

# Plant Adaptations Notes

## Plant Hormones

- \_\_\_\_\_: A \_\_\_\_\_ that is produced in one part of an organism & affects \_\_\_\_\_ part of the \_\_\_\_\_ individual
- Control a plant's:
  - \_\_\_\_\_ of growth & development
  - plant's \_\_\_\_\_ to environmental conditions.

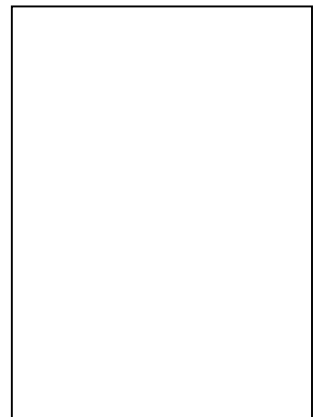
## Hormones tell Plants:

- When to drop their \_\_\_\_\_.
- When to start new \_\_\_\_\_.
- When to cause \_\_\_\_\_.
- When to cause \_\_\_\_\_.
- When to cause \_\_\_\_\_.
- \_\_\_\_\_ - the portion of an organism affected by a particular \_\_\_\_\_

## Types of Hormones

### 1. Auxins

- Substances produced by the tip of each seedling that regulate \_\_\_\_\_.
- They stimulate cell \_\_\_\_\_.
- Contribute to: \_\_\_\_\_ & \_\_\_\_\_
- \_\_\_\_\_: Location where auxins are produced.
  - \_\_\_\_\_ & \_\_\_\_\_
- \_\_\_\_\_ - the closer a bud is to the stem's tip, the more it is inhibited, because auxins move out from the \_\_\_\_\_
- \_\_\_\_\_ - a meristematic area on the side of a stem that gives rise to \_\_\_\_\_ branches
- Auxinlike Weed Killers
  - \_\_\_\_\_ - compounds that are toxic to plants, many contain high \_\_\_\_\_ since auxins inhibit growth



### 2. Cytokinins

- Plant hormones that are produced in growing \_\_\_\_\_ & in developing \_\_\_\_\_ & \_\_\_\_\_.
- In plants, cytokinins stimulate growth of \_\_\_\_\_, & cause \_\_\_\_\_ seeds to \_\_\_\_\_.

### 3. Gibberellin

- A \_\_\_\_\_ substance
- Gibberellins produce dramatic \_\_\_\_\_, particularly in \_\_\_\_\_ & \_\_\_\_\_.

### 4. Ethylene

- One of the minor components of \_\_\_\_\_.
- In response to \_\_\_\_\_, fruit \_\_\_\_\_ release small amounts of the hormone ethylene
- Ethylene then stimulates fruits to \_\_\_\_\_.

**Instructions:** Name and describe the four major types of plant hormones.

Hormones	1.	2.	3.	4.
What it does?				
Diagram				

**Topic: Tropism**

- \_\_\_\_\_ - the responses of plants to \_\_\_\_\_
- Plant tropisms include \_\_\_\_\_, \_\_\_\_\_, & \_\_\_\_\_.
- Each of these responses demonstrates the ability of plants to respond effectively to \_\_\_\_\_, such as \_\_\_\_\_, \_\_\_\_\_, & \_\_\_\_\_.

Tropisms	What does it do?	Diagram
1.	The response of a plant to _____	
2.	The response of a plant to a _____ source	
3.	The response of a plant to _____	

**Photoperiodism**

- \_\_\_\_\_ - a plant's response to \_\_\_\_\_
- Responsible for the timing of \_\_\_\_\_ activities such as \_\_\_\_\_ & \_\_\_\_\_.
- \_\_\_\_\_ - a plant pigment that is responsible for photoperiodism (absorbs \_\_\_\_\_)
- \_\_\_\_\_-day plants - plants that flower when the days are short. Ex: \_\_\_\_\_
- \_\_\_\_\_-day plants - plants that flower when the days are long. Ex: \_\_\_\_\_

**Dormancy**

- The period when an \_\_\_\_\_ & \_\_\_\_\_ or stop
- Cold weather approaches:
  - \_\_\_\_\_ plants turn off photosynthetic pathways
  - transport materials from \_\_\_\_\_ to \_\_\_\_\_
  - \_\_\_\_\_ leaves off from the rest of the plant

**Leaf Abscission**

- \_\_\_\_\_: layer of cells at the \_\_\_\_\_ the leaf off from the plant's \_\_\_\_\_ system
  - Before long, the \_\_\_\_\_, a sign that the tree is fully prepared for winter

Types of Plants	What they are	Diagram
1.	To take in sufficient _____, many aquatic plants have tissues with large _____-_____ spaces through which oxygen can diffuse	
2.	_____: Plants that live in the _____ <ul style="list-style-type: none"> <li>• Plant adaptations include _____, reduced leaves, &amp; _____ that can store water</li> </ul>	
3.	Plants that have specialized features for obtaining _____. <ul style="list-style-type: none"> <li>• _____ plants (digest insects)</li> <li>• _____ grow into tissues of their host plant &amp; extract water &amp; nutrients, causing harm to host</li> <li>• Ex:</li> </ul>	
4.	Plants that grow on top of other plants <ul style="list-style-type: none"> <li>• Found</li> <li>• Ex:</li> </ul>	

**Chemical \_\_\_\_\_:**

- Many plants defend themselves against \_\_\_\_\_ attack by manufacturing \_\_\_\_\_ that have powerful \_\_\_\_\_ on animals

**Hormones**

1. auxin- regulates \_\_\_\_\_ and produced in the \_\_\_\_\_
2. cytokinin – regulates \_\_\_\_\_
3. gibberellins – regulates \_\_\_\_\_
4. ethylene – regulates \_\_\_\_\_

**Tropisms (responses to environment)**

1. phototropism – response to \_\_\_\_\_
2. gravitropism – response to \_\_\_\_\_
3. thigmotropism – response to \_\_\_\_\_
  - Seed growth relies on which 2 tropisms? \_\_\_\_\_ & \_\_\_\_\_

**Define the following terms:**

- Abscission –
- Dormancy –
- Epiphyte –
- Xerophyte –
- Phytochrome –
- Photoperiodism –
- Nutritional specialist – \_\_\_\_\_ . Example:

List 3 ways desert plants are adapted to a dry climate:

- 1.
- 2.
- 3.