



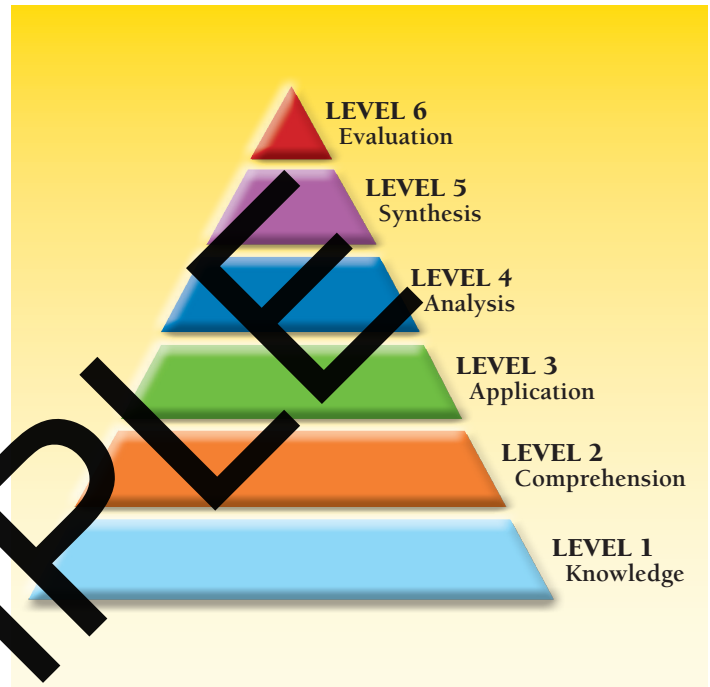
# Bloom's Taxonomy

**Our resource is an effective tool for any SCIENCE PROGRAM.**

## Bloom's Taxonomy\* for Reading Comprehension

The activities in our resource engage and build the full range of thinking skills that are essential for students' reading comprehension and understanding of important science concepts. Based on the six levels of thinking in Bloom's Taxonomy, and using language at a remedial level, information and questions are given that challenge students to not only recall what they have read, but to move beyond this to understand the text and concepts through higher-order thinking. By using higher-order skills of application, analysis, synthesis and evaluation, students become active readers, drawing more meaning from the text, attaining a greater understanding of concepts, and applying and extending their learning in more sophisticated ways.

Our resource, therefore, is an effective tool for any Science program. Whether it is used in whole or part, or adapted to meet individual student needs, our resource provides teachers with essential information and questions to ask, inspiring students' interest, creativity and promoting meaningful learning.



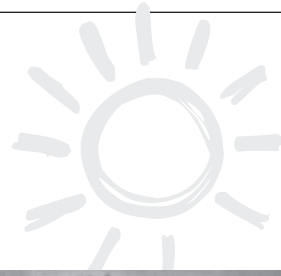
### BLOOM'S TAXONOMY: 6 LEVELS OF THINKING

*\*Bloom's Taxonomy is a tool widely used by educators for classifying learning objectives, and is based on the work of Benjamin Bloom.*

**SAMPLE**  
**Vocabulary**

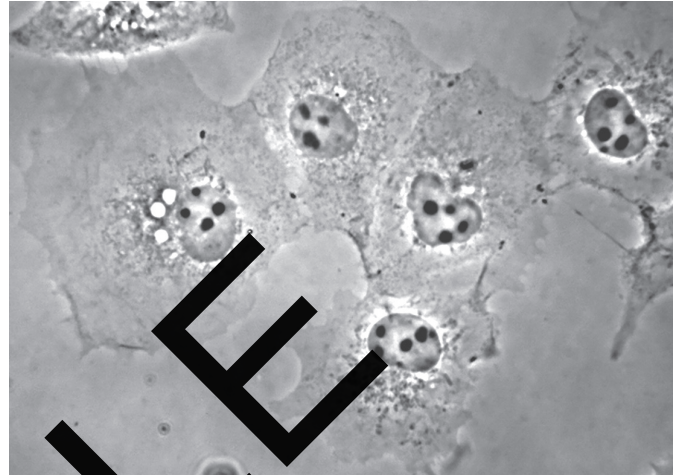


- matter • cell • magnify • microscope • organism • building block
- amoeba • multicellular • single-celled • nucleus • DNA • cell membrane
- particles • cytoplasm • organelle • cilia • cell specialization • specialize
- chromosome • mitosis • meiosis • asexual reproduction • cell wall
  - vacuole • plastid • centriole • lysosome • tissue • organ
- organ system • organism • diffusion • osmosis • active transport
  - passive transport • semi-permeable



# What Cells Do

**G**uess whose job it is to keep us alive and healthy? You may think our heart is what keeps us alive. This is a very important organ, but something else is important, too. If you could look on a smaller scale inside your body, you would see that our cells keep us alive.



Kidney cells

Try to think of a cell as a tiny factory. Within the factory there are many parts, or structures, that work together. These parts let the factory run smoothly. Would a real factory be productive if people didn't show up for work? Parts of a cell must also work together for it to work smoothly and to keep the organism alive. The cell "factory" has a "boss" (**nucleus**) which directs all the cell's activities. It also has a "power source" (**cytoplasm**) which provides energy to carry out these activities. It also has a "front door" (**cell membrane**) that controls which materials can go in and out of the cell.

**What different jobs do you think a factory boss would have to do to make sure the factory runs smoothly?**



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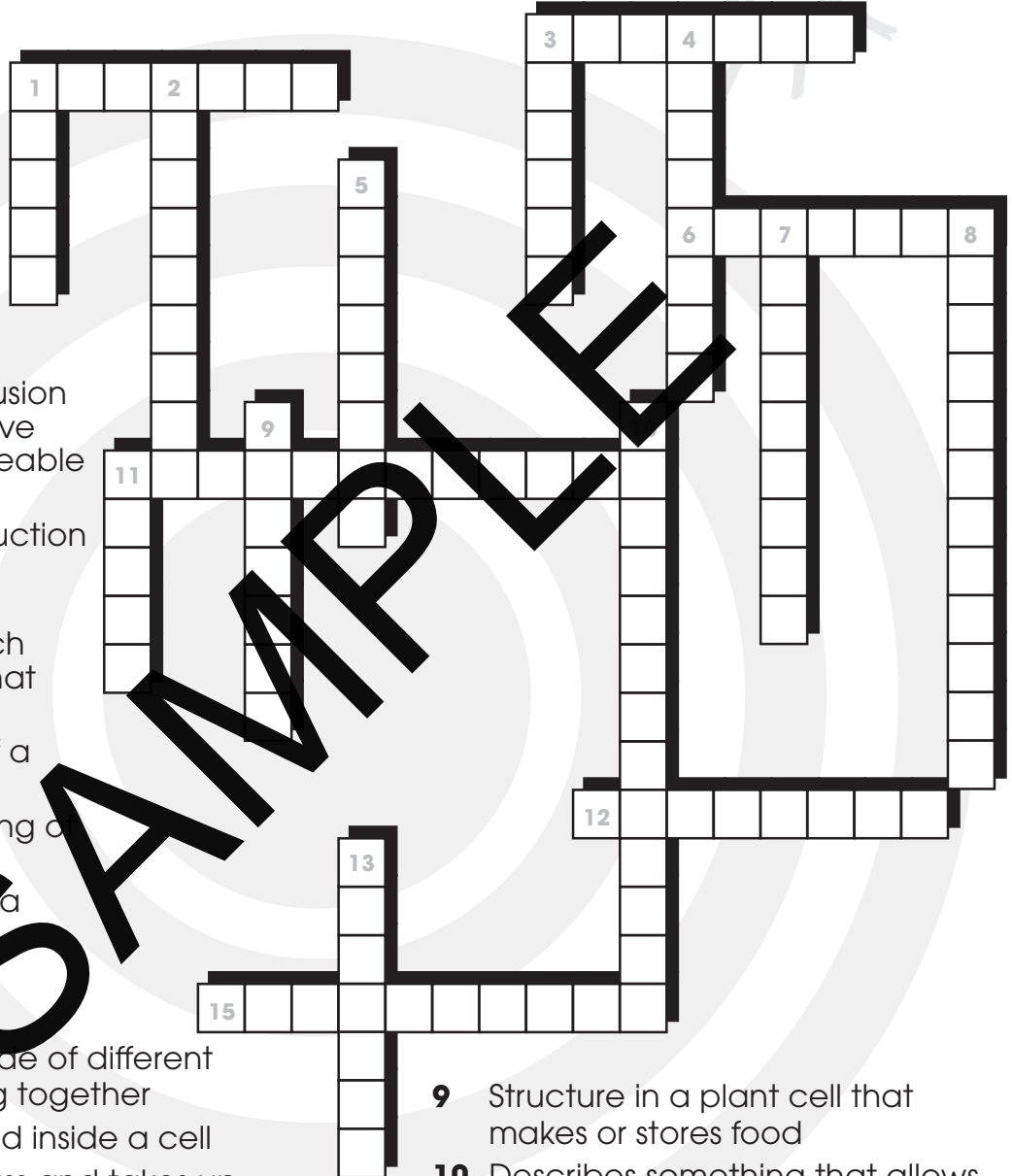
Now let's look at **cell specialization**. When a person is **specialized** in something, it means they have a unique and special **function**. They have their own job to do. Cells specialize too! Most multicellular organisms are made up of many specialized cells. This means that different cells carry out different functions to help keep the organism alive. Each cell has its own job, but they must still work together as a "team". For example, liver cells need other cells in the body (blood cells) to feed them oxygen and nutrients. So, both liver cells and blood cells work together as a team. Some specialized cells store food. Some carry nutrients to other cells. But remember that no matter what their job is, cells all have one main job: to keep the plant or animal alive.



# Crossword Puzzle!

**Word List:**

Cell membrane, cell wall, chromosome, cilia, cytoplasm, matter, meiosis, mitosis, nucleus, organ, organelle, organism, osmosis, plastid, semi permeable, single celled, vacuoles



**Across**

- 1** A special type of diffusion in which particles move through a semi-permeable membrane
- 3** A type of cell reproduction in which sex cells are produced
- 6** The cell's "brain" which controls everything that happens in the cell
- 11** The outer covering of a cell
- 12** The rigid outer covering of a plant cell
- 15** A small bit that holds a cell's genetic code

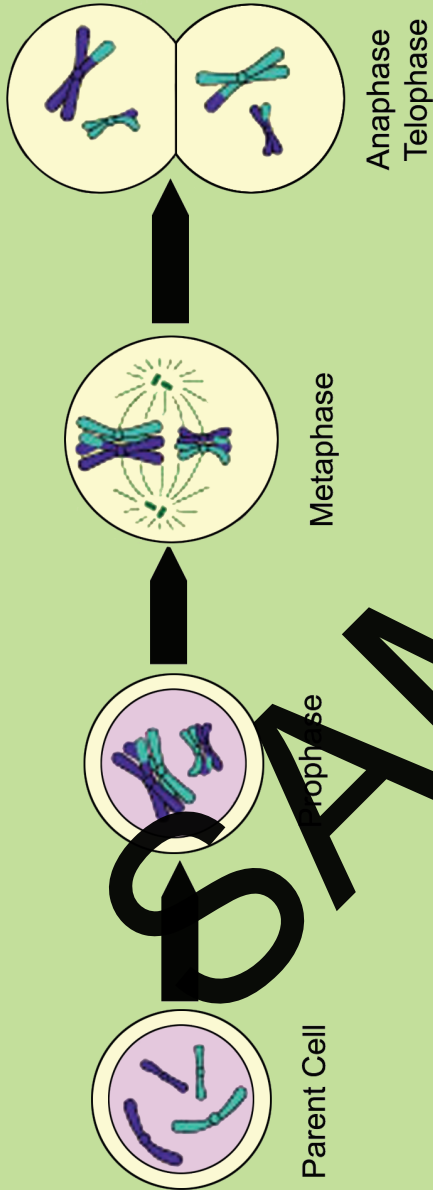
**Down**

- 1** Something that is made of different kinds of tissue working together
- 2** A small structure found inside a cell
- 3** Anything that has mass and takes up space
- 4** A living thing, such as a plant or animal
- 5** Large sacs in a plant cell that take up a lot of space
- 7** Jelly-like substance that fills the inside of a cell
- 8** Describes an organism that is made up of only one tiny cell
- 9** Structure in a plant cell that makes or stores food
- 10** Describes something that allows some things through it, and not others
- 11** "Paddles" that push the cells around and make them move
- 13** Type of cell reproduction in which one cell divides into two new, almost identical cells

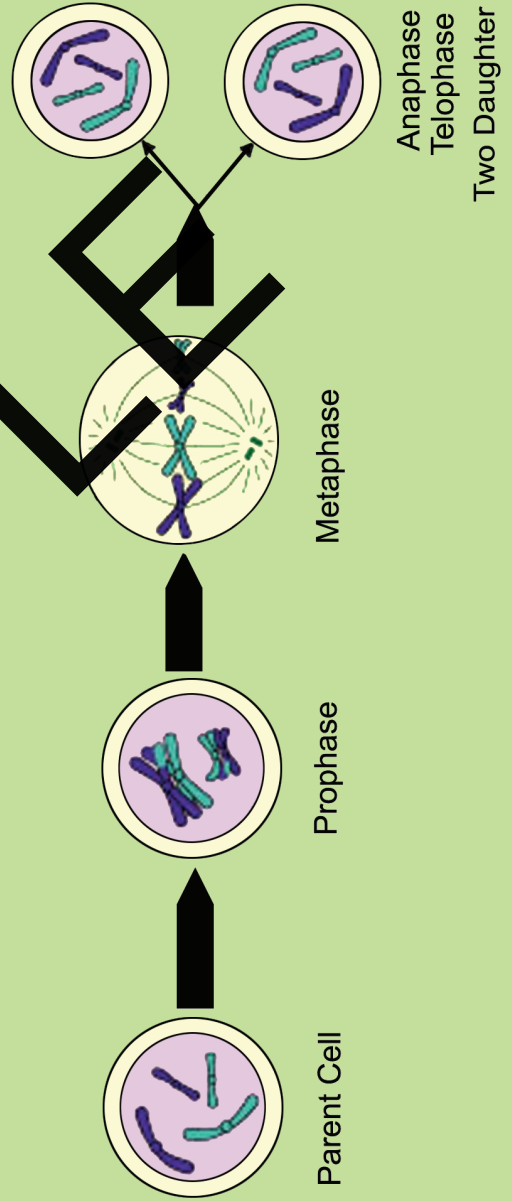
# Meiosis & Mitosis



## Meiosis



## Mitosis



**SAMPLE**