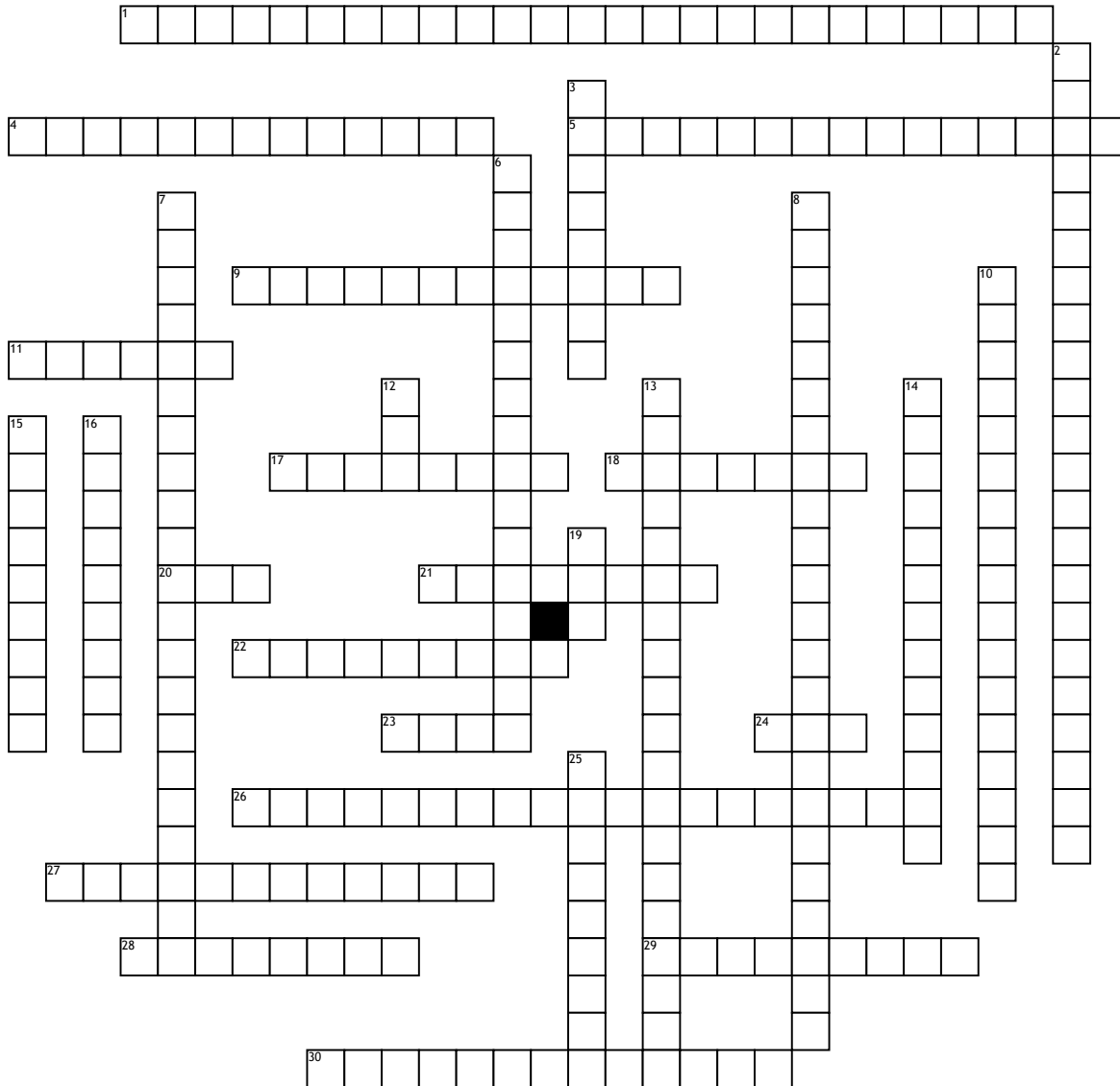


Name: _____

Date: _____

Cell Communication



Across

1. A set of chemical reactions in a cell that occurs when a molecule attaches to a receptor on the cell membrane
4. A mechanism leading to multiple copies of a chromosomal region within a chromosome arm
5. A phosphate group is added
9. They pass the message to the next signaling component in the chain without otherwise participating
11. Usually a molecule which produces a signal by binding to a site on a target protein
17. Any behavior of a living organism that results from an external or internal stimulus
18. A chemical substance produced in the body that controls and regulates the activity of certain cells or organs
20. A glyceride consisting of two fatty acid chains covalently bonded to a glycerol molecule through ester linkages
21. Similar to paracrine signaling but there is a special structure called the synapse between the cell originating and the cell receiving the signal
22. Refers to the reversible transition of a molecule into a nearly identical chemical or physical state
23. High-affinity cell surface receptors for many polypeptide growth factors
24. Guanine Diphosphate
26. Interact and/or bind with multiple members of a signaling pathway, tethering them into complexes

27. The process by which foreign DNA is introduced into a cell by a virus or viral vector

28. Protrusion of the plasma membrane of a cell

29. A process of programmed cell death that occurs in multicellular organisms

30. A system of stimuli and response correlated to population density

Down

2. A sequence of events where one enzyme phosphorylates another, causing a chain reaction leading to the phosphorylation of thousands of proteins
3. Act as molecular switches inside cells, and are involved in transmitting signals from a variety of stimuli outside a cell to its interior
6. A molecule that relays messages in a cell from a receptor on a cell membrane to the final destination where an action within the cell is to take place
7. A group of transmembrane ion channel proteins which open to allow ions through the membrane in response to the binding of a chemical messenger
8. Constitute a large protein family of receptors, that detect molecules outside the cell and activate internal signal transduction pathways and, ultimately, cellular responses
10. A phosphate group is taken away
12. Guanine Triphosphate
13. An enzyme that removes a phosphate group from the phosphorylated amino acid residue of its substrate protein

14. Kinase enzyme that modifies other proteins by chemically adding phosphate groups to them

15. A form of cell-to-cell communication in which a cell produces a signal to induce changes in nearby cells

16. When the target cell detects a signal, usually in the form of a small, water-soluble molecule, via binding to receptor protein

19. A secondary messenger molecule used in signal transduction and lipid signaling in biological cells

25. A release of hormones that act on distant target cells in the body