

Title: Methane, Water and Ammonia

Introduction: One of the tasks space probes traveling to other planets often has is to sample the atmosphere of other planets. The probe can sample directly if it lands or indirectly if it flies close by. Often, our probes have indicated that water, methane and ammonia are found on other planets, sometimes in the atmosphere, sometimes as “lakes” either frozen or liquid. In this activity, you will find the properties of the three elements and answer the question: How would Earth be different if all the water was replaced by methane or ammonia?

Procedures:

1. Use a textbook to fill in the data table below.
2. With your group decide which substance you wish to replace water on Earth, ammonia or methane. Write a short news story, giving each member of the group a part. The first line has been done for you below.
3. Present your newscast to the class.

Data:

Substance	Molecular formula	Drawing	Polarity?	Important characteristics
Water				
Methane				
Ammonia				

Newscast Script:

1. Today's top story is an amazing turn around for Earth. It appears that all the water in our oceans and atmosphere has been replaced by _____.

2.

3.

4.

5.

6.

7.

8.

9.

10.