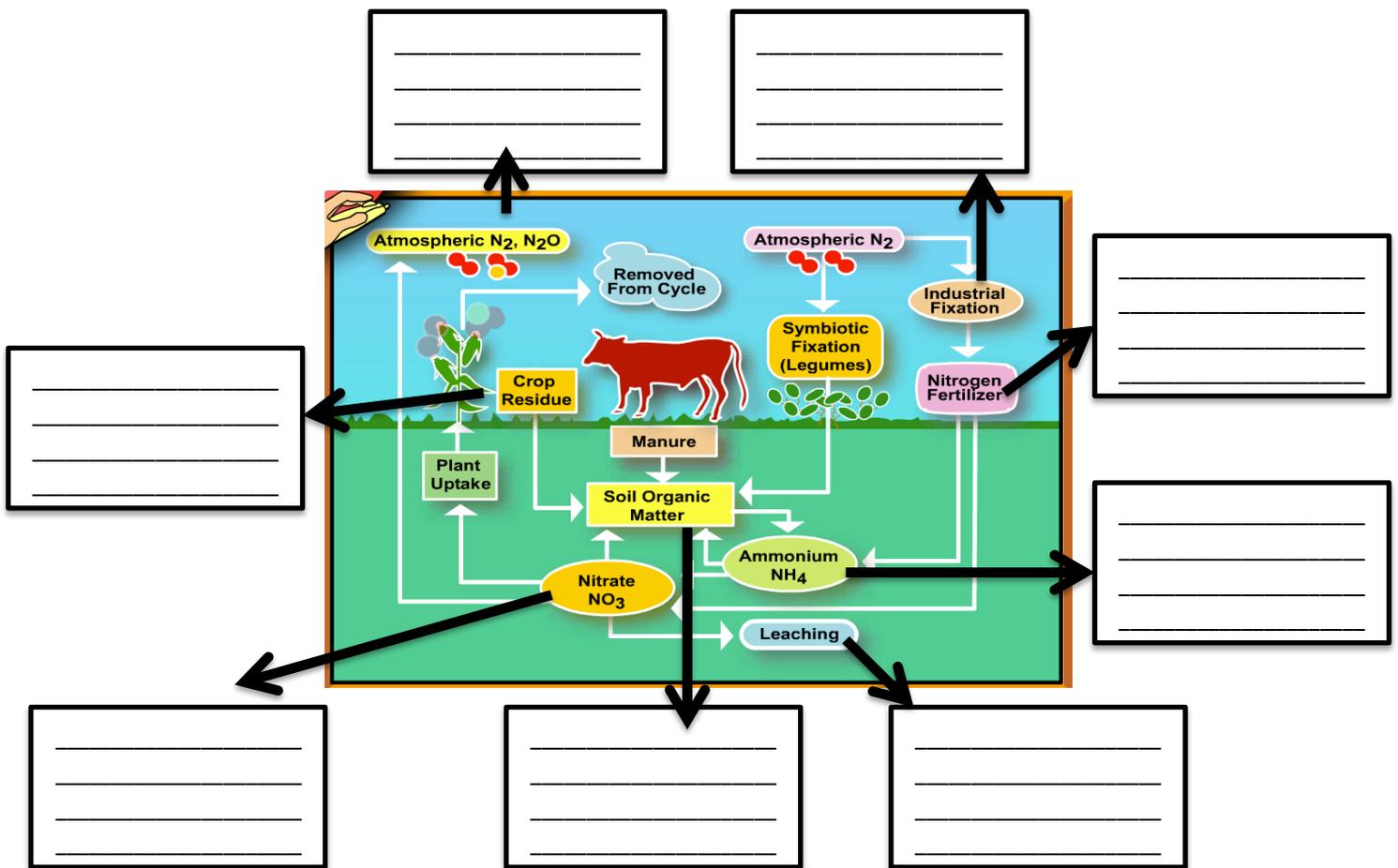


## The Nitrogen Cycle Webquest

This interactive is designed to help you gain a better understanding of the nitrogen cycle. You need to complete the series of activities outlined below and answer any questions on this sheet.

Go to: [http://www.sites.ext.vt.edu/virtualfarm/flash\\_mov/nitrogencycleintro.swf](http://www.sites.ext.vt.edu/virtualfarm/flash_mov/nitrogencycleintro.swf) or if this fails to load go to [www.google.com](http://www.google.com) and type in the words "virtual farm the nitrogen cycle interactive". Select the 2<sup>nd</sup> option from the list that is generated for you.

1. Nitrogen is important to \_\_\_\_\_
2. What percentage of the air is nitrogen? \_\_\_\_\_
3. Most plants and animals cannot get the nitrogen they need \_\_\_\_\_ from the \_\_\_\_\_.
4. Run your cursor over the headings in the picture below to reveal more information. Place this information in the boxes provided.



5. Plants get their nitrogen from the soil through \_\_\_\_\_
6. How is the nitrogen that cattle eat removed from their bodies? \_\_\_\_\_
7. *Complete the sentence:*  
Nitrogen leaves in other ways, such as going back into the \_\_\_\_\_ and leaching into the \_\_\_\_\_.

8. What happens when too much nitrogen gets into water? \_\_\_\_\_

Click on the farmer icon at the bottom of the screen



9. When you get back to the main page click on the window that says "The Farm"



Click on the titles to fill in the blanks below:

10. Atmosphere: The \_\_\_\_\_ store of nitrogen is in the atmosphere

11. Manure lagoon: The manure lagoon is where the \_\_\_\_\_ and \_\_\_\_\_ from the cattle is stored to preserve the \_\_\_\_\_ for later use on the crop.

12. Animals: The animals consume \_\_\_\_\_ found in the feed. They \_\_\_\_\_ nitrogen to the groundwater and the atmosphere from their urine and manure.

13. Fertilizer: if manure \_\_\_\_\_ meet the \_\_\_\_\_ needs of the crop, additional nitrogen is needed. Fertilizer provides \_\_\_\_\_ and other nutrients.

14. Pasture: Pasture consists of \_\_\_\_\_ and legumes that cattle graze. Legumes, such as clover, have \_\_\_\_\_ growing on their roots that are able to capture \_\_\_\_\_ from the \_\_\_\_\_ and use it for plant growth.

15. Crop: The crop uses \_\_\_\_\_ in the soil that comes from \_\_\_\_\_, supplied by bacterial fixation, crop residues, manure or fertilizer.

16. Soil: Plants take up \_\_\_\_\_ from the soil. Nitrogen can be \_\_\_\_\_ from the soil by runoff to streams, leaching to the subsoil, and directly to the atmosphere.

17. Stream: Plants and animals in the stream need nitrogen too. But \_\_\_\_\_  
\_\_\_\_\_ nitrogen can upset the stream ecosystem balance.

### *Extension Activity*

Help the farmer manage the nitrogen on his farm (click on the tractor icon at the bottom of the page)

END OF WEBQUEST