everywhere



Redwood trees in California

Such Frond Friends

Group name: Ferns and fern allies

How many species: 13,043

Number of fern allies species: 1,043

Key ID points: fern leaves at first resemble the head of a fiddle; no flowers; most have roots and stems

Examples: swordfern, rattlesnake fern, clubmoss, horsetail, quillwort

Favorite hangouts: tropical forests, edges of freshwater sources



DISCOVERY EDUCATION SCIENCE CONNECTION

Flowering Power

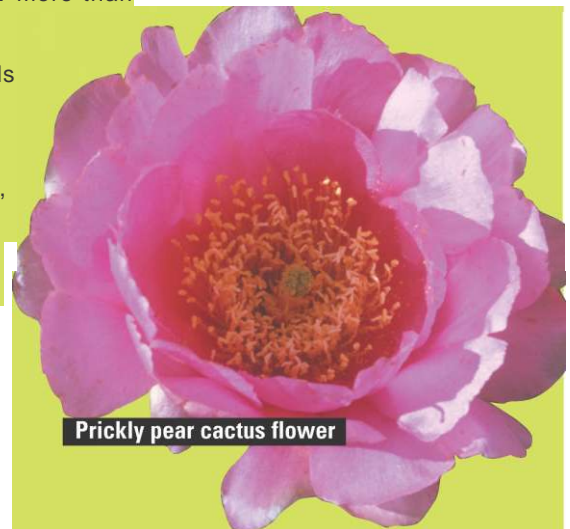
Group name: Flowering plants

How many species: more than 200,000 species

Key ID points: seeds enclosed in a fruit

Examples: bean plants, maple trees, cactuses, roses, buttercups, geraniums

Favorite hangouts: all environments



Prickly pear cactus flower

PLANTS IN PERIL

Plants all over the world are threatened.

Country	Total Species	Species Threatened	Percent of Total
United States	16,108	4,669	29.0%
Jamaica	3,308	744	22.5%
Turkey	8,650	1,876	21.7%
Spain	5,050	985	19.5%
Australia	15,638	2,245	14.4%
Cuba	6,522	888	13.6%
Panama	9,915	1,302	13.1%
Japan	5,565	707	12.7%
South Africa	23,420	2,215	9.5%
India	16,000	1,236	7.7%
Mexico	26,071	1,593	6.1%
Peru	18,245	906	5.0%
Ecuador	19,362	824	4.3%
Brazil	56,215	1,358	2.4%
Colombia	51,220	712	1.4%

Source: International Union for the Conservation of Nature and Natural Resources, 1997

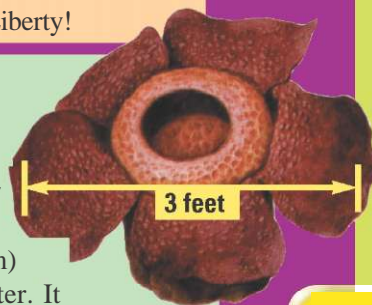
Plant Hall of Fame

Tallest living tree: A giant redwood in California stands about 367 feet (112 m). That's 62 feet (19 m) taller than the Statue of Liberty!



Largest flower:

Rafflesia can grow up to 3 feet (.9 m) in diameter. It grows in Malaysia. Picture an open umbrella.



Smallest plant:

Wolffia floats on water. A full grown *Wolffia* is usually smaller than this "o." It grows in North and South America.



SHOOTS and ROOTS

Plants have three major vegetative organs: leaves, a stem, and roots.

Leaves

- Located above ground
- Absorb energy from sunlight
- Photosynthesis (Produce glucose from water and carbon dioxide, using energy from sunlight)
- Store glucose



Stem

- Located above ground
- Support leaves and flowers
- Buds produce new stems
- Photosynthesis
- Store glucose

Roots

- Located below ground
- Absorb water from ground
- Absorb nutrients from soil
- Tubers (potatoes, carrots) store food (starch)



Activity

FIELD TRIP Go to your local park or forest with a camera or sketchbook, pen and pencil, magnifying glass, and envelope for collecting seeds. Examine the plants with your magnifying glass. How many different kinds of plants can you find on your expedition? Draw or photograph the different species. Start a notebook when you get home. Use the information you've gathered to group the plants according to the information on page 8.