

## The Nitrogen Cycle

Name \_\_\_\_\_

Go to Nitrogen Cycle and answer these questions

1. What are the two conditions under which nitrogen will react with oxygen? (In other words, what is necessary for nitrogen in the air to combine with oxygen?)
2. What are the two compounds that are formed when nitrogen combines with oxygen?
3. How does nitric acid ( $\text{HNO}_3$ ) form?
4. Why is nitric acid ( $\text{HNO}_3$ ) important?
5. What percentage of the air we breathe is nitrogen?

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6. Even though considerable nitrogen is available in the air, most plants do not use the nitrogen ( $\text{N}_2$ ) found in the air. Why not?
7. In what compounds can plants use nitrogen?
8. How do animals get the nitrogen they need?
9. Atmospheric nitrogen ( $\text{N}_2$ ) is pretty inert. This means that it does not easily break apart. When molecules do not break apart easily, it is difficult (or impossible) for organisms to use them as a nutrient source. As a result, **nitrogen fixation** is the term used to describe the process of breaking up  $\text{N}_2$ .
  - a. What is atmospheric fixation?
  - b. What is industrial fixation? [This is how artificial fertilizers are made.]
  - c. What is biological fixation? (In your answer, describe the types of plants associated with the symbiotic relationship.)