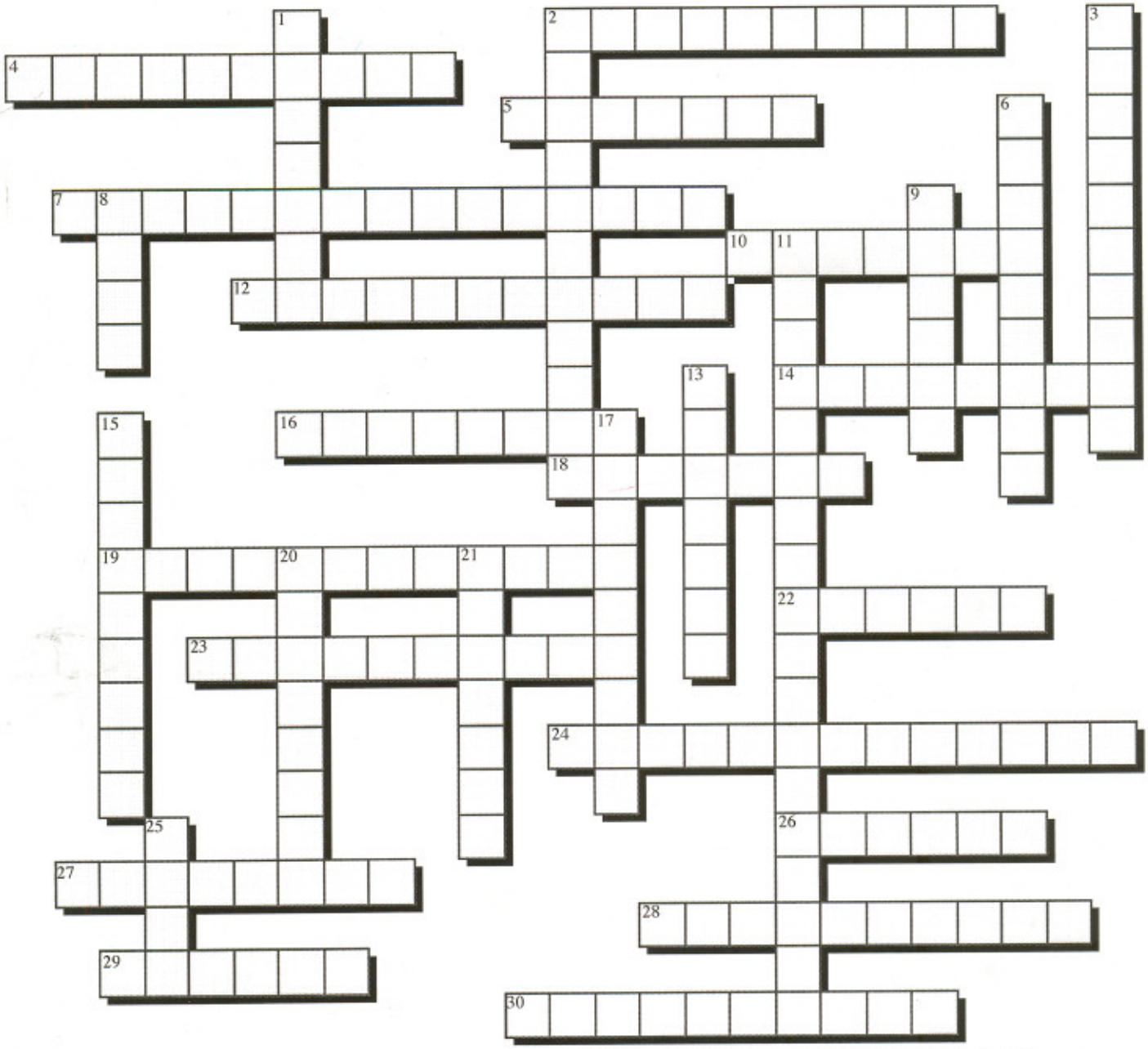
Name _____ **Periodic Table X-W** Period_____



**ACROSS**

**2** His model of the atom was mostly empty space.
**4** He proposed the idea that matter was composed of small pieces that could not be cut into smaller parts.
**5** The horizontal rows of elements in the periodic table.
**7** Those electrons that have the highest energy level and are held most loosely.
**10** Hard to detect because it has no electrical charge.
**12** The specific amount of energy an electron has.
**14** This is a poisonous green gas that combines with Sodium to form salt.
**16** This element has 26 neutrons.
**18** One of only two elements that are found in nature in as a liquid.
**19** The force of attraction that holds two atoms together as a result of the arrangement of electrons between them.
**22** He thought atoms were like smooth, hard balls that could not be broken.
**23** According to this model, electrons move rapidlyin every direction around the nucelus.
**24** An arrangement of elements showing the repeating patern of their properties
**26** Uncuttable.
**27** His model of the atom was like a chocolate chip cookie.
**28** All of these elements have full outer energy levels.
**29** Vertical columns of the periodic table.
**30** The average mass of all the isotopes of an element.

**DOWN**

**1** This element has 14 protons, 14 electrons and 14 neutrons.
**2** This element is not found in nature and has 161 neutrons.
**3** The sum of the protons and neutrons in the nucleus of an atom.
**6** This element is found in the 3rd period and has two valence electrons.
**8** The smallest particle of an element.
**9** Has a mass of one A.M.U.
**11** One way to depict the number of valence electrons in an element.
**13** A tiny region at the center of an atom and is postively charged.
**15** These atomic particles have only 1/2000 the mass of a neutron.
**17** He discovered a set of patterns that applied to all the elements.
**20** Atoms of the same element that have different numbers of neutrons.
**21** This halogen has seven valence eletrons and has an atomic mass of 79.904.
**25** His model of the atom resembled a sliced onion.