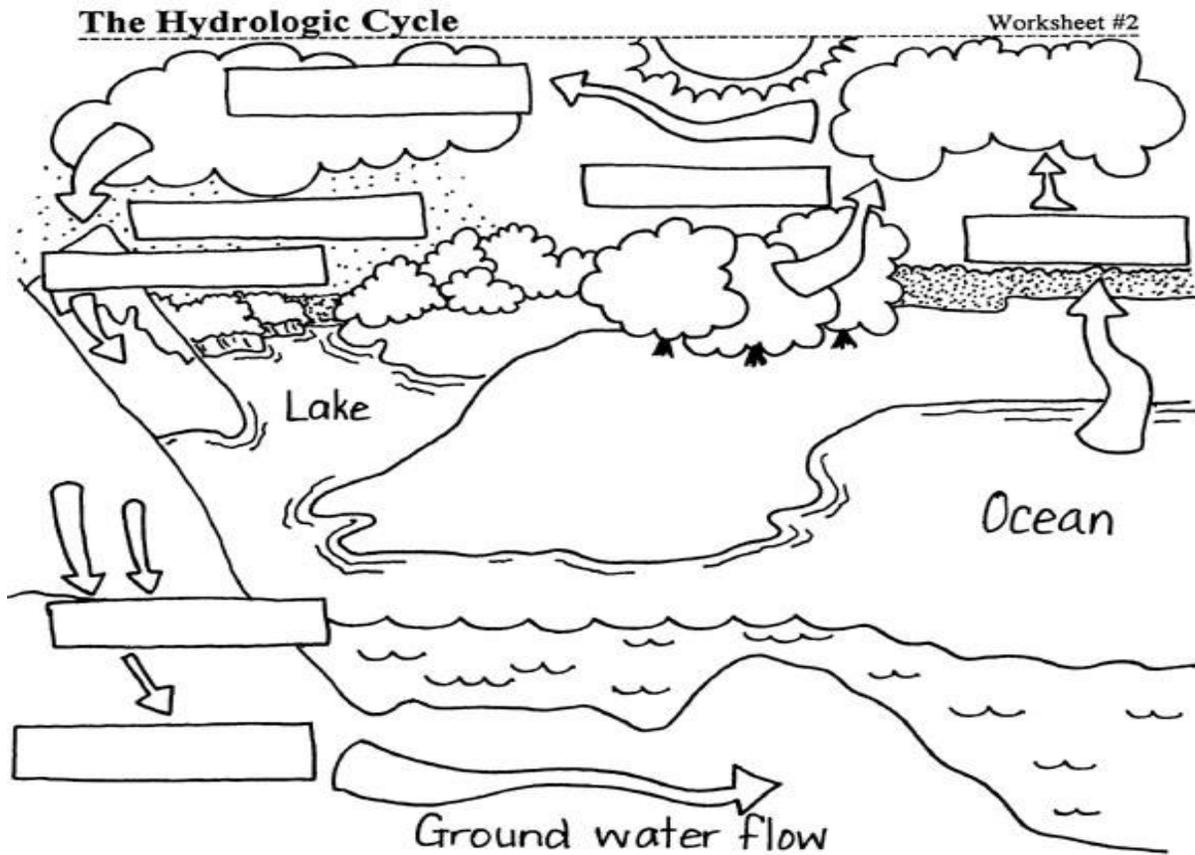


**NOTES ORGANIZER FOR POWERPOINT PRESENTATION
THE CYCLING OF MATERIALS**

The Water Cycle, a.k.a.



Water (H₂O) can be a _____, _____ (ice) or _____ (water vapor).

- Animals drink water or get it in the food they eat.

Animals lose water through

1. _____ and
2. _____.

_____ of dead organisms also releases water.

Plants absorb water through their roots and then lose it through their leaves during

_____.

The Carbon Cycle

- Carbon is in the atmosphere as _____.

- Plants use _____ in _____ to form sugars (like _____)
- Organisms get carbon when they eat _____, (_____) or other _____ (_____).

Carbon dioxide is released back into the atmosphere in several ways, like:

- When organisms _____
- Or when wood or fossil fuels are _____
- Carbon is also returned to the atmosphere from organisms through _____.



*Draw a figure depicting the **CARBON CYCLE** here ↓*

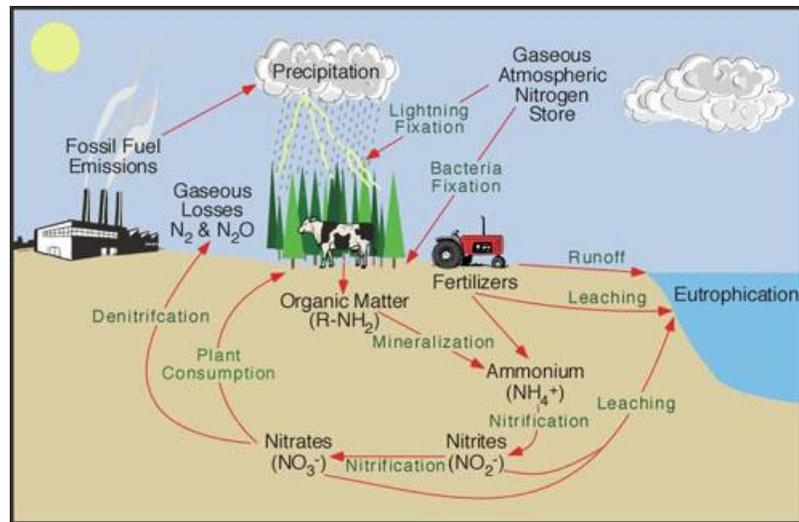


The Nitrogen Cycle

- Nitrogen is the main component of the _____.
- _____% of our atmosphere is Nitrogen!
- BUT most living things _____ use that nitrogen from the air.

Nitrogen _____

- Must happen before living things can use nitrogen
- Happens in two ways:
 1. _____ (in the soil and roots of plants)
 2. _____



http://serc.carleton.edu/images/microbelife/microobservatories/northinlet/Nitrogen_Cycle.jpg

- Once nitrogen is fixed, it moves through the _____.

 1. Plants use it to make _____
 2. _____ eat the plants
 3. _____ eat the herbivores
 4. Organisms _____ when they die and the nitrogen is returned to the soil

➤ There are some different _____ in the soil that “unfix” nitrogen and return some of it back to the atmosphere.

 - Humans have affected the nitrogen cycle!

- _____ and animal _____ cause _____ of _____ into groundwater.
- Nitrogen entering the _____ system flows into streams, rivers, lakes, and estuaries.
- The added nitrogen can lead to _____.
- Not to mention sewage waste and _____ tank leaks.

The Phosphorus Cycle

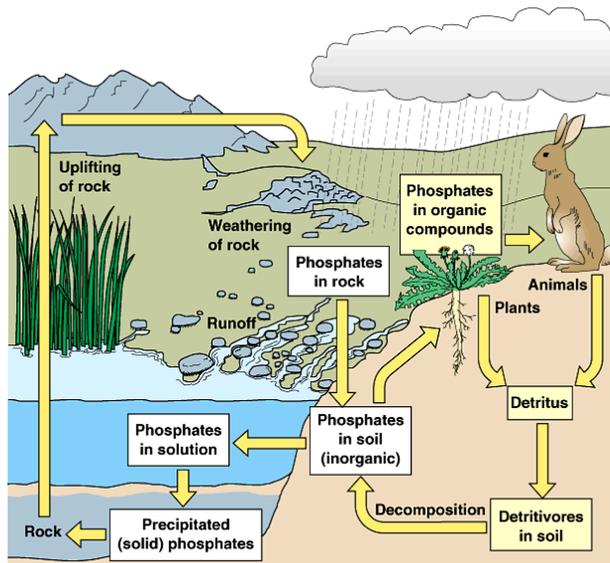
- _____ (PO_4^{3-}) dissolved in runoff and _____ ends up in the oceans.
- PO_4^{3-} is returned to land by animals that feed on phosphorus containing sea creatures and then deposit their _____ on land.
- Phosphorous is not usable alone – it has to be used in a _____ form

You need phosphorous because...

- It is used in _____ and _____
- It is used in the _____-carrying molecules in your body

Phosphorous basically follows the food chain: _____ take it up from the soil, _____ eat the plants, dead matter _____

The **difference**: Dead matter can also turn into _____, which _____ phosphorous
When rock erodes, the phosphorous is _____.



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