

**Pre-AP Biology Worksheet:  
Introduction to Energy & Ecology**

**Name:** \_\_\_\_\_

**The flow of energy is very important in ecology so fill out the following to get a brief overview of energy concepts**

**Chemical Energy & ATP**

Use pages 202-203 to answer the following:

1. One of the principal chemical compounds that cells use to store & release energy is \_\_\_\_\_ abbreviated \_\_\_\_\_.
2. This molecule consists of:
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
3. The key to ATP's ability to store and release energy is the 3 \_\_\_\_\_ groups.
4. The energy stored in ATP is released by breaking the chemical bond between \_\_\_\_\_.
5. List 5 ways that a cell can use the energy provided by ATP
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
  - d. \_\_\_\_\_
  - e. \_\_\_\_\_
6. Why do most cells only have a small amount of ATP to last a few seconds of activity?
7. A single molecule of glucose stores more than \_\_\_\_\_ times the chemical energy of a molecule of ATP.
8. Cells can regenerate \_\_\_\_\_ from \_\_\_\_\_ as needed by using the energy in foods like glucose.
9. Draw and label an ATP molecule. (See figure 8.2).

**Ecology and Energy**

Begin on page 63 in your text - Read the text and define the following terms & answer the following questions as you come upon them. REMEMBER: use the fewest words possible that still allow you to understand the meaning of the word.

1. ecology
2. biosphere
3. List the levels of organization from smallest to largest.