

تم تحميل هذا الملف من موقع المناهج الإماراتية



ملخص الدرس الثاني Cell function and structure بنية الخلية ووظيفتها

موقع المناهج ← المناهج الإماراتية ← الصف السادس ← علوم ← الفصل الثاني ← ملخصات وتقارير ← الملف

تاريخ إضافة الملف على موقع المناهج: 13:28:25 2025-01-19

ملفات اكتب للمعلم اكتب للطالب | اختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل | منهج انجليزي | ملخصات وتقارير | مذكرات وبنوك | الامتحان النهائي للمدرس

المزيد من مادة علوم:

التواصل الاجتماعي بحسب الصف السادس



صفحة المناهج الإماراتية على فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

المزيد من الملفات بحسب الصف السادس والمادة علوم في الفصل الثاني

أوراق عمل مراجعة وحدة life Exploring استكشاف الحياة

1

ملخص درس life Exploring استكشاف الحياة منهج انسابير

2

حل أوراق عمل مراجعة وحدة life Exploring استكشاف الحياة

3

ملخص الدرس الأول life Exploring استكشاف الحياة من وحدة life and Cell

4

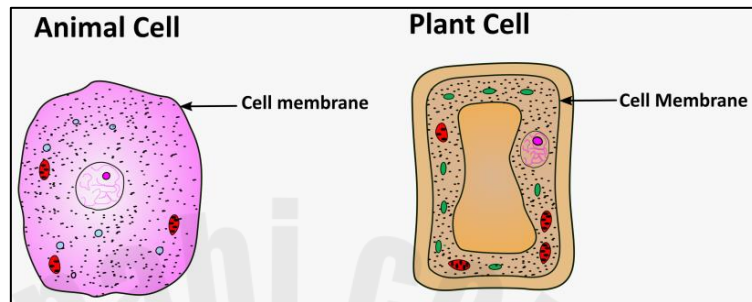
ورقة عمل درس أشكال الطاقة المختلفة من الوحدة السادسة الطاقة والشغل

5

Cell structure and function -L2

1- Cell membrane

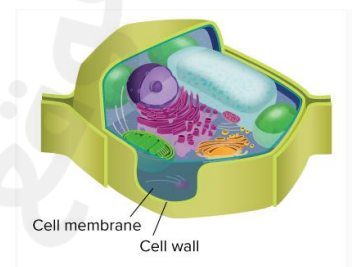
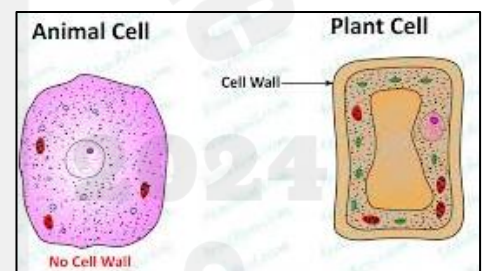
- Every cell is surrounded by a protective boundary called a cell membrane.
- The cell membrane is a flexible covering that protects the inside of a cell from the environment outside a cell.
- A cell membrane is semipermeable – it allows only nutrients to enter and wastes to leave a cell
- The **important role of cell membrane** is to control the movement of a substance into and out of cells



- 2- The **cytoplasm** is a fluid inside a cell that contains salts and other molecules

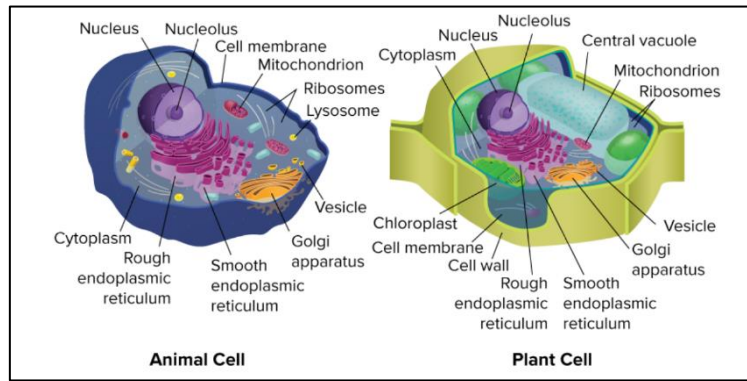
3- Cell Wall

- The cell wall is a stiff structure outside the cell membrane
- Cell walls provide structure and help protect the cell from the outside environment (attack by viruses and other harmful organisms).



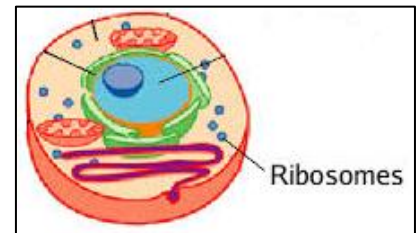
➤ Surface Area and volume:

- 1- When a cell grows, both its surface area and its volume increase.
- 2- However, the volume of the cell increases faster than its surface area.
- 3- If a cell becomes too large, it will need large amounts of nutrients.
- 4- It would produce large amounts of waste material.
- 5- Its surface area would be too small to move enough nutrients into the cell and remove all the waste materials from the cell.



4- Ribosomes

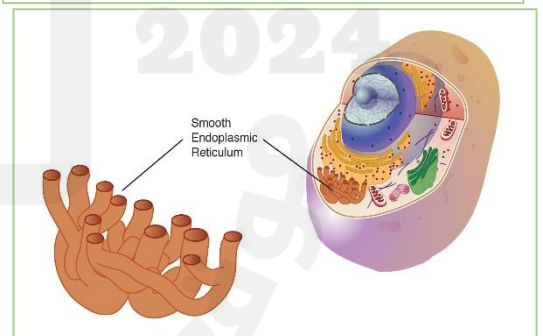
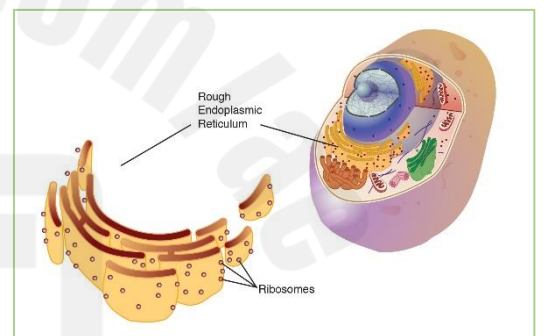
- Some proteins help cells communicate with each other.
- Some proteins transport substances inside cells.
- Proteins are made on small organelles called ribosomes. A ribosome is not surrounded by a membrane



5-Endoplasmic Reticulum

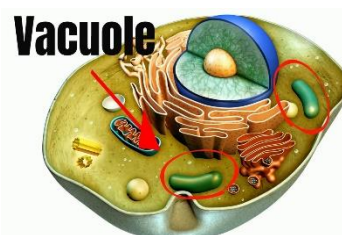
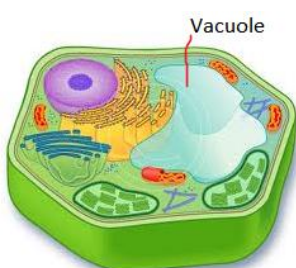
- Ribosomes can be attached to an organelle called the endoplasmic reticulum, or ER.

Rough Endoplasmic Reticulum	Smooth Endoplasmic Reticulum
With ribosomes on its surface	without ribosomes on its surface
Produce proteins	helps remove harmful substances from a cell



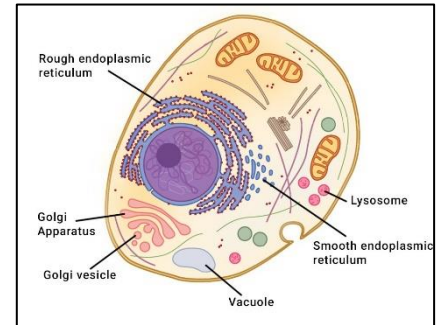
6-Vacuoles

- Vacuoles are organelles that store food, water, and waste materials in a cell.
- **Plant cells usually have one large vacuole.**
- Vacuoles help support the plant. / Some animal cells have many small vacuoles



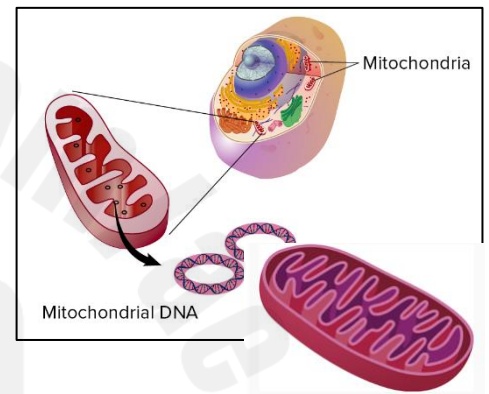
7-The Golgi Apparatus

- The Golgi apparatus is an organelle that gets proteins ready for their specific jobs.
- It then packages the proteins into tiny membrane-bound, ball-like structures **called vesicles.**
- **Vesicles are organelles that transport substances to other parts of the cell.**
- Some vesicles in an **animal** cell are called **lysosomes.**
- **Lysosomes help break down and recycle different parts of the cell.**



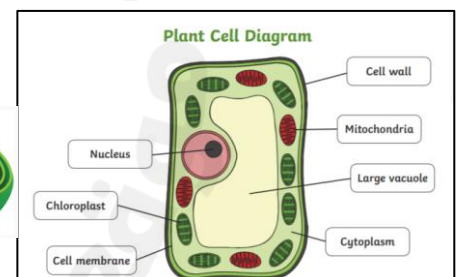
8-Mitochondria

- Mitochondrion is a bean-shaped organelle.
- It is called the powerhouse of cells.
- **Mitochondria are found in both plant and animal cells.**
- Mitochondria are the site of cellular respiration – a series of chemical reactions in which food molecules are broken down and the energy in them is converted to ATP.



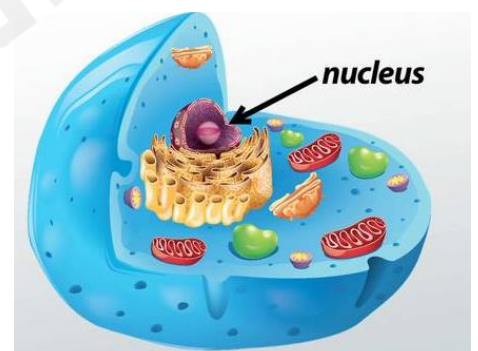
9-Chloroplast

- plant cells contain organelles called chloroplast.
- **Chloroplasts** are organelles that use light energy and make food

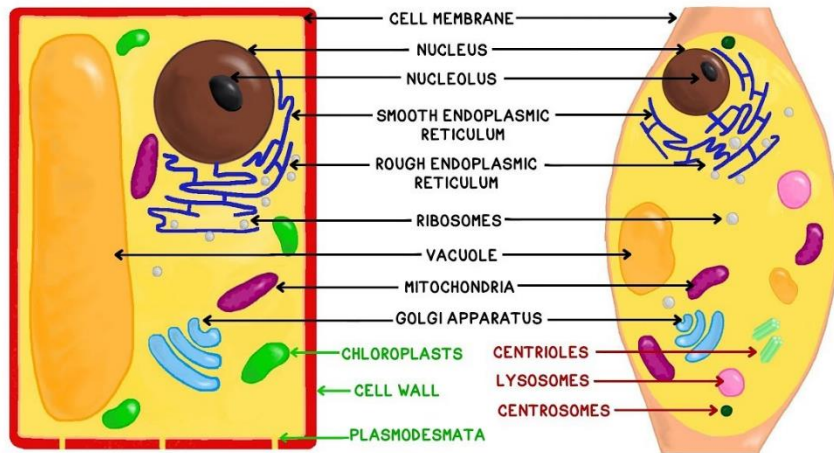


10-Nucleus

- The largest organelle inside most eukaryotic cells is the nucleus.
- The nucleus is the part of a eukaryotic cell that directs cell activities and contains important cellular information stored in DNA.
- DNA is organized into structures called chromosomes.
- DNA carries instructions for making all the proteins a cell needs.



PLANT VS. ANIMAL CELLS



Organelle	Function	Plant, animal, or both?
Nucleus	Directs cellular activity	Both
Mitochondria	Powers animal cells and plant cells	Both
Chloroplasts	Capture energy for the plant cell	Plant
Cell Wall	Provides structure, support, and protection	Plant
Cell Membrane	Regulates what enters and leaves a cell	Both

- **Red blood cells** are disk-shaped which helps them move through blood vessels and carry oxygen throughout the body.
- **Xylem cells** are tube like cells that transport water from the roots to the leaves of plants.
- **Neurons** are cells found in many animals that transmit information from one part of the body to another

