AP Biology 12 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Plant Form and Function** Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
 Block:\_\_\_\_

**Concept 1: Analyzing the structure, growth, development and nutrition of plants (Ch 35, 37)**  
There are many new terms in this concept. The purpose of this handout is to organize and apply the language of plants!

1. Complete the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| System | Structure | Primary Function | Example of Adaptations |
| Root System | Roots |  |  |
| Shoot System | Stem |  |  |
| Terminal bud |  |  |
| Axillary bud |  |  |
| Leaves |  |  |

1. Complete the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| Tissue | Description of Structure | Description of Function | Example |
| Dermal Tissue |  |  |  |
| Vascular Tissue – Xylem |  |  |  |
| Vascular Tissue– Ploem |  |  |  |
| Ground Tissue |  |  |  |

1. Complete the following table:

|  |  |  |
| --- | --- | --- |
| Cell Type | Structure and Location | Function |
| Parenchyma Cells |  |  |
| Collenchyma Cells |  |  |
| Sclerenchyma Cells |  |  |
| Xylem Cells - tracheids |  |  |
| Xylem Cells - vessels |  |  |
| Phloem Cells - sieve-tubes |  |  |
| Phloem Cells - companion |  |  |

1. Compare and contrast annuals, biennials and perennials.
2. Define **meristem**.
3. Compare and contrast primary growth (with apical meristems) and secondary growth (with lateral meristems).
4. List all of the macronutrients and micronutrients that a plant requires to complete its life cycle.
5. Explain the difference between a macronutrient and a micronutrient.
6. Define **rhizosphere**.
7. Complete the following chart:

|  |  |
| --- | --- |
| Organism in Mutually Symbiotic Relationship with plants | Description of relationship - What does the plant get? What does the other organism get? |
| Rhizobacteria |  |
| Rhizobium |  |
| Mycorrhizae |  |

1. Complete the following chart

|  |  |  |
| --- | --- | --- |
| Plant | Description | Example |
| Parasitic plants |  |  |
| Epiphytes |  |  |
| Carnivorous plants |  |  |

