

11/11京都大学地球環境学堂 (立命館大学の学生と合同)



授業は英語で行いました。
英語のスライドもあり
ます。



Most of the things/materials are made of very small, tiny particles

Decay!

Radioactive material

Q2. What are radioactive materials, Radioactivity and radiation mean?

- The words sound very similar, so they mean the same.
- "Radioactivity" and "radiation" mean the same, but "Radioactive material" has different meaning.
- They all mean different.

100% safe

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放射線は私たちの周りにもあります。

Q3. Where are the radiations?

- Everywhere (even here)
- There are no radiation in buildings (not here)
- You can find only in special places such as in the hospitals and in the nuclear power plants (not here)

Find out the amount of radiation. One of them is potassium. One of them is sodium. One of them is calcium. One of them is iron. One of them is chlorine. One of them is sulfur. One of them is phosphorus. One of them is magnesium. One of them is silicon. One of them is oxygen. One of them is carbon. One of them is nitrogen. One of them is hydrogen. One of them is helium. One of them is neon. One of them is argon. One of them is krypton. One of them is xenon. One of them is radon. One of them is francium. One of them is actinium. One of them is thorium. One of them is uranium. One of them is plutonium. One of them is americium. One of them is curium. One of them is berkelium. One of them is californium. One of them is einsteinium. One of them is fermium. One of them is mendelevium. One of them is nobelium. One of them is lawrencium. One of them is rutherfordium. One of them is dubnium. One of them is seaborgium. One of them is bohrium. One of them is hassium. One of them is meitnerium. One of them is darmstadtium. One of them is roentgenium. One of them is copernicium. One of them is nihonium. One of them is flerovium. One of them is tennessine. One of them is oganesson.

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External exposure & Internal exposure

Characteristics of radiation

Q4. How do you know if you are exposed to radiation?

- I smelled something sweet
- I heard noise sounded like a broken whistle
- I felt sharp electric shock
- I tasted bitter when I opened my mouth
- I saw something like fog
- I didn't feel a thing

You can NOT feel with the five senses; however,--

Types of radiation

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Instantaneous exposure to large doses of radiation

Over 1000 rads

Daily doses of radiation

Q5. Is Radiation absolutely safe?

- Instantaneous exposure to large doses of radiation will kill you
- Instantaneous exposure to small doses of radiation will kill you
- Absolutely safe!

Types of radiation and their characteristics

