Name Date Class



 **LESSON 2**

**Challenge**

***Research Radiation Types***

Research to find information that is necessary to complete the chart below. Be sure to
record your sources of information. Find three versions of the EM spectrum and see if each
one gives the same wavelength range for each type of electromagnetic radiation. Then use
the information from your research to answer the questions below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of EMRadiation** | **Does it passthroughEarth’satmosphere?** | **Level ofDanger ItPoses toLivingOrganisms** | **WavelengthRange perFirst SourceWeb Site:**  | **WavelengthRange perSecondSourceWeb Site:**  | **WavelengthRange perThird SourceWeb Site:**  |
| Gamma rays |  |  |  |  |  |
| X-rays |  |  |  |  |  |
| Ultraviolet |  |  |  |  |  |
| Light waves |  |  |  |  |  |
| Infrared |  |  |  |  |  |
| Microwaves |  |  |  |  |  |
| Radio waves |  |  |  |  |  |

**1.** Is all radiation harmful? If not, what are some good forms of radiation?

**2.** How does Earth’s atmosphere protect living organisms?

**3.** Compare the kinds of electromagnetic radiation. Did your three sources agree on any
of the wavelength ranges?

**4.** Based on the results of your research, does it appear that the wavelength ranges for
each part of the electromagnetic spectrum have precise value, or do different scientists
use different definitions for each region? Justify your response.

**5.** If you were doing a report on a type of electromagnetic radiation, would you feel
comfortable using a single source for your information? Why or why not?

**38** Electromagnetic Waves