

# Lesson 31: Electrons in the Atom Notes

Chemistry with Lab

## **Bohr's Energy Levels**

- Electrons in \_\_\_\_\_
- \_\_\_\_\_ energy levels: \_\_\_\_\_ to \_\_\_\_\_
- \_\_\_\_\_ energy levels: \_\_\_\_\_ from \_\_\_\_\_
- Ground State: \_\_\_\_\_ in \_\_\_\_\_  
\_\_\_\_\_ possible

## **Excited Atom**

- Atom has \_\_\_\_\_
- \_\_\_\_\_ state is \_\_\_\_\_
- \_\_\_\_\_ soon \_\_\_\_\_ same amount of \_\_\_\_\_
- \_\_\_\_\_ seen as \_\_\_\_\_

## **Wave Description of Light:**

Wavelength (\_\_\_\_\_): \_\_\_\_\_ between \_\_\_\_\_  
on \_\_\_\_\_ waves

Frequency (\_\_\_\_\_): the \_\_\_\_\_ of \_\_\_\_\_ passing a given  
\_\_\_\_\_ in a given \_\_\_\_\_

$c =$  \_\_\_\_\_

$c =$  \_\_\_\_\_: speed of \_\_\_\_\_

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Sample problem 1:

What is the frequency of light if the wavelength is  $6.0 \times 10^{-7}\text{m}$ ?

Sample problem 2:

What is the wavelength of light if its frequency is  $5.0 \times 10^{14}\text{Hz}$ ?

### **Particle Description of Light**

\_\_\_\_\_ exists as \_\_\_\_\_ called \_\_\_\_\_

$E =$  \_\_\_\_\_

### **The Modern View of Light**

\_\_\_\_\_ has a \_\_\_\_\_

- Light may \_\_\_\_\_ as a \_\_\_\_\_
- Light may \_\_\_\_\_ as a \_\_\_\_\_ of \_\_\_\_\_ called \_\_\_\_\_ or \_\_\_\_\_

### **Spectroscopy**

- \_\_\_\_\_ lines represent \_\_\_\_\_ as \_\_\_\_\_ returns to \_\_\_\_\_

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Chemistry with Lab

- \_\_\_\_\_ lines \_\_\_\_\_ an \_\_\_\_\_
- Called the \_\_\_\_\_ of an \_\_\_\_\_

### **Orbital**

\_\_\_\_\_ of \_\_\_\_\_ where an \_\_\_\_\_ is \_\_\_\_\_  
to be \_\_\_\_\_

### **The Chemistry Quiz**

CR1. \_\_\_\_\_ CR2. \_\_\_\_\_ 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

4. \_\_\_\_\_ 5. \_\_\_\_\_