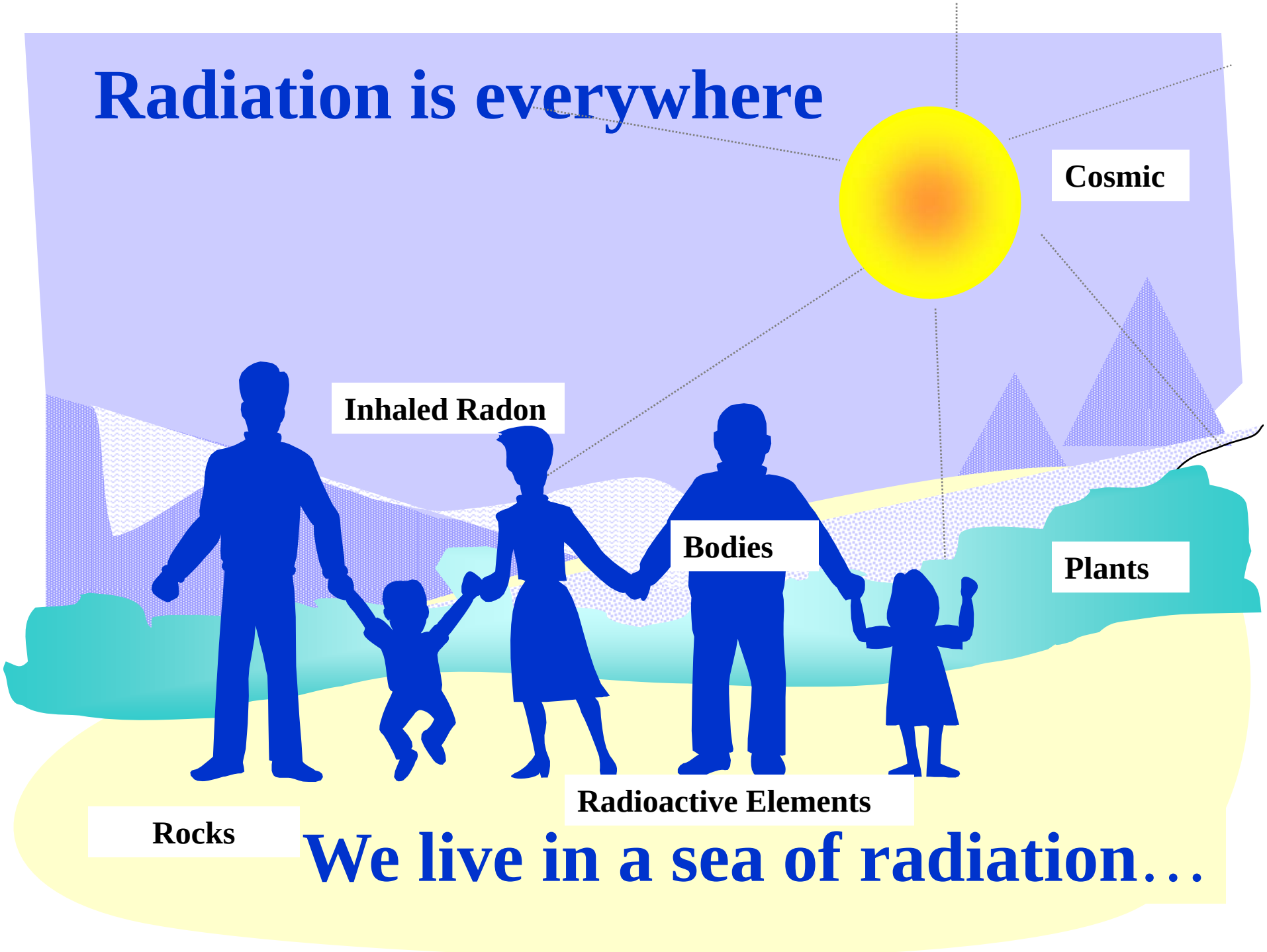

Background
Radiation

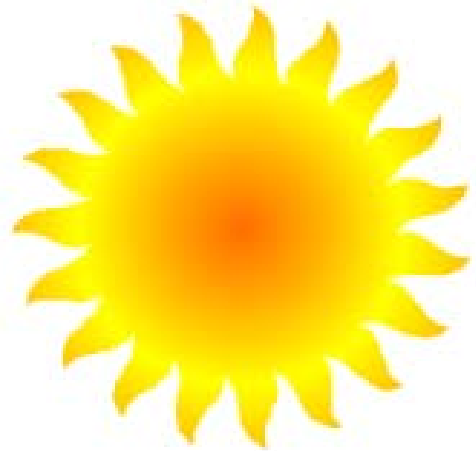
Radiation is everywhere



We live in a sea of radiation…

BACKGROUND RADIATION

The average background radiation per person is **370 millirems** (mrem) per year. This varies widely depending on where someone lives, and their occupation, health and lifestyle.



Background Radiation

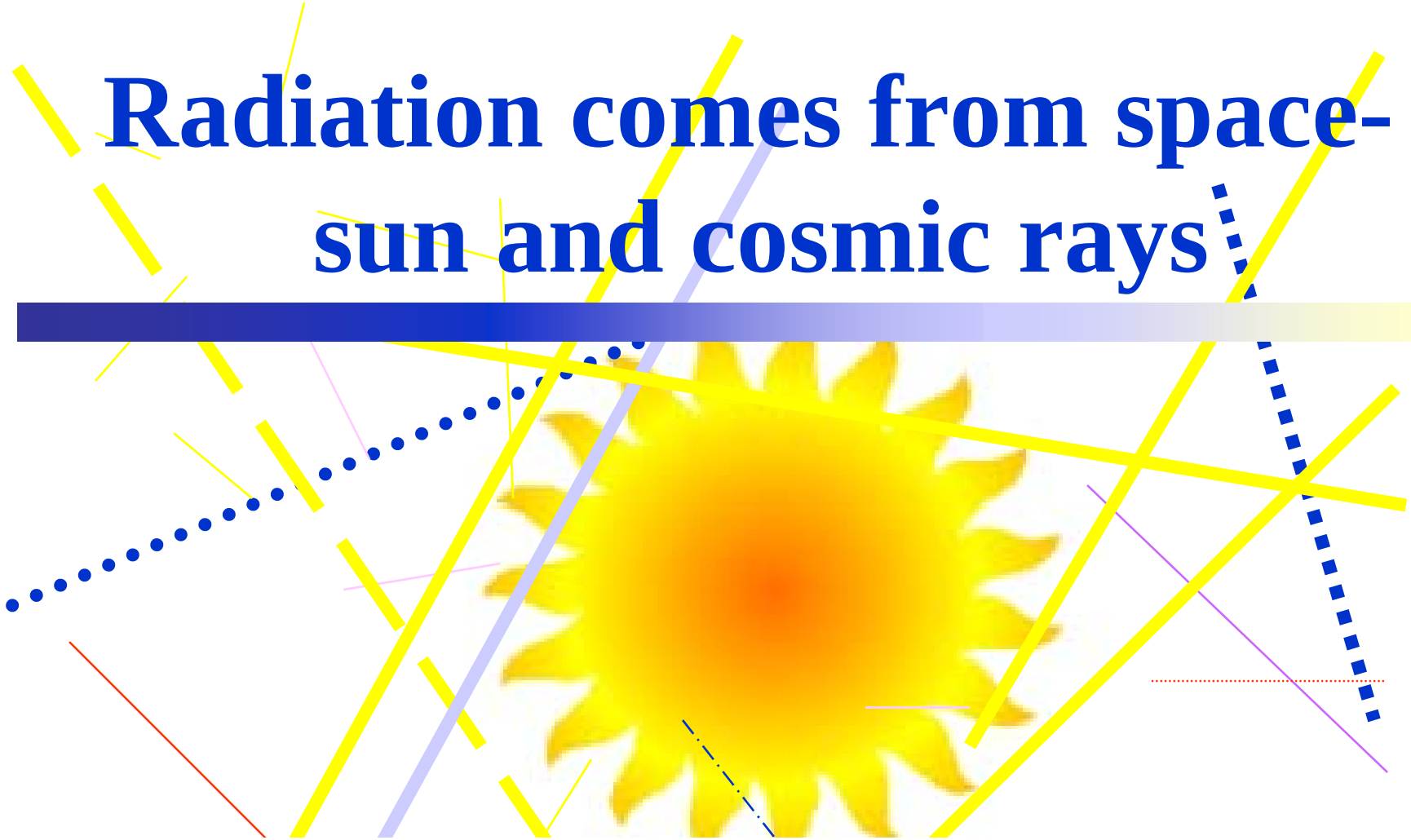
Most background radiation is natural.

It is part of nature.

It has always been here.

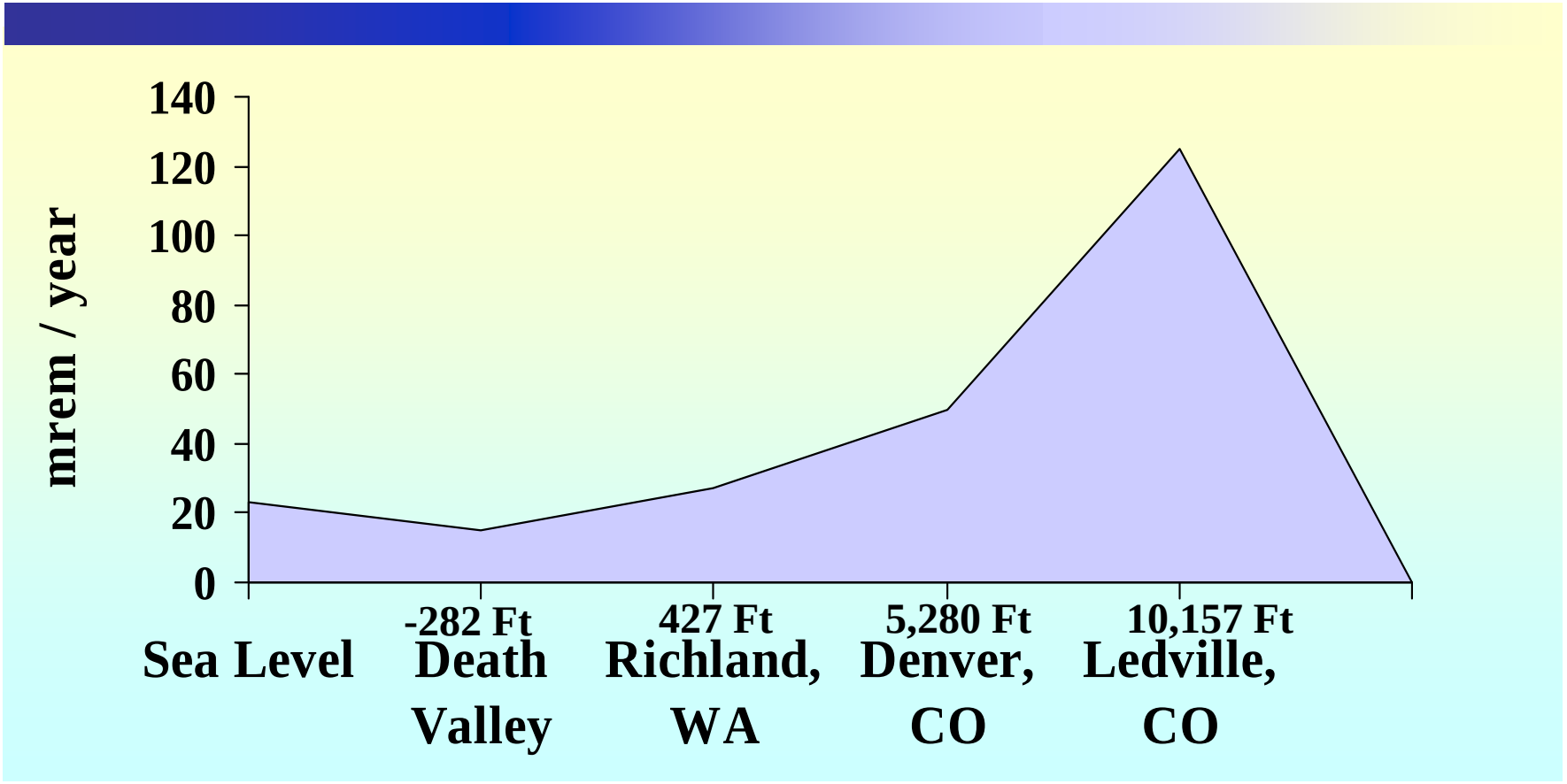
People have always lived with it.

Radiation comes from space- sun and cosmic rays



Because this type of radiation is somewhat shielded by the atmosphere, the dose is higher at higher altitudes

Background Radiation Exposure at Different Elevations



Every 200 feet increase in altitude increases dose 1 mrem/year

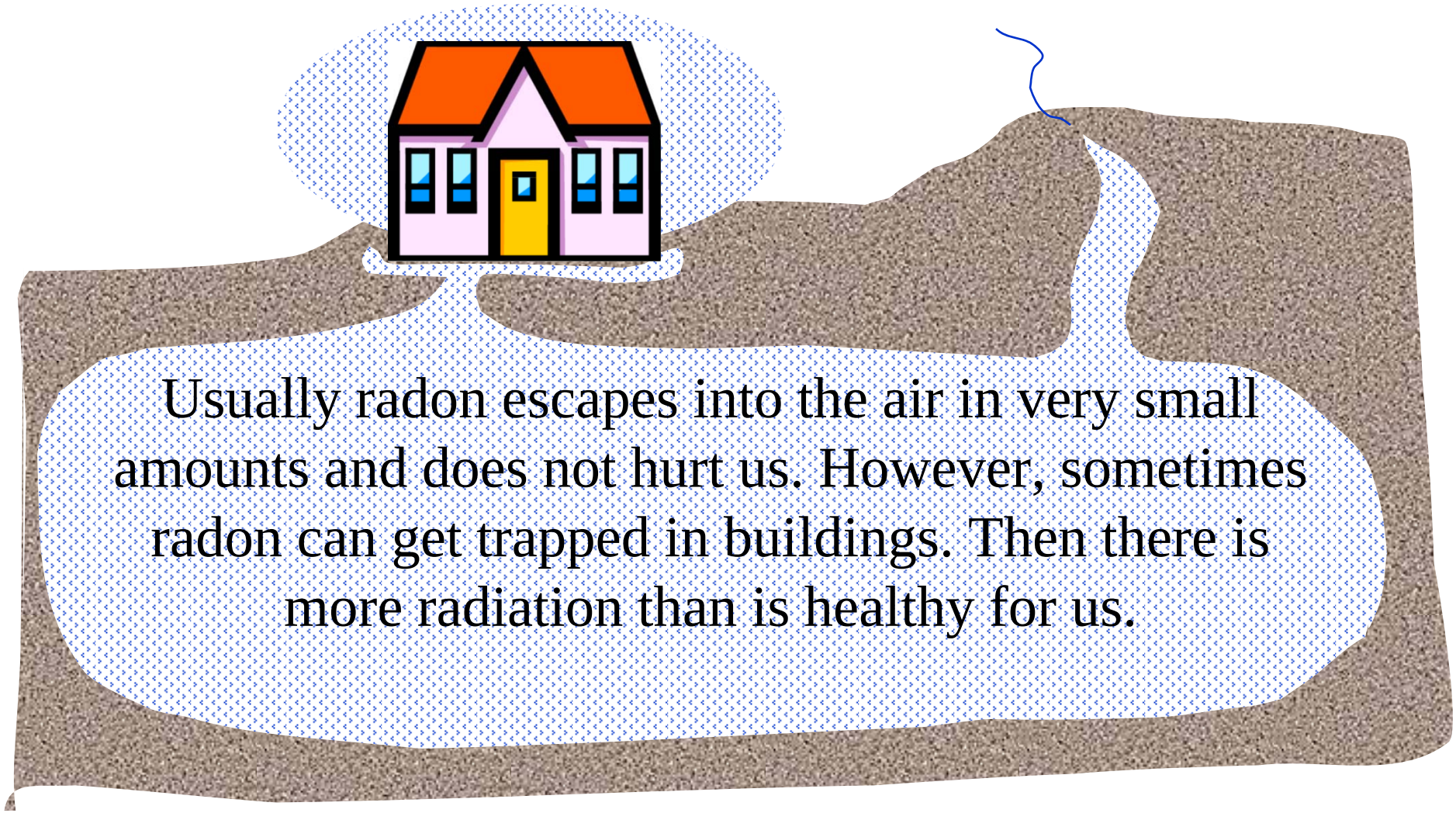
Every 800 feet increase in altitude increases dose 4 mrem/year

Radiation comes from the earth

Some rocks, like Uranium are radioactive.
So are coal and some building materials such as granite.

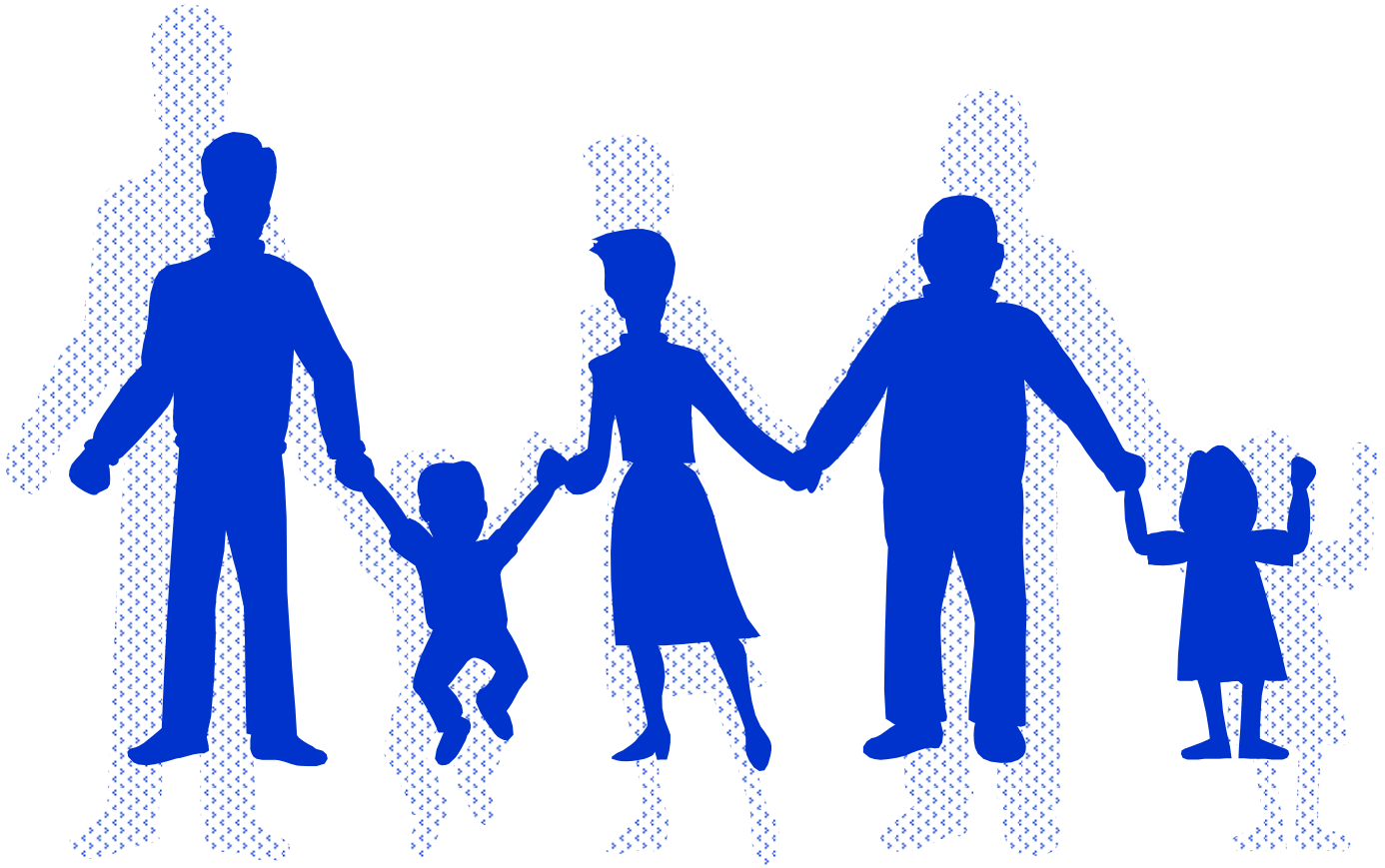
The natural radiation from the granite in Grand Central Station is higher than is allowed to certify a nuclear power plant.

Radon is a radioactive gas that comes from inside the earth

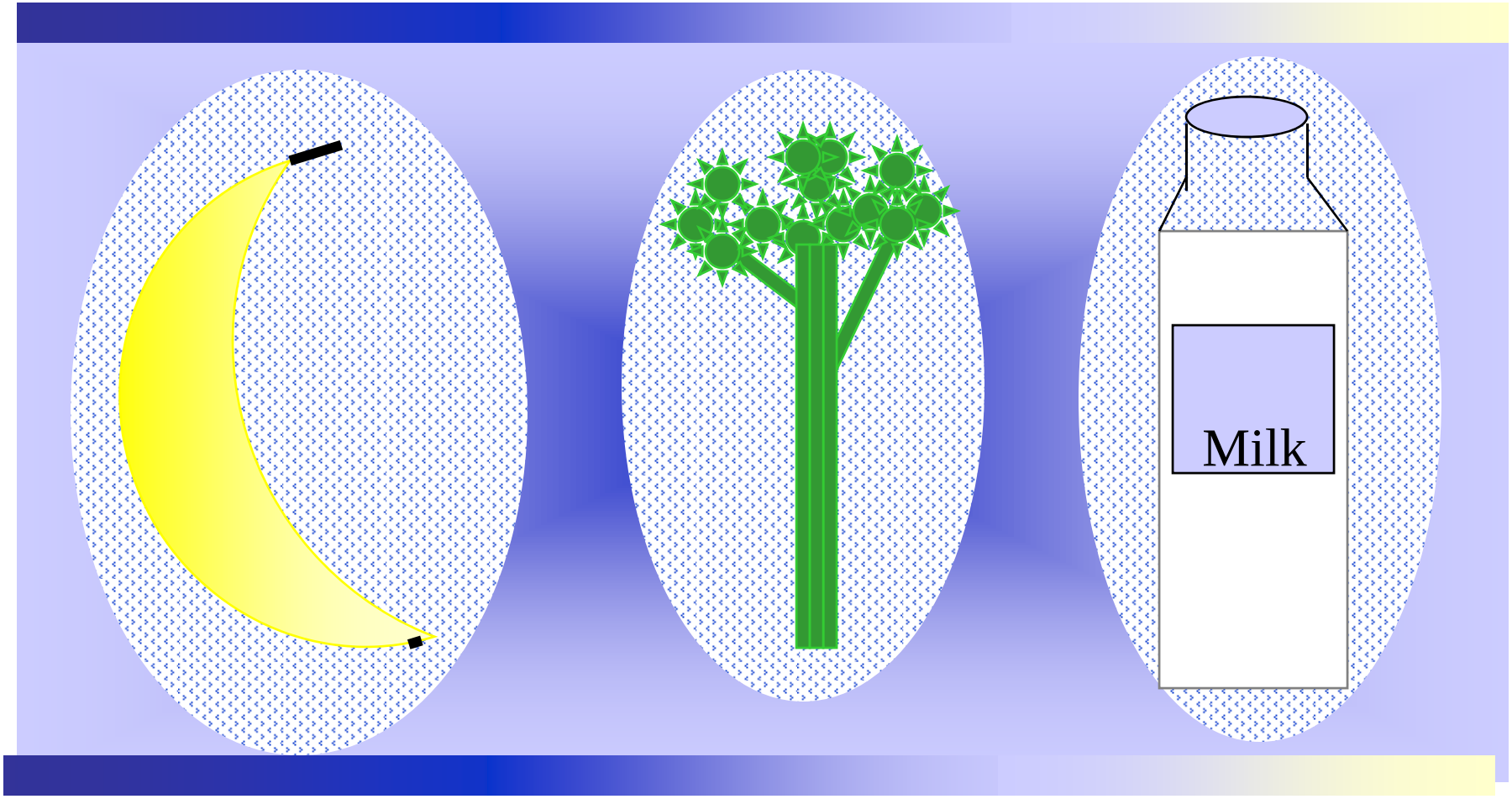


Usually radon escapes into the air in very small amounts and does not hurt us. However, sometimes radon can get trapped in buildings. Then there is more radiation than is healthy for us.

Radiation comes from within our own bodies.

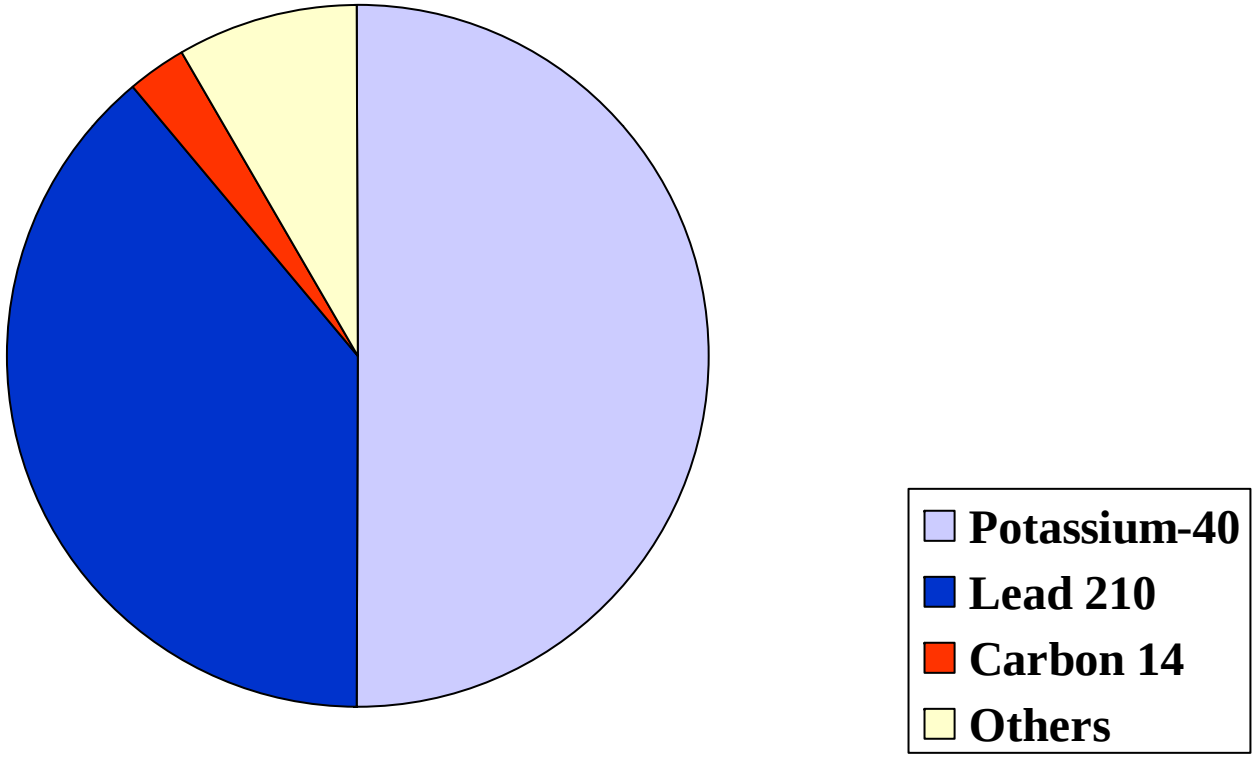


Cells in our body contain radioactive elements, such as Potassium, which come from the food we eat



Background Radiation

Radioactive elements in our bodies



Man-made Background Radiation

Other radiation is man-made. Radiation from X-rays, medical isotopes, televisions, smoke detectors, nuclear fuel, and weapons fallout are all man-made sources of radiation.

Normal annual exposure from natural radiation

About 300 mrem/yr

Radon gas	200 mrem
Human body	40 mrem
Rocks, soil	28 mrem
Cosmic rays	27 mrem

Normal annual exposure from man-made radiation

About 70 mrem/yr

Medical procedures	53 mrems
Consumer products	10 mrems
One coast to coast airplane flight	2 mrems
Watching color TV	1 mrem
Sleeping with another person	1 mrem
Weapons test fallout	less that 1 mrem
Nuclear industry	less than 1 mrem

Background Radiation

The body does not distinguish between natural and man-made. Neither natural nor man-made background radiation has been shown to be harmful. The body has developed repair mechanisms to deal with negative effects of background radiation.