

Name _____

Date _____

Fact/Possible/Myth: Answers

- Natural radiation won't hurt you like radiation caused by humans will
 - **MYTH. Radiation is radiation! The important things are the distance, the time, the dose, and the pathway (air, water, etc.) the radiation takes to move**
- A report noting there is no 'harmful' radiation found at the site means that the radiation found there is the safer kind
 - **MYTH. Radiation is radiation! If it is present then it needs to be evaluated. Maybe the report meant that the dose was too low to be dangerous, but it should still be evaluated**
- Irradiating food to kill bacteria makes the food radioactive
 - **MYTH. Irradiating food is done with low dose gamma rays, which pass right through the food and does not render it radioactive**
- Spending the day outside hiking on the Colorado plateau exposes you to more radiation than hiking the Appalachian Trail in Virginia
 - **FACT. This mountainous area has higher exposure to cosmic radiation, while the geologic richness of uranium deposits adds to the radioactivity**
- Cat litter might end up being a pathway to contaminating our groundwater
 - **FACT. Kitty Litter contains bentonite clay, which contains naturally occurring uranium and thorium. If dumped in unlined landfills it can eventually leak into groundwater**
- No granite countertops should be used in the kitchen since they emit dangerous amounts of radiation
 - **POSSIBLE. Granite, a rock that retains naturally occurring radiation, emits only very small amounts of radiation; however, adding radiation to your home could be considered an unnecessary risk**
- Bananas are radioactive
 - **FACT. Bananas do produce enough radiation that they will cause Geiger counters to respond**
- People who live at sea level are less exposed to cosmic radiation than people who live in Denver, called the 'Mile High City'
 - **FACT: The higher the altitude, the more cosmic radiation you receive**
- Getting dental x-rays can cause headaches and nausea because of the amount of radiation
 - **MYTH: The amount of radiation from a dental X-ray is fairly low (5 microsieverts)**
- Americans get most of their annual doses of radiation from nuclear power plants
 - **MYTH: Americans typically get most of their annual radiation from normal background levels around them and medical procedures**

- A brazil nut is one of the most radioactive foods in the world since the tree roots are so deep they absorb naturally occurring radium from the ground
 - **FACT: Brazil nut trees have very deep roots that reach down into the naturally occurring radium**
- Radiation exposure following the nuclear accident at Fukushima Daiichi did not cause any immediate health effects. This exposure is unlikely to be able to be attributable to any health effects among the general public in the future.
 - **FACT: Medical evidence suggests that this is the truth**
- All exposure to radioactivity is transmitted through direct exposure
 - **MYTH: Radioactivity exposure occurs in a variety of pathways including inhalation, ingestion, as well as direct exposure**
- Grand Central Station in New York City has radiation levels higher than what nuclear power plants are legally allowed to admit
 - **FACT: The station is one of the world's largest and built of granite. Its large size causes high radiation levels**
- Coal power plants give off significantly less radiation than nuclear power plants.
 - **MYTH: Coal plants give off over 3 times that of nuclear power plants**
- The radioactivity we find in rocks is not harmful.
 - **MYTH: Radioactivity is radioactivity. Rocks are one of three groupings of radiation. They are terrestrial (rocks and soil), cosmic (space), and human made**