Sample Academic Content Design

by

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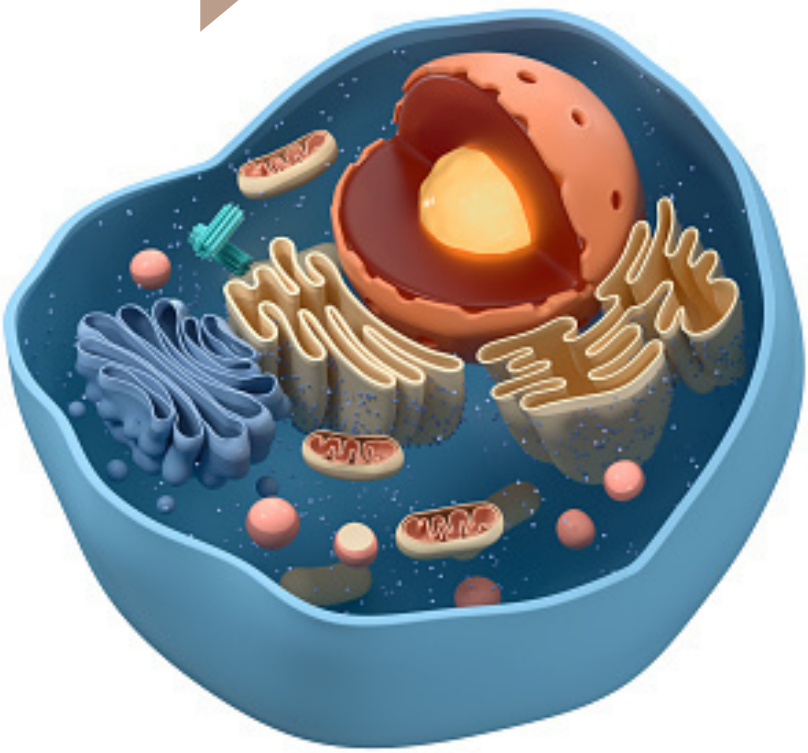
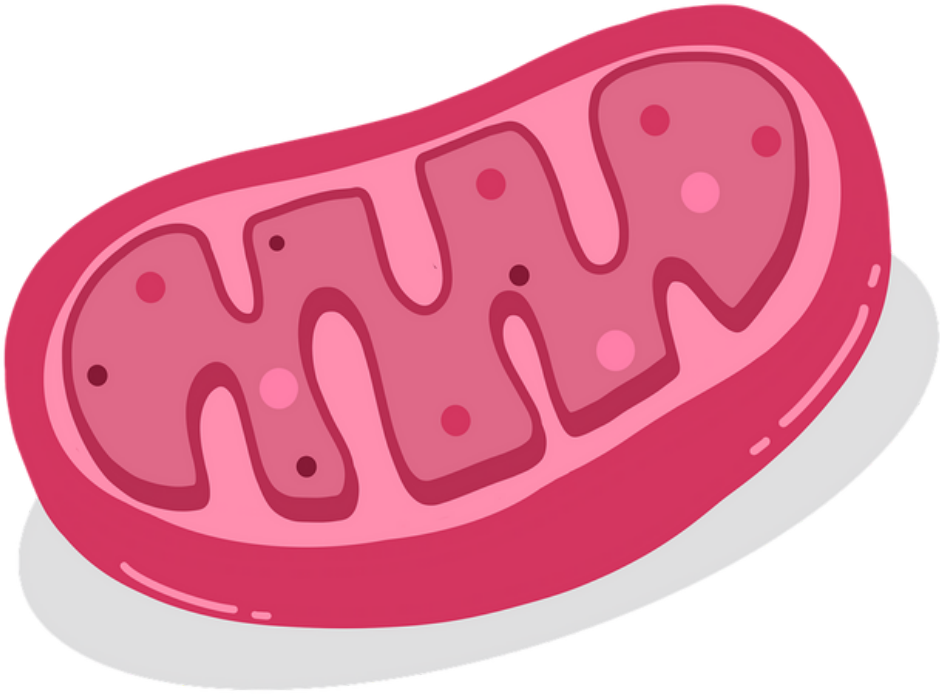
Could you recall this picture ?

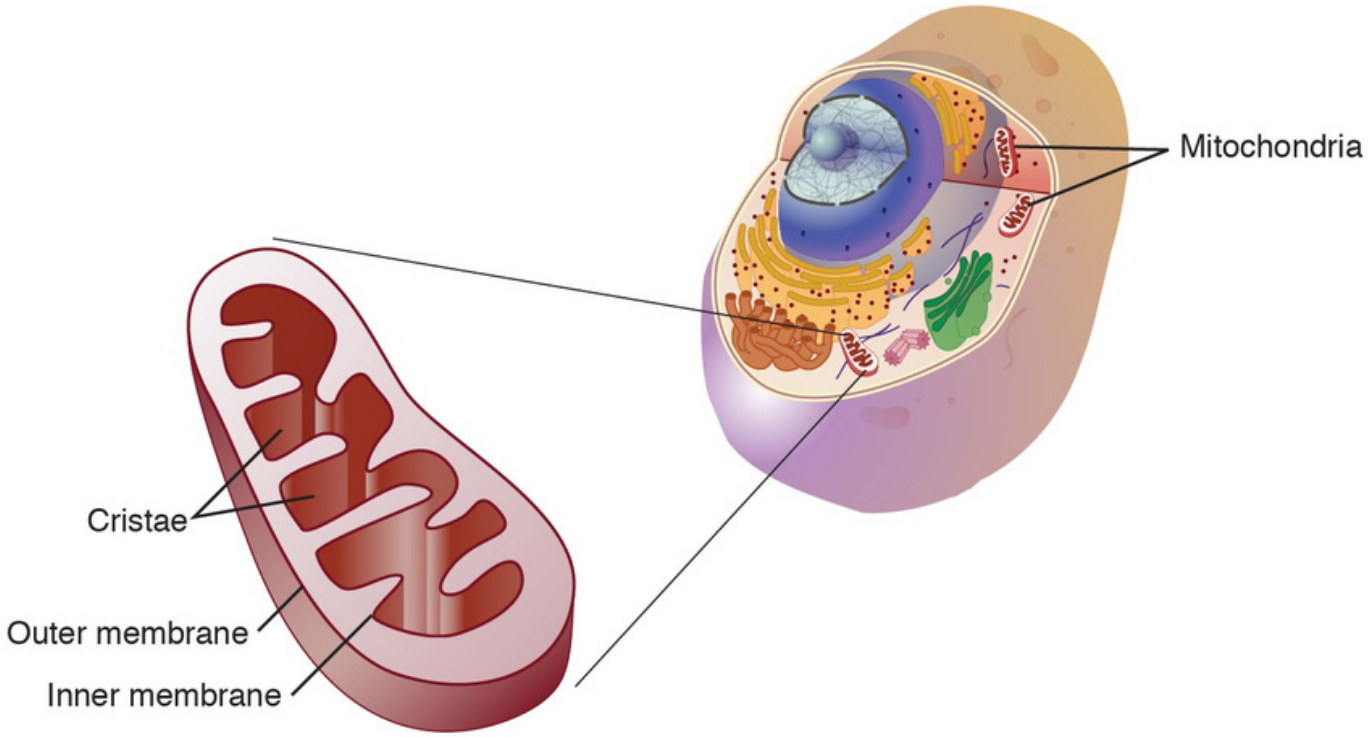


It's a cell and it requires energy to carry out various activities. This material discusses about the component of cell involved in production of energy.

Here's that very component which we call 'Mitochondria' and it is a cell organelle.

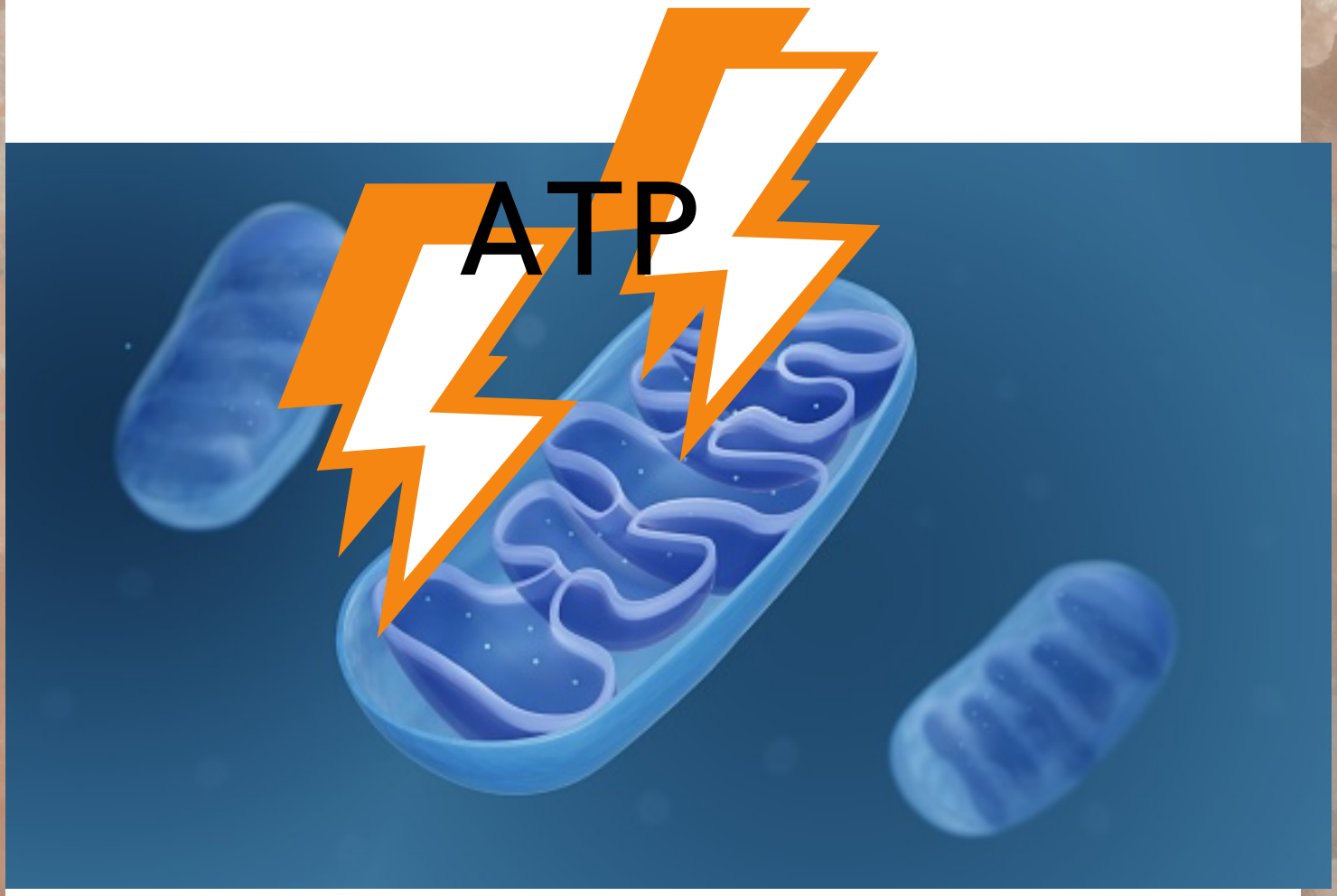


It is also called 'Powerhouse of the Cell ' as it is involved in energy production.



Mitochondria is a double membrane cell organelle and it contains:

1. An outer membrane, which is porous.
2. An inner membrane with folds called cristae, which increases the surface area for chemical reactions.



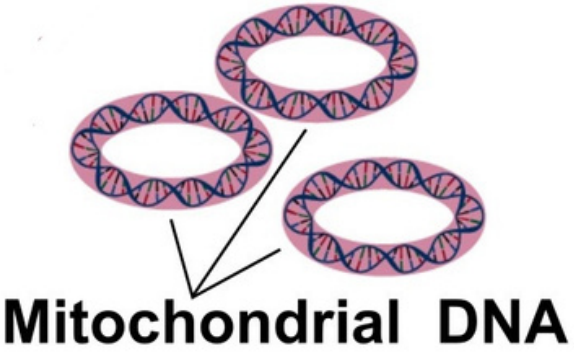
Various chemical reactions taking place in mitochondria produces the ATP (Adenosine Triphosphate) molecules or the energy currency of the cells.

Unique features about mitochondria✨

Have own DNA

Have ribosomes

Thus, can synthesize own proteins.



Time to Check Yourself

Which cell organelle is called powerhouse of the cell?

Ribosomes

Mitochondria

Chloroplast

Answer- Mitochondria is called the powerhouse of the cell.

How many membranes does the mitochondria have?

Single

Double

No membrane

Answer- Mitochondria is a double membrane cell organelle.

What are cristae?

Folds in inner membrane of mitochondria

Folds in outer membrane of mitochondria

Folds in matrix of mitochondria

Answer- Cristae are the folds present in inner membrane of the mitochondria.

What is the energy currency of the cell?

NADPH

ADP

ATP

Answer- ATP is called energy currency of the cell as energy is produced and consumed in the form of those molecules.

What does ATP stands for?

Alanine Triphosphate

Adenosine Triphosphate

Adrenaline Triphosphate

Answer- ATP stands for Adenosine Triphosphate.

Which of the following is not present in mitochondria?

Nucleus

DNA

Ribosomes

Answer- Mitochondria doesn't have nucleus.

You have mastered the topic Mitochondria...