

Warm up:



Study Notes/Questions

### The Nitrogen Cycle

All living things need nitrogen to form \_\_\_\_\_ (for DNA) and \_\_\_\_\_ (for proteins)

Nitrogen gas makes up \_\_\_\_\_, but most organisms can't break \_\_\_\_\_ molecules so Nitrogen Cycle is needed

#### First Step –

A process carried out by \_\_\_\_\_ on the roots of legumes such as \_\_\_\_\_

Also in \_\_\_\_\_ (in water) and in \_\_\_\_\_

Plants and bacteria have \_\_\_\_\_ (both benefit) \_\_\_\_\_ is fixed (combined with  $H_2$ ) to give \_\_\_\_\_

Excess ammonia is dissolved in water as \_\_\_\_\_ ions

#### Second Step -

A process where \_\_\_\_\_ are produced from ammonium ions \_\_\_\_\_

Plants need both \_\_\_\_\_ and \_\_\_\_\_ to grow

### 4.3 The Nitrogen Cycle

Study Notes/Questions

Plants use nitrates to make \_\_\_\_\_ (building blocks of protein) and \_\_\_\_\_

Animals get amino acids by \_\_\_\_\_ and nucleic acids, remake their own \_\_\_\_\_

#### Third Step -

When organisms produce waste or die and decompose, the materials are broken down to release \_\_\_\_\_

\_\_\_\_\_ convert ammonium and nitrate back to nitrogen gas  
(*anerobic = without oxygen*)

This process speeds up in \_\_\_\_\_ such as peat bogs

Summary: (two to three sentences summarizing this section)

Self-Reflection Questions:

1. Describe one thing you learned about this topic today.

2. Describe one thing about this topic you want to learn in more detail.