

When was the electron microscope first used?

The electron microscope was first used in 1933.

What can be seen using an electron microscope?

Electron microscopes can be used to see much smaller things in more detail, such as the internal structure of mitochondria and chloroplasts. They can also be used to see smaller things, such as ribosomes and plasmids.

What is the formula for calculating magnification?

Magnification = image size/actual size

What is cell differentiation?

Cell differentiation is the process by which cells become specialized.

What are undifferentiated cells called?

Undifferentiated cells are called stem cells.

What is the purpose of sperm cells?

The purpose of sperm cells is reproduction.

How are sperm cells specialised for reproduction?

Sperm cells are specialised for reproduction by their long tail, streamlined head to help them swim to the egg, by containing lots of mitochondria to provide the energy needed for this process, and by carrying enzymes to digest through the egg cell membrane in the acrosome (tip of the head). Sperm cells also only have 23 chromosomes.

What is another term for nerve cells?

Another term for nerve cells is neurons.

What is the function of nerve cells?

The function of nerve cells is rapid signaling: to carry electrical signals from one part of the body to another.

How are nerve cells specialised for rapid signaling?

Nerve cells are specialised for rapid signaling because they have a long axon to allow the electrical signals to travel more distance, and are branched at their ends (have dendrites) to connect to other nerve cells and form a network. They also have a myelin sheath which surrounds the axon to prevent electrical nerve signals leaking out of the nerve cell, which increases the speed of transmission of electrical signals.