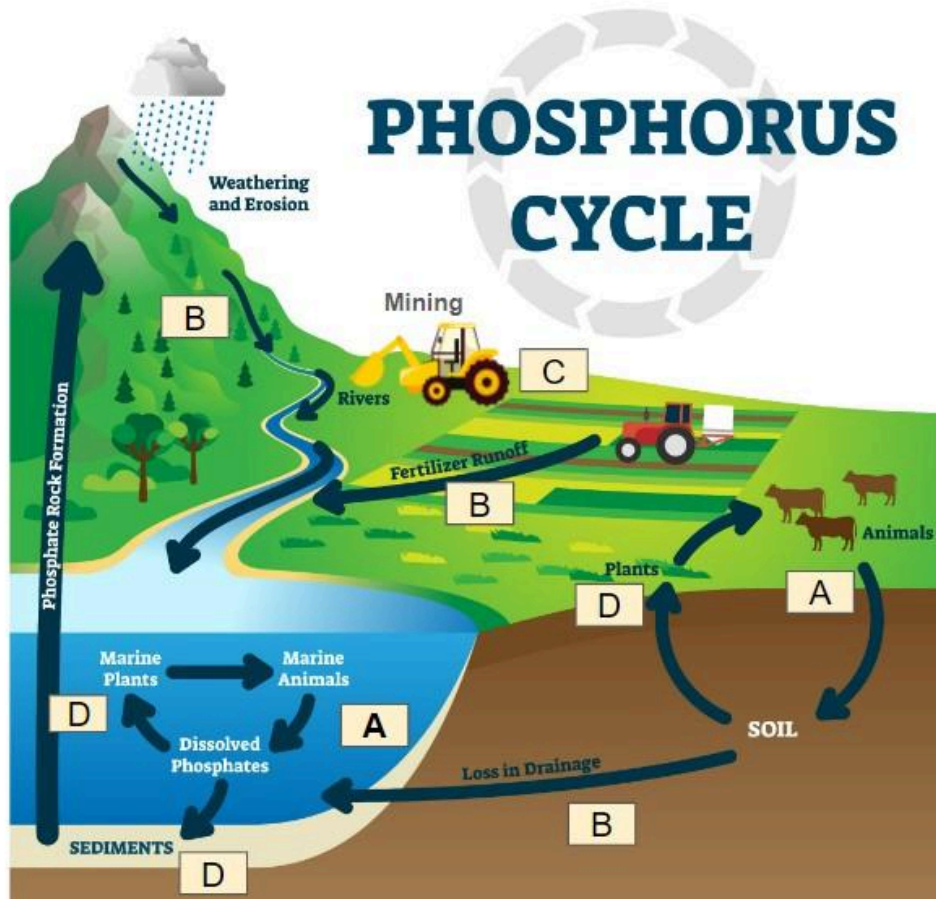


Student Worksheet: Phosphorus Life Cycle (**TEACHER KEY**)



Extraction:

Phosphate ore is accessed and mined in open pits. When excavating the ore, material overlying the phosphate-rich beds is removed.

Decomposition:

The process in which large or complex molecules are broken down into simpler ones. This process is essential to a healthy ecosystem because it aids in the nutrient cycling of molecules such as phosphorus.

Uptake:

Nutrient uptake by crops depends on nutrient supply in the soil, root surface area, and root activity. Roots are able to absorb only the nutrients that come into contact with living and active cells, so phosphorus uptake is dependent on the condition of a plant's root system.

Runoff:

Phosphorus is carried in runoff water from agricultural fields into streams, wetlands and lakes. It can travel attached to particles of soil or manure eroded by water into a stream. Phosphorus also can dissolve into runoff water as it passes over the surface of the field

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Write the definition for each term in the boxes.

**Indicate on the phosphorus cycle where the following processes may occur:
(A) Decomposition, (B) Runoff, (C) Extraction, (D) Uptake**