

CHAPTER 10

Last week, you looked at how offspring can inherit traits from their parents. In addition, organisms can learn traits like how to read a book or ride a bike...

This week, you are going to look at some of the inherited traits of our little green friends...

Plants

There are a lot of different plants in the environment! Trees, grasses, bushes and vegetables (yum!) are all different kinds of plants!

Have you ever taken a good look at a salad before?



**There are plants all over
the place in there!**

In a salad you may find lettuce,
carrots, broccoli, cauliflower and
radishes...

...these are all plants!

Everything in a salad may look different...

...but because they are all parts of plants,
they share similar traits!

Almost all plants have these similar traits:



*Many plants also have flowers too! You are going to learn
about how flowers are very important to fruit later on...*

Keep reading!

Roots are the parts of the plant under the ground! Have you ever tried to pull a plant out of the ground before? It may have been pretty hard to do, right? That is because the roots support the rest of the plant. They do this by attaching the plant to the ground!

The roots also soak up all of the water and nutrients from the ground!

Leaves are the workshops of the plant. They use the water and nutrients from the roots and sunlight to make food for the plant! This process is called **photosynthesis** ("foe-toe-sin-thu-sis"). Each leaf must collect as much sunlight as possible! The more light that is collected, the more food the leaves can make. That is why many leaves are so big!

**No
sunlight...
no food...
no plant!**



WHAT
VEGETABLE
CAN TIE
YOUR
STOMACH IN
KNOTS?

STRING BEANS!



I AM SO SORRY.
THAT WAS WORSE
THAN THE FIRST
JOKE.

But how does the water and nutrients from the roots get to the leaves?

From the stems!

Stems carry all of the water and nutrients from the roots to the leaves. The stems also carry the food that the leaves make to the rest of the plant. Stems are normally very stiff. This is important so that the plant can stand upright for the leaves to collect as much sunlight as possible!

Remember, no sunlight... no food... no plant!

Fruits are the parts of the plant that hold the seeds! The fruit is made to surround and protect the seed! Some of these fruits are fleshy, like an apple or an orange.

Many of the vegetables we eat are really the fruits of a plant (like beans, tomatoes, cucumbers...)

Flowers may look and smell pretty, but they are very important for the plant! Flowers are the parts of the plant that make all of the seeds and fruits!



Each seed has all of the inheritable traits to create a new plant of the same species! You wouldn't plant an apple seed and grow a carrot, would you? Of course not!

Now that you have a good idea about the parts of a plant, let's see how they all work together!

Plants (and all other organisms) go through a **life cycle**. A life cycle is a way that an organism makes more of its own kind. Plants, like many other organisms, have the same parts in their life cycles that include:

- being born
- growing into adults
- reproducing
- and eventually dying

Here is a simple life cycle for a plant:

1. Seeds are grown by the flower of a plant.
2. The seeds fall to the ground or are carried to the ground by the wind or by animals.
3. With the correct abiotic resources (Remember! Abiotic means "non-living resources") of water, soil and temperature, the seed can **germinate** ("jer-me-nate"; which means "a plant that begins to grow.")
4. Once the seed germinates, it begins to grow into a small plant, called a **seedling**.
5. Seedlings grow roots, which hold onto the soil and soaks up water and nutrients. Leaves begin to make food for the plant. The stems send all of these resources all over the plant!
6. Flowers develop on the plant. The flowers grow new seeds. The flowers grow fruit around the seeds.



... and the cycle starts all over again as the seeds fall to the ground or are carried to the ground by wind or animals.

The table below contains words and phrases that have been chopped in half. Find the pieces that fit together and write them in the answer area below.

seed	germ	Ro	St
cycles	Flo	wers	inate
photosy	lea	ves	ots
its	life	nthesis	Fru
ling	ems		

Answers:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

Match the words in the first column to the best available answer in the second column.

- | | |
|----------------------|---|
| _____ Roots | 1) a pattern for all organisms that includes being born then growing into adults and reproducing then dying |
| _____ Leaves | 2) to begin plant growth |
| _____ Photosynthesis | 3) this part of a plant use the nutrients from the roots and sunlight to make food for the plant |
| _____ Stems | 4) the parts of the plant that hold the seeds |
| _____ Flowers | 5) the parts of a plant under the ground that support the plant and soak up its water and nutrients from the soil |
| _____ Fruits | 6) parts of the plant that make all of the seeds |
| _____ Life cycles | 7) a young and small plant |
| _____ Germinate | 8) a way for plants to use sunlight and nutrients and water to make their own food |
| _____ Seedling | 9) parts of a plant that carry all of the water and nutrients from the roots to the leaves |

Draw a picture of a plant. Label the following parts on your picture:

Roots
Leaves
Stem

Flower
Fruits