

Cell Signaling: How Cells Signal Each Other by Khan Academy

Article 1: Introduction to cell signaling

Video 1: Overview of cell signaling (optional)

What are the different types of cell signaling discussed in the article? Name four major cell signaling types then draw a picture of each type of signaling. It is optional to write a caption to show how each cell signaling type works.

Vocabulary: paracrine signaling, autocrine signaling, endocrine signaling, and signaling by direct contact, synapse, neurotransmitter, hormone, intracellular mediators,

Article 2: Ligands and receptors

What are three major types of cell-surface receptors? Name three major cell types of cell-surface receptors then draw a picture of each type of signaling. It is optional to write a caption to show how each cell signaling type works.

Vocabulary: ligand, receptor, Intracellular receptors, Cell-surface receptors, Ligand-gated ion channels, G protein-coupled receptors, Receptor tyrosine kinases

Article 3: Signal Relay Pathways

Please read up to “Phosphorylation example: MAPK signaling cascade.” Content beyond secondary messenger is optional read. Draw the diagram in “Phosphorylation example” section of the article then explain how signal is relayed in a cell after the reception of the signal using the diagram.

Vocabulary: intracellular signal transduction pathways, kinase, phosphorylation, phosphatase

Article 4: Response to a signal

What are two ways cells response to a signal? Simplify the diagrams in the article to show the response. It is optional to write a caption to describe each response.

Vocabulary: cellular response, Gene expression, Cellular metabolism

Your final task:

After reading the four articles and watching two videos under the heading “How Cells Signal Each Other,” create a three-step pictorial diagram then label each step on the diagram with captions to show how a cell communicates with another cell in endocrine signaling.