Flowers

A flower starts as a bud on a stem. Buds are small and tightly closed. The flower petals open wide when the flower blooms. The leaf will turn to catch the sunlight.

Fruits

An orange is a fruit. Fruits have seeds inside them. The sweet part of the orange is called the pulp. The bumpy skin of the orange is called the peel.
Thank you, Grandma.
I will water it every day.
The sprout grew from the seed.
Then we covered it with soil.
We put a bean in a clay pot.
Grandma helped me plant a bean.

**Planting**

![Diagram of a plant with labeled parts: pot, soil, bean, sprout]

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The veins carry sap to the leaf.
The veins grow inside the leaf.
The leaf to the twig.
The green stem connects.
A leaf grows from a plant's branch.
A twig grows from a plant's branch.

**Leaves**

![Diagram of a leaf with labeled parts: stem, leaf, veins, twig]
Carrots and radishes are roots.
These roots are big and colorful.
The greens grow above the soil.
Many roots do not taste good, but carrots and radishes are yummy.

Seeds

Acorns are nuts.
Kidney beans are seeds.
Sunflower seeds are beans.
Nuts and beans are seeds, too.
Sunflower seeds have hard shells.

New plants grow from seeds.
Counting the rings in the trunk,
I can tell how old a tree was by
the wood in the trunk.
If it is darker than the rest,
The heart of the tree helps it stand.
This tree trunk is covered in rough bark.

Our tree will grow big and tall.
They are covered in green leaves.
The branches reach out to the sun.
The trunk stands tall and straight.
The tree roots go into the dirt.
I help my grandma plant a tree.

Trunk

Tree

roots

branches

leaves

heart

nicks

pork

wood

trunk
Sepals are special types of leaves that form a ring around the petals. Their job is to protect the flower while it is still a bud. After the flower has opened, the sepals can still be seen behind the petals. Sepals are usually green or brown, although in some plants they are the same colour as the petals. All the sepals together are known as the 'calyx'.
The nectaries are the parts of a flower that make nectar. Nectar is a sweet substance, which insects drink to give them energy. Bees use nectar to make honey. The nectaries are usually right in the centre of the flower. The insects have to reach deep into the flower to find the nectar. As they do so, they pick up pollen from the anthers on their bodies and carry it to the next flower they visit.
The carpel is the female part of the flower, where the seeds are made. It has three parts: the stigma, which is sticky to 'catch' grains of pollen, the style (the neck), and the ovary which contains the ovules. When the flower is pollinated, the pollen sticks to the stigma and travels down the style to the ovary. Here, the pollen joins with the ovules, and the ovules become seeds. This is fertilisation.
The stamens are the male parts of the flower. They make pollen. Pollen is a fine yellow powder that is needed to make a new plant. Each stamen has two parts: an anther and a filament. The anther contains the pollen and the filament holds up the anther. The pollen is carried to the stigma of another flower or the same flower. This is called pollination.
The receptacle is the top part of the flower stalk, where the parts of the flower are attached. It is often rounded in shape. In some cases, the receptacle becomes part of the fruit after fertilisation, along with the ovary. All the parts of the flower are attached to the receptacle.
Petals are often very brightly coloured. This is because their main job is to attract insects, such as bees or butterflies, into the flower. In some flowers, the petals have special guidelines that lead the insects right into the centre of the flower. The insects pick up pollen from the flower, and carry it to the next flower they visit. This is how insects pollinate flowers.
Directions: Observe and draw a plant. Use the word list to describe your plant or add your own words.

**Plant Observation**

<table>
<thead>
<tr>
<th>Plant Part</th>
<th>Color</th>
<th>Texture</th>
<th>Shape</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filament</td>
<td>Yellow</td>
<td>Prickly</td>
<td>Round</td>
<td>Soft</td>
</tr>
<tr>
<td>Chlorophyll</td>
<td>Blue</td>
<td>Smooth</td>
<td>Pointy</td>
<td>Antler</td>
</tr>
<tr>
<td>Stem</td>
<td>Petal</td>
<td>Petiole</td>
<td>Flower</td>
<td>Leaf</td>
</tr>
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<td>Flower</td>
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<td>Flower</td>
<td>Leaf</td>
</tr>
</tbody>
</table>

Name:
1. Tomatoes and a tomato plant started out as a _____________.

2. The ________________ is the pretty outside part of a plant.

3. The inside of a flower is filled with a liquid called ________________.

4. Lines on a flower ________________ guide a bee to where the nectar can be found.

5. If a flower petal has a lot of lines then it will ________________ a lot of bees.

6. Plants make nectar for insects to ____________ and they use flowers to show where the nectar is.

7. The anther is the part of the flower that holds the ________________.

8. As a bee or insect flies into the flower it gets ________________ in pollen.

9. The pollen sticks to the bee's legs / wings.

10. Insects and bees ________________ pollen from one plant to another plant.

11. The part of the flower that has the pollen is the male / female part.

12. When pollen is dropped in a flower it grows a ________________ which goes down into the flower.

13. The pollen tubes grow down to the eggs and make seeds / flowers.

14. The seeds come up and out of the plant and are carried away by the ________________.

15. A new seed needs soil, water, ________________, and time to grow.
MSB-Goes To Seed

While watching, complete this video guide.

Three things I knew that were confirmed in the video:

A-

B-

C-

Three things I didn’t know but I now know because I watched the video.

A-

B-

C-

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15. A new seed needs soil, water, ____________ and time to grow.
Miss Frizzle took the class on a field trip to ________________.

Their field trip was ________________.

You won't believe what happened!

First, ________________

Then, ________________

Next, ________________

Finally, ________________
MSB-GETS PLANTED

Word Bank

air  open  stem
chloroplasts  plants  sugar
energy  roots  sunlight
food  seed  water
hairs  sprout  wilt

Not all terms are used.  Some terms may be used more than once.

__ 1. A plant starts out as a ________________.

__ 2. Plants need soil, sunlight and ________________ to grow.

__ 3. To stay alive all living things must have ________________.

__ 4. All plants have leaves, a stem and ________________.

__ 5. A soil mite is an insect that lives above / under the ground.

__ 6. Plant roots grow little fibers called root ____________ that absorb water from the soil.

__ 7. Water travels up the ____________ of the plant towards the leaves.

__ 8. Leaves are green because they contain a green substance called ________________.

__ 9. Leaves have tiny holes on their surface that are used for taking in ________________.

__ 10. Sunlight gives ________________ to the chloroplasts inside the leaves.

__ 11. Chloroplasts make ________________ from sunlight, air and water which becomes food for the plant.

__ 12. Even if a plant has enough water and air it must still have ________________ to make its own food.

__ 13. A plant will start to wilt / sprout without sunlight.

__ 14. Plants cannot make their own food if the leaves are not ________________.

__ 15. Only ________________ can make their own food from air, water and sun.
MSB-Gets Planted

While watching, complete this video guide.

Three things I knew that were confirmed in the video:

A-
B-
C-

Three things I didn’t know but I now know because I watched the video.

A-
B-
C-

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# Growing Seeds

**Growing Conditions**  
(How the seed will be planted)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>A</strong></td>
<td>The seed will be given water and sunlight.</td>
<td></td>
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<tr>
<td></td>
<td><img src="image" alt="Watering Can" /> <img src="image" alt="Sun" /></td>
<td></td>
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<tr>
<td><strong>B</strong></td>
<td>The seed will be given water, but will not be given sunlight.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Watering Can" /> <img src="image" alt="No Sun" /></td>
<td></td>
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<tr>
<td><strong>C</strong></td>
<td>The seed will not be given water, but will be given sunlight.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="No Water" /> <img src="image" alt="Sun" /></td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>The seed will not be given water, and will not be given sunlight.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="No Water" /> <img src="image" alt="No Sun" /></td>
<td></td>
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</tbody>
</table>

**Prediction**  
(Do you think it will Grow A Lot, Grow A Little, or Not Grow At All?)  

<p>| | |</p>
<table>
<thead>
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</table>
**Instructions:** As you read, list causes in the left-hand column and their effect in the right-hand column.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
**Instructions:** In the first row, write what you already know about greenhouses. In the second row, write what you would like to learn about them. After you finish reading, fill in the third row with information you learned from reading the book and the fourth row with what you still want to know.

<table>
<thead>
<tr>
<th>What I Know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>What I Want to Know</td>
</tr>
<tr>
<td></td>
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<tr>
<td>What I Learned</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>What I Still Want to Know</td>
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<tr>
<td></td>
</tr>
</tbody>
</table>
Plants

ACROSS

1 New plants grow from tiny _________.
4 Like all living things, plants ________ and change.
6 The ________ of a plant grow on the stem.
8 Roots hold plants in the ________.
9 Most plants have ________ that make seeds.
12 All plants need sunlight, food, and ________.
13 The stem carries ________ and water to all the parts of the plant.
14 Plants use ________ to stay healthy.

DOWN

1 A tiny ________ can grow into a beautiful plant.
2 The part of the plant that holds the plant up straight is the ________.
3 Plants are ________ things.
5 Plants give off ________ to help us breathe.
7 Insects carry ________ from flower to flower.
10 The ________ of a plant take in water and minerals from the soil.
11 Sometimes, a plant can grow ________ that we can eat.

WORD BANK: Flowers, food, fruit, ground, grow, leaves, living, minerals, oxygen, pollen, roots, seed, seeds, stem, water.
# Plant Vocabulary

Use the vocabulary words in the box to complete the sentences below.

<table>
<thead>
<tr>
<th>seeds</th>
<th>oxygen</th>
<th>water</th>
</tr>
</thead>
<tbody>
<tr>
<td>life cycle</td>
<td>fruit</td>
<td>pollen</td>
</tr>
<tr>
<td>leaves</td>
<td>stem</td>
<td>roots</td>
</tr>
</tbody>
</table>

1. New plants grow from ________________.
2. Plants give off ________________ to help us breathe.
3. The ________________ of a plant grow underground.
4. Insects carry ________________ from flower to flower.
5. The ________________ of a plant shows how it grows, lives and dies.
6. All plants need sunlight, food and ________________.
7. The ________________ of a plant grow on the stem.
8. Sometimes, a plant can grow ________________ that we can eat.
9. The part of the plant that holds it up straight is the ________________.