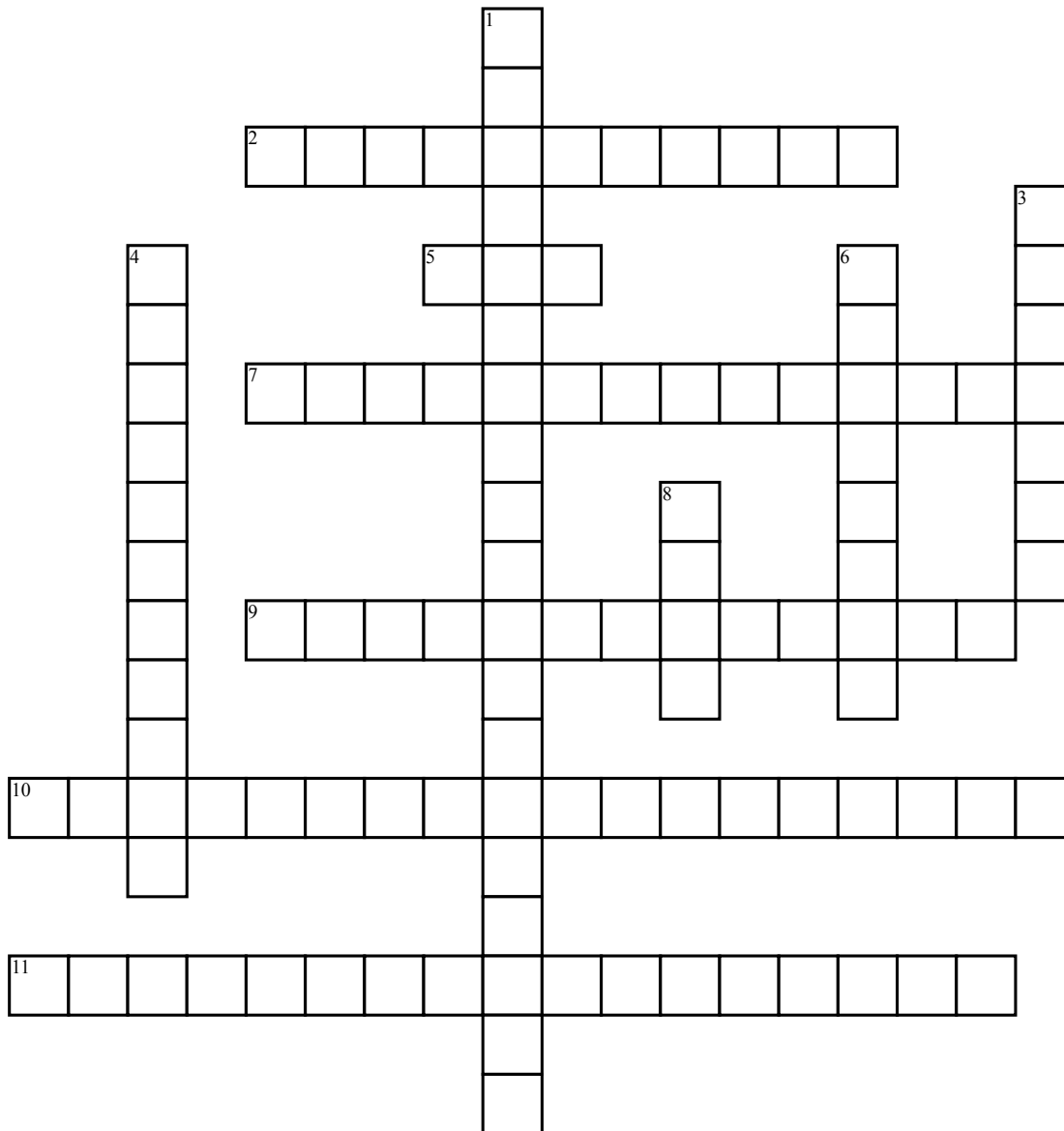


Bitotechnology



Across

2. long thread-like structures made of a DNA molecule and protein
5. a molecule that contains the instruction needed for an organism to develop and function. These instructions are stored as a code made up of genes.
7. the biological treatment of hazardous waste by living organisms.
9. the application of scientific knowledge to change the genetic makeup of living things to create products and processes for human use.
10. also known as genetic engineering Manipulating genes for practical purposes
11. the intentional mating of organisms to produce offspring with specific traits.

Down

1. a thirteen year long research effort that sequenced all the base pairs that compose human DNA allowing them to produce a gene map which showed the relative location of each known gene on every human chromosome
3. creating new organisms by using EXACT copies of another organism's genes. Production an organism that is an exact genetic copy of another.
4. A form of genetic modification in which a gene from one organism is inserted into the DNA of another organism. Insulin producing bacteria is an example
6. changes in the number, type, or order of bases on a piece of DNA which can be categorized as a deletion, insertion, or a substitution.
8. a segment of a DNA molecule within the nucleus of all cells that are made up of a sequence of four different chemical bases (adenine, thymine, cytosine, and guanine) which determines the traits of an organism or individual.