|  |
| --- |
| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

The World of Polymers and Plastics

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |
|  |  |  |  | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 7 |  |  |  |  |  |  | 8 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 9 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 11 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 13 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 14 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 15 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **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 -NH2 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 protiens.**11.** Small molecules used to synthesize the polynmeric chain |