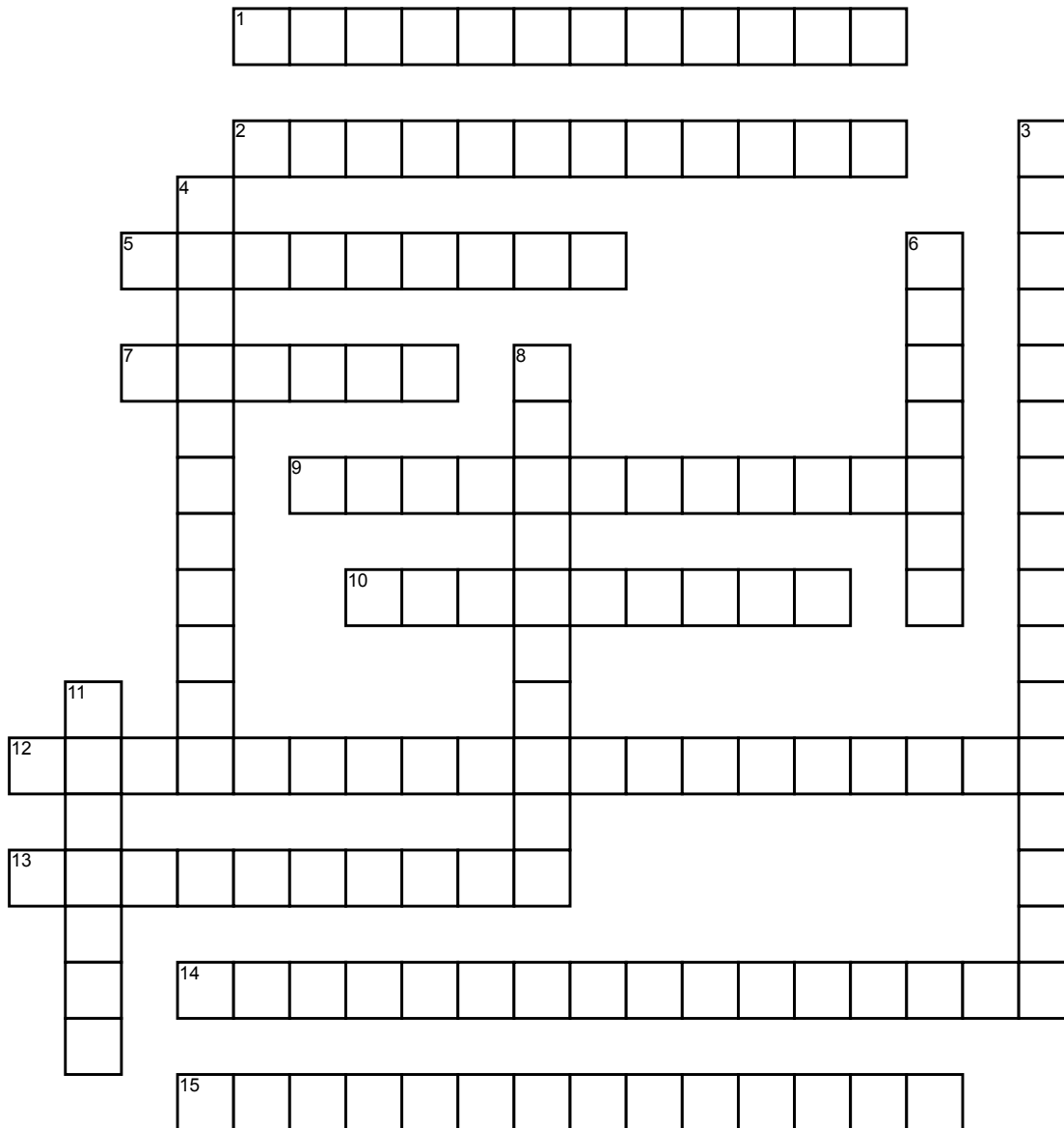


Name: _____

The World of Polymers and Plastics



Across

1. A type of polymer that is thermoplastic, meaning that it can be melted to a liquid and remolded as it returns to a solid state
2. Compounds that are added in small amounts to polymers to make them softer and more pliable.
5. An insoluble substance that is the main constituent of plant cell walls and of vegetable fibers such as cotton
7. A naturally abundant nutrient carbohydrate, found chiefly in the seeds, fruits, tubers, roots, and stem of plants

9. Is either a gas or a substance capable of producing a gas to manufacture a foamed plastic.

10. A polymer formed by the combination of two or more different monomers.

12. Nylon is another common example of what

13. Condensation polymers that contain the amide functional group

14. Are attractions between molecules in the polymer that hold the material together

15. Involve thousands of atoms and their molecular masses can reach over a million

Down

3. Distinctive arrangements of atoms that impart characteristic chemical properties to the molecules that contain them

4. Covalent bond that forms between $-COOH$ group of one amino acid and the $-NH_2$ group of the next

6. A material consisting of any of a wide range of synthetic or semi-synthetic organics that are malleable and can be molded into solid objects of diverse shapes.

8. Monomers from which our body builds proteins.

11. Small molecules used to synthesize the polymeric chain