

15.1 Radiation Exposure Investigation & Discussion

We are exposed both to natural radiation and man-made radiation on a daily basis.

Radiation exposure is measured in millirems (mrem).

The recommended exposure limit is 500 mrem per year.

For this assignment, we are going to find out how much radiation exposure we have in our daily lives and how much it accumulates over a year. We will then share and discuss the results with the class.

Please follow the following steps and instructions:

Step 1

Read the page titled "[Doses in Our Daily Lives](#)" on the United States Nuclear Regulatory Commission's website. Here, you will learn about normal radiation exposure and how we are being exposed to these daily doses of radiation.

Step 2

Go to the "[Personal Annual Radiation Dose Calculator](#)" in the U.S.N.R.C website and investigate how much personal radiation dose you have. Record the result in the "[Radiation Exposure Investigation](#)" sheet.

To find the elevation from the sea level for your location, you can use the number 800 as a general mean for Michigan, or you can use an online resource, such as "[What is My Elevation](#)" from whatismyelevation.com, to verify a more specific elevation for your area.

Step 3

Using the same tool ("[Personal Annual Radiation Dose Calculator](#)"), conduct more investigations. Try changing some of the variables and see the changes in doses. Record the results from these investigations in the "[Radiation Exposure Investigation](#)" sheet.

For example, you can use the tool to find out answers to the following questions:

- What happens to your exposure if you move to Denver, CO. (altitude of about 5000 ft). How about other cities in which you would like to live?
- What happens if you move to a different house?
- What happens if you stop watching TV?

Step 4

Come to the discussion board titled "Radiation Exposure" and share your findings and thoughts. In your posts, please include the following elements for full credit:

- Your investigation results.
- How you can reduce your annual exposure (i.e., not having dental x-rays), and what are the consequences?
- Your overall thoughts about daily radiation exposure.

Step 5

Read your classmates' posts and write feedback to at least two of them. Your replies (feedback) must be in full sentences. Think about the following:

- a. In your classmate's post, is there anything that surprises you?
- b. Is there anything that makes you want to know more about?
- c. Does his/her post or investigations make you generate questions?