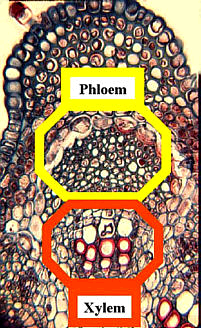
Life Sciences 11 The Pteridophytes Name:

**Objectives:** By the end of the lesson you should be able to:

* Compare and contrast bryophytes and pteridophytes and state the evolutionary advancements of the pteridophytes
* Describe the life cycle of a pteridophyte
* Give some examples of pteridophytes

**Introduction:**

* As the earth’s climate became \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, nature selected for appropriate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* This led to the evolution of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
* In order to develop effective conducting and support tissues, plants selected for having a dominant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_instead of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_…why?
* The first vascular plants were better suited to land than the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but were still not fully adapted

**What is Vascular Tissue?**

They are the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” of plants:

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** to conduct \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_from roots to shoots
2. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** to conduct the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from shoots to roots

**Benefits of Vascular Tissue:**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to plant tissue
* Movement of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Plants can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**First Vascular Plants:**

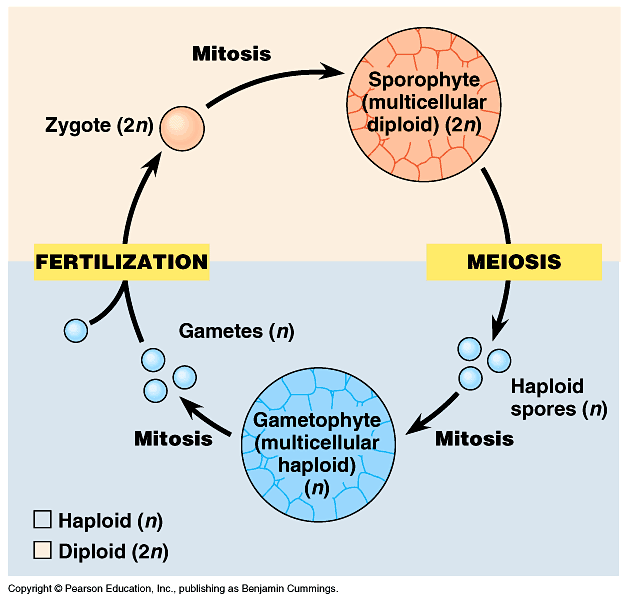
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: the ferns
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_transport system
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, roots, leaves
  + swimming sperm
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_sperm
  + life cycle dominated by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ stage
    - leafy fern plant you are familiar which is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - fragile \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for reproduction
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cells which sprout to form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Pteridophyte Basics:**

* They utilize the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ life cycle
* They \_\_\_\_\_\_\_\_\_\_\_\_\_ produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(thus they are called the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”)
* The sperm must swim from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* They have roots, which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ up the stem to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which are photosynthetic.
* They produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to reproduce.

**Pteridophyte Life Cycle:**

**diploid**



**haploid**



**produces male   
& female gametes**

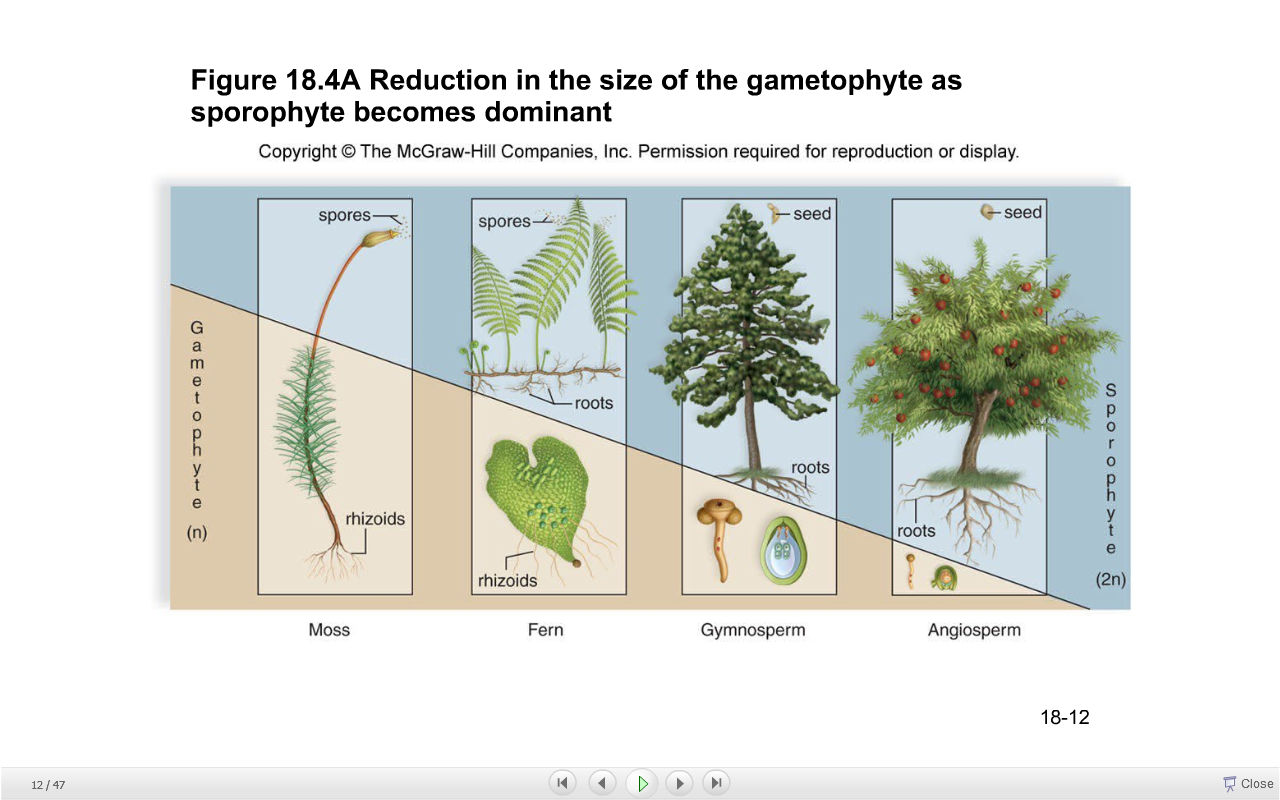
**The Sporophyte Generation:**

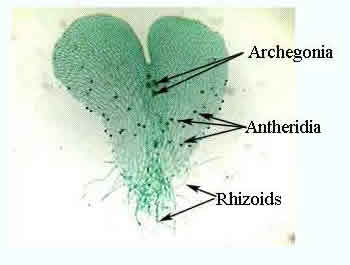
* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (dominant stage) develops \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* These spores are in containers called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which group into clusters called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

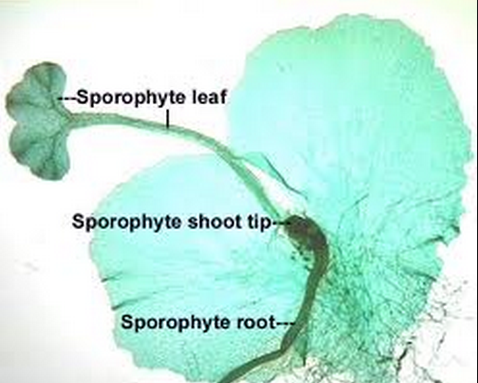
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**Fern Fronds** (not called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!)

Fern sporophyte showing \_\_\_\_\_\_\_\_\_\_on underside



**The Gametophyte Generation:**

* + Fern gametophyte (\_\_\_\_\_) is thin, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ structure called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + The developing gametophyte first grows a set of root-like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ then flattens into the heart shaped mature gametophyte
  + It’s very small and produces the gametes
  + Grows independently of the sporophyte
* Sperm from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ swims to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to fertilize an egg.
* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ begins to grow.

**Examples:**

**Fossil Fuels:**

* Despite their shortcomings, the ferns quickly spread all over the world forming vast forests of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ much like those seen in New Zealand today
* These fed the mighty \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_who were also dominant on land at this time



Carboniferous forest – 290-350 mya

* Forests of seedless plants \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Can you …**

**… compare and contrast bryophytes and pteridophytes and state the evolutionary advancements of the pteridophytes?**

**… describe the life cycle of a pteridophyte?**

**… give some examples of pteridophytes?**