

HIERARCHY OF CLASSIFICATION

Use **12.1 – 12.3 (Classification chapter)** of text to learn about classification and complete this concept development:

Define **TAXONOMY**:

Fill in the 7 Taxonomic Levels.

| Taxonomic Level | Woodchuck | Grizzly Bear | Raccoon | Squirrel | Panda Bear | Marmot |
|-----------------|----------------|------------------|----------------|---------------------|----------------|-----------------|
| 1. | Animalia | Animalia | Animalia | Animalia | Animalia | Animalia |
| 2. | Chordata | Chordata | Chordata | Chordata | Chordata | Chordata |
| 3. | Mammalia | Mammalia | Mammalia | Mammalia | Mammalia | Mammalia |
| 4. | Rodentia | Carnivora | Carnivora | Rodentia | Carnivora | Rodentia |
| 5. | Sciuridae | Ursidae | Procyonidae | Sciuridae | Procyonidae | Sciuridae |
| 6. | <i>Marmota</i> | <i>ursus</i> | <i>Procyon</i> | <i>Scirus</i> | <i>Ailurus</i> | <i>Marmota</i> |
| 7. | <i>monax</i> | <i>horriblis</i> | <i>lotor</i> | <i>carolinensis</i> | <i>fulgens</i> | <i>caligata</i> |

- Which two organisms are most closely related? EXPLAIN WHY you think this!
- Which organism is most closely related to the panda bear? EXPLAIN!
- What is wrong with taxonomic level 6 of the grizzly bear?
- Which organism is more closely related to the squirrel and woodchuck than to the other three animals? EXPLAIN!
- What is the most specific taxonomic level at which all six animals are related?
- Using binomial nomenclature (sec. 17.1), write the proper scientific name of the grizzly bear.
- If two organisms belong to the same genus, must they always belong to the same order? EXPLAIN!
- If two organisms belong to the same class, must they always belong to the same family? EXPLAIN!
- What is the most specific taxonomic level at which a man and a squirrel would be classified together?
- Consider the statement: "Size and shape are NOT reliable indicators of the degree of relatedness." What information in the table above supports this statement?