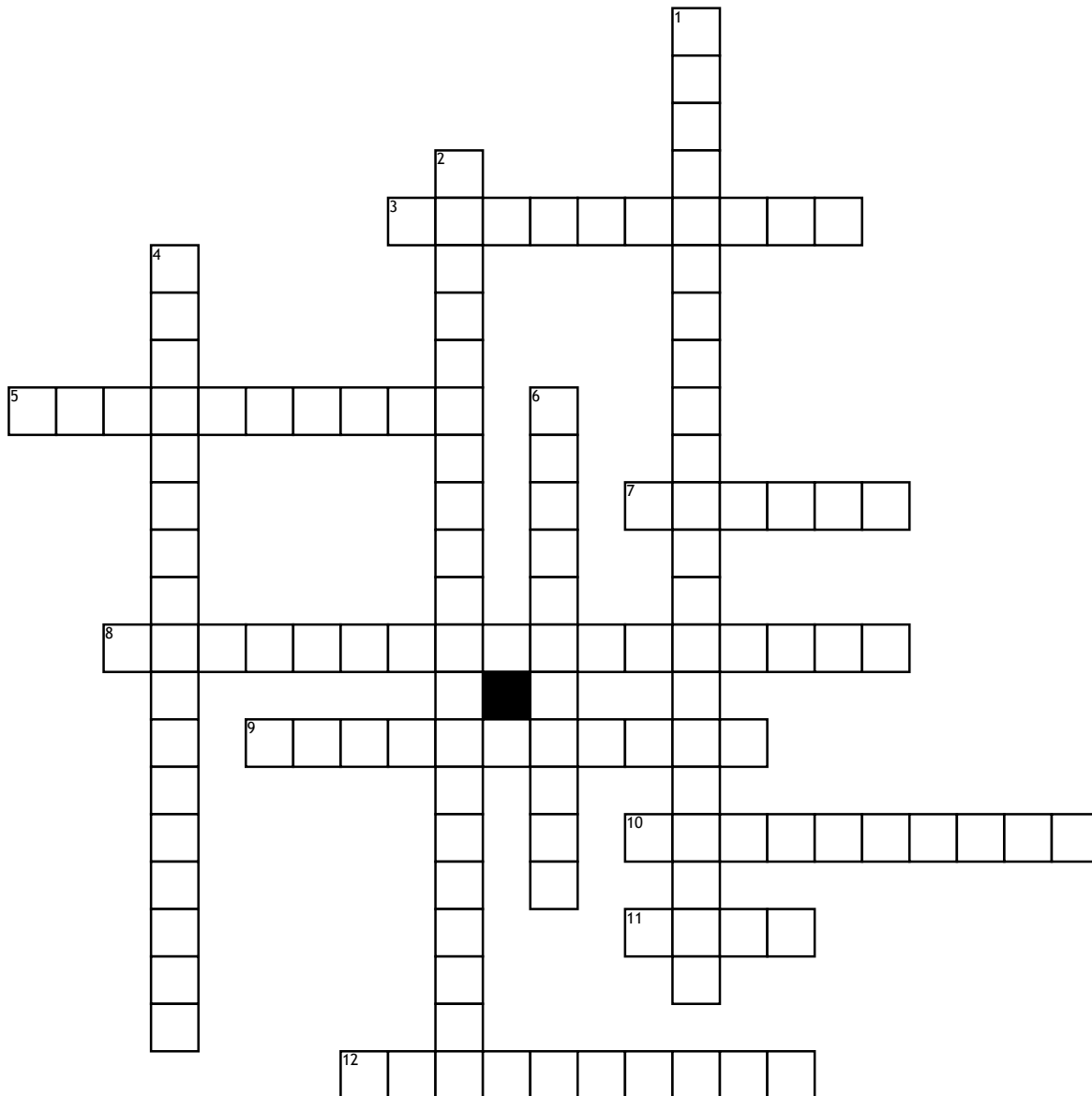


Ionizing radiation



Across

3. _____ occurs when the radiation carries enough energy to remove an electron from an atom or molecule

5. _____ occurs when the radiation excites the motion of the atoms or molecules, or excites an electron from an occupied orbital into an empty, higher energy orbital.

7. One way to measure ionizing radiation is to measure the activity of the source in units of disintegration per second or _____.

8. Radiation that carries more energy than 1216 kJ/mol that can remove an electron from a water molecule

9. The dividing line between ionizing and non-ionizing radiation falls in the _____ spectrum

10. People who live in the Rocky Mountains receive twice as much background radiation as the national average because there is less _____ to filter out the cosmic rays from the sun

11. Radiation absorbed doses or "_____"

12. Damage to the _____ is the main cause of death at modernity high levels of exposure

Down

1. The _____ or rem is the absorbed dose in rads times the biological effectiveness of the radiation.

2. Radiation that carries less energy and can only excite the water molecule

4. The dividing line between radiation that excited electrons and radiation that forms ions is often assumed to be equal to the _____

6. The H_2O^+ ion is an example of a _____, which contains an unpaired valence shell electron. They are extremely reactive.