

Biology I - diy NOTES  
Chpt 21.2, 22.3 (Plants part 3)  
Seed Plants

Name \_\_\_\_\_

Date \_\_\_\_\_ Hour \_\_\_\_\_

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*Read chapter 21.2 in your text, page 567-569, table 21.1 p568 & p590-592.  
Fill in the blanks (or answer the questions) below using the information you have read.*

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Seed Plants:

Seeds are a \_\_\_\_\_ productive method of reproduction than spores in a \_\_\_\_\_ environment.

All seed plants have \_\_\_\_\_ .

2 types of Seed Plants:

p590

1. Non-flowering = \_\_\_\_\_ which means "\_\_\_\_\_ seed"

2. Flowering = \_\_\_\_\_ which produce seeds enclosed within a \_\_\_\_\_ .

Non-flowering Seed Plants: (p567-569, table 21.1 p568 & p590-592)

\_\_\_\_\_ means "\_\_\_\_\_ seed"

Produce seeds in \_\_\_\_\_ or \_\_\_\_\_-like structures

4 Divisions:

1. Cycadophyta

- grow primarily in the \_\_\_\_\_ or sub-tropics
- have male and female reproductive systems on \_\_\_\_\_ plants.
- Male = cones that produce \_\_\_\_\_ grains, which become \_\_\_\_\_.
- Female cones produce \_\_\_\_\_ which when fertilized, will develop into seeds.
- the trunks and leaves resemble those of \_\_\_\_\_ , but they are NOT closely related.

Seed Plants:

2. Gnetophyta

- usually found in \_\_\_\_\_ or \_\_\_\_\_ environments, but some are \_\_\_\_\_.
- has \_\_\_ very diverse genera, including tropical \_\_\_\_\_, climbing \_\_\_\_\_, and low-growing \_\_\_\_\_ plants.
  - members of the genus \_\_\_\_\_ are a source of ephedrine, a medicine used to treat \_\_\_\_\_, emphysema, and hay fever.
- produce seeds in \_\_\_\_\_ structures.

p591 fig 22.16

ephedrine, a

3. Ginkophyta

- one living species = \_\_\_\_\_
- small, \_\_\_\_\_ leaves
- have male and female reproductive systems on \_\_\_\_\_ plants.
- seeds are surrounded by soft, \_\_\_\_\_-like structures
- because the seeds have \_\_\_\_\_, landscapers usually plant the \_\_\_\_\_ trees.
- Often planted in cities because they are tolerant to \_\_\_\_\_.

4. Coniferophyta

- known as \_\_\_\_\_
- examples: \_\_\_\_\_
- depending on the species, can be tall \_\_\_\_\_, or ground-covering \_\_\_\_\_.
- produce seeds in \_\_\_\_\_ or \_\_\_\_\_ structures.
- usually male and female structures are on \_\_\_\_\_ tree.
- have modified leaves that are \_\_\_\_\_-like or \_\_\_\_\_-like. Needles help reduce \_\_\_\_\_ loss.

p593

## Evergreens v.s. Deciduous plants:

- most conifers are \_\_\_\_\_ plants, and \_\_\_\_\_ their leaves throughout the year.
- List 2 advantages of being an evergreen:
  - a few conifers, and most other trees are \_\_\_\_\_ plants, which means they \_\_\_\_\_ all their leaves each fall, or when \_\_\_\_\_ is scarce or \_\_\_\_\_ .
  - One advantage of dropping their leaves is:
    - the disadvantage of dropping their leaves is:

## Flowering Seed Plants: (p569, table 21.1 p568 & p594-597)

- division name \_\_\_\_\_ , called the \_\_\_\_\_ plants.
- \_\_\_\_\_, most \_\_\_\_\_ group of seed plants living on Earth.
- List at least 5 examples:
  - Unlike conifers, anthophytes produce \_\_\_\_\_ from which \_\_\_\_\_ develop
  - A fruit usually contains \_\_\_\_\_ .
  - This division has 2 classes: \_\_\_\_\_ and \_\_\_\_\_

# Comparing Angiosperms

characteristics:	<b>Monocots</b>	<b>Dicots</b>
seed: number of cotyledons		
examples:		