



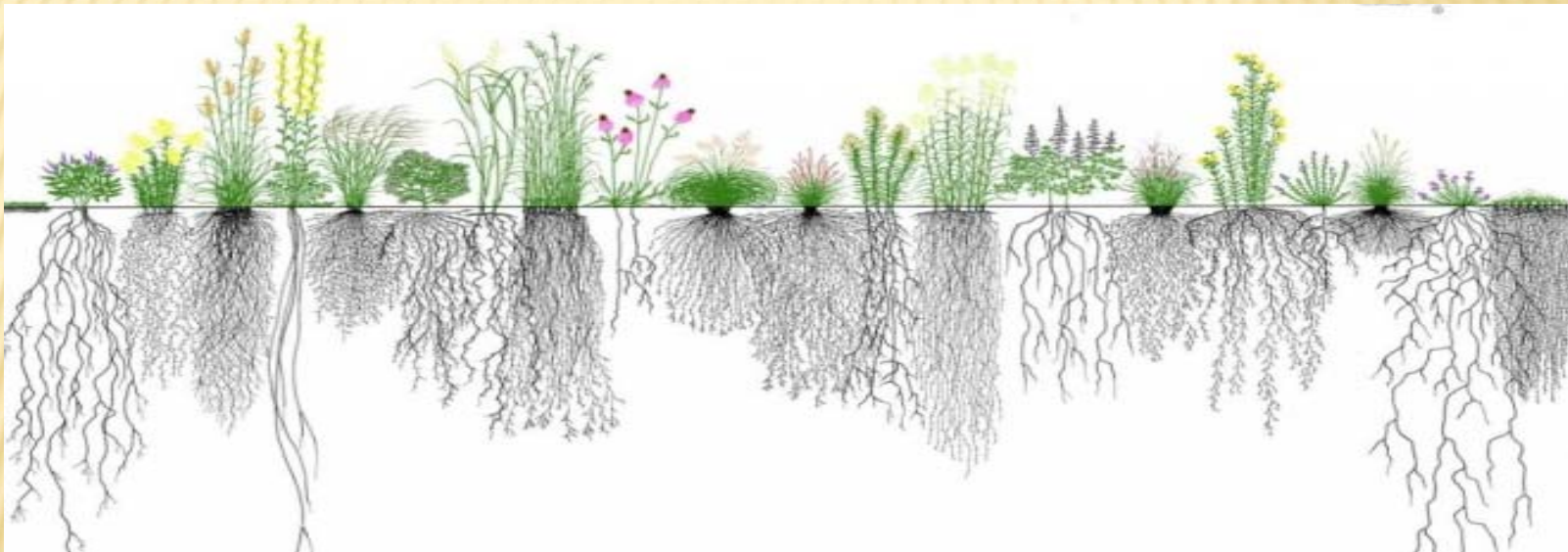
What did you learn from your root investigation?

ALL ABOUT ROOTS

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ALL ABOUT ROOTS

- ✗ What are the roots of a plant and what do they do for the plant?



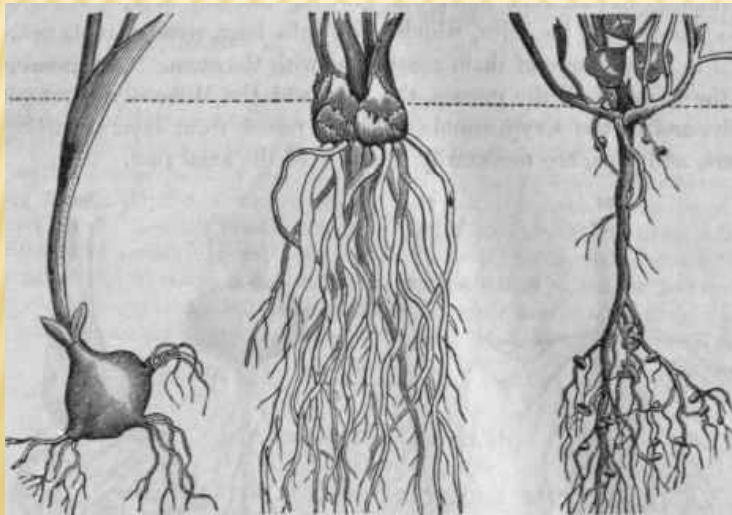
- ✗ We often don't see roots but they are very important.

ROOTS



Roots are organs of a plant that anchor the plant in the ground.

Why is that job important?

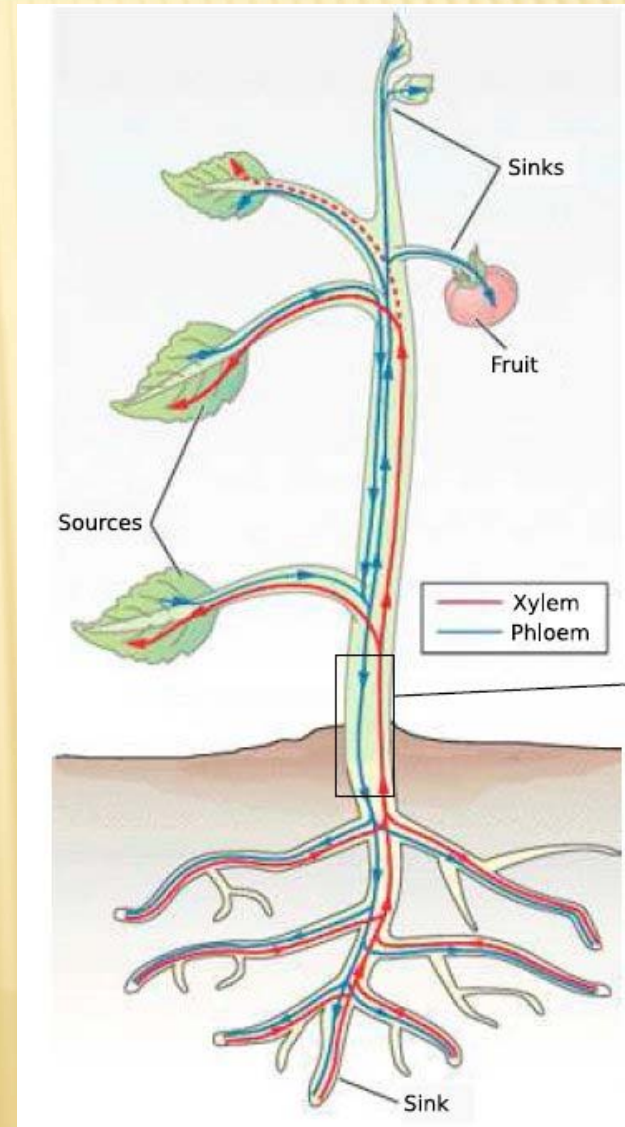


What do you notice about these roots?

ROOTS

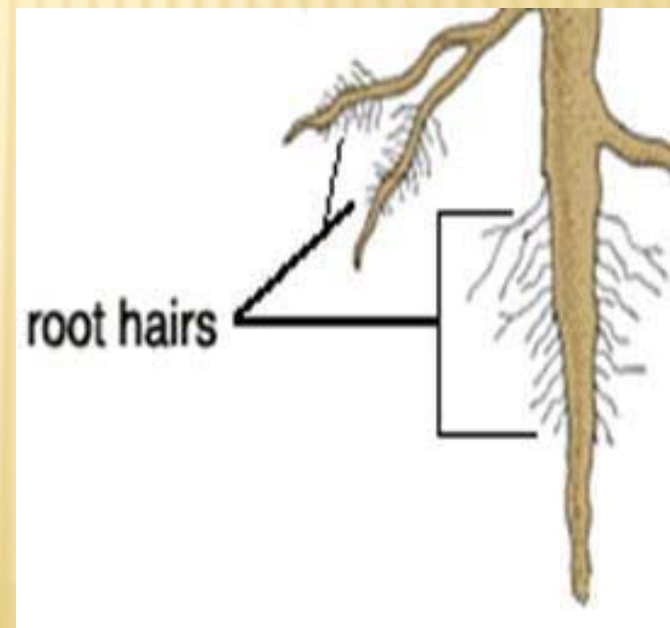
In addition to anchoring the plant, roots also:

- ✗ Bring water with dissolved minerals into the plant from the ground.



ROOTS

- ✗ Root hairs are extensions of the root responsible for bringing water into the plant.
- ✗ Root hairs are too small to see without magnification.



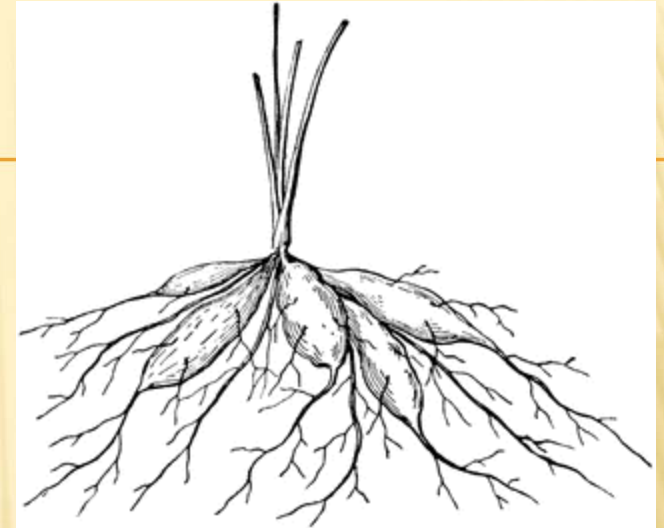
ROOTS

In addition to anchoring the plant and bringing water into the plant, roots also:

- ✖ Store sugars and starches — products of photosynthesis from the leaves.
- ✖ Some are called storage roots.



FUNCTION OF ROOTS



What do roots do for a plant?

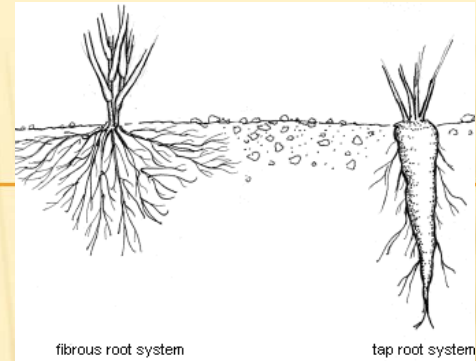
- ✗ _____ the plant
- ✗ Bring _____ from the _____ with dissolved minerals into the plant
- ✗ Store _____ and _____ made in the leaves through photosynthesis.

FUNCTION OF ROOTS

Were you correct? What do roots do for a plant?

- ✗ Anchor the plant
- ✗ Bring water from the ground with dissolved minerals into the plant
- ✗ Store sugar and starches made in the leaves through photosynthesis.

KINDS OF ROOTS



Fibrous roots branch out in all directions and are about the same length.

- ✖ Grasses, corn, and lilies have fibrous roots.

Taproots have a main downward growing root with smaller roots branching off from it.

- ✖ Carrots, radishes, beets, parsnips, and turnips are **storage taproots** since they hold sugar and starches made in the leaves.

ROOTS

- ✗ Which root system is fibrous?
- ✗ Which root system is a taproot system?
- ✗ Explain.



QUESTIONS ABOUT ROOTS



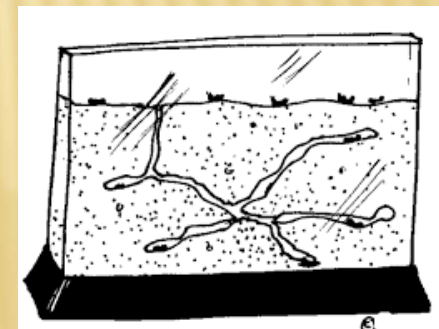
- ✗ What plant part is a sweet potato? _____
a white potato? _____ garlic? _____



- ✗ How do earthworms help plant roots to grow?



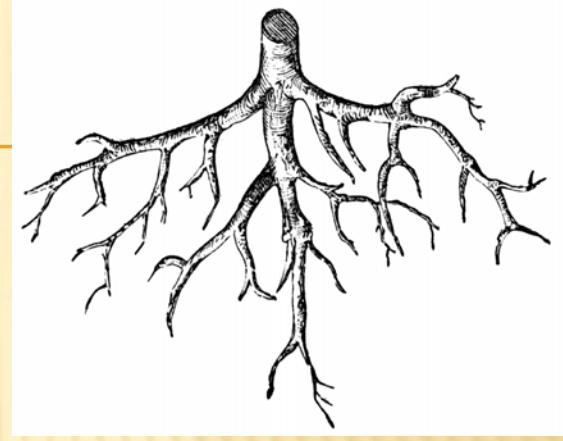
- ✗ How do ants help roots grow?



MORE QUESTIONS ABOUT ROOTS

- ✗ Do you think desert plants (experiencing low rainfall) have deep or shallow roots? Explain.
- ✗ Do you think root vegetables are suitable for growth in a Tower Garden? Explain.
- ✗ Why do you think that some plants (like the ones we call “weeds”) sometimes grow back after we pull them out of the ground?
- ✗ How might the function of roots in the Tower Garden be different from roots growing through soil? How might their function be the same?

ROOT ASSESSMENT



Students write the answer to the following questions:

- ✘ How would the growth of a plant be affected if its roots were cut off? Suggest at least two ways.
- ✘ Why does watering a plant mean to water the soil around the plant?