

**Chapter 18 The Electromagnetic Spectrum and Light**  
**Section 18.2 The Electromagnetic Spectrum**  
 (pages 529–545)

Name \_\_\_\_\_  
 Period \_\_\_\_\_  
 Date \_\_\_\_\_

*This section identifies the waves in the electromagnetic spectrum and describes their uses.*

1. Complete the table for the electromagnetic spectrum. List at least two uses for each kind of wave.

The Electromagnetic Spectrum		
Type of Wave	Use #1	Use # 2

**The Waves of the Spectrum**

2. Is the following sentence true or false? (circle one - *If it is false change it to make it true*).  
 William Herschel determined that the temperature of colors of light was higher at the blue end and lower at the red end.
3. Herschel’s curiosity led him to conclude there must be invisible \_\_\_\_\_ beyond the red end of the color band.
4. Is the following sentence true or false? (circle one - *If it is false change it to make it true*).  
 The full range of frequencies of electromagnetic radiation is called the electromagnetic spectrum.
5. Name each kind of wave in the electromagnetic spectrum, from the longest to shortest wavelength.

**Radio Waves**

6. Circle the letter of each way that radio waves might be used.  
 a. x-ray machines      b. microwave ovens      c. radio technology      d. television technology
7. Explain the difference between amplitude modulation (AM) and frequency modulation (FM)?
8. How do microwaves cook food?