**Water & Nitrogen Cycles**

**Objective**: *Describe how abiotic factors affect ecological relationships and relate how organisms function in each cycle.*

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|  | Many important elements and compounds **cycle** through the living and nonliving components of the environment as a chain of events that continuously repeats.    To analyze the interactions involved, we identify the elements of a system and interpret how energy and matter are used by each organism. |

1. Transpiration 5. Evaporation

2. Condensation 6. Precipitation

3. Evaporation 7. Runoff-over surface

4. Precipitation Infiltration-through soil

**Summary**: *Using complete sentences, describe how plants & animals function in the water cycle.*

**Nitrogen Cycle**

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|  | Nitrogen   * Necessary for life * Air is mostly (4/5) nitrogen. * “Free nitrogen” (found in the air) cannot be used by plants and animals. * Plants and animals use “fixed nitrogen” (joined with other atoms). * Methods of nitrogen fixation:   + lightning   + nitrogen fixing bacteria found in nodules in the roots of plants like beans, peas, and clover |

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**Summary*:*** *Describe what needs to take place for atmospheric nitrogen to be used by plants and animals.*