

Educational Technology for Biology Teachers

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Cell Organelles Trading Cards

BACKGROUND:

This lesson focuses on knowledge of cell organelles and their functions. For this lesson, students will create trading cards of cell organelles, describing characteristics such as location and function. The final product will be a set of trading cards complete with information and images for each of the organelles found in plant and animal cells. The lesson also includes a number of different activity ideas for these trading cards to use in the classroom.

The interactive trading card creator is a free online program created by readwritethink.org that allows students to enter information into a template to create trading cards featuring content about any topic imaginable, including famous people, places, objects, and events. This software prompts students to answer specific questions about the topic of each card. This program could be used for any content area to promote critical thinking about a topic. In this lesson, the interactive trading card creator is used to create cards describing the different organelles found in plant and animal cells.

By completing this lesson, students will gain scientific literacy skills through knowledge of facts about cell organelles and their functions.

21st Century Student Outcomes:

Learning and Innovation Skills - think creatively and work creatively with others, communicate and collaborate with others about ideas

ICT Literacy Skills - use digital technology to research, organize, evaluate, and communicate information

Life and Career Skills - productivity and accountability to manage projects and produce results, social skills, work together in diverse teams

OBJECTIVES:

Students will be able to name and describe organelles found in animal and plant cells, and explain the location, structure, and functions of each.

STANDARDS:

Structure of Life L.12.B.1 - Students know cell structures and their functions.

MATERIALS:

- Biology textbook
- Computer with internet access to Interactive Trading Card Creator
- http://www.readwritethink.org/files/resources/interactives/trading_cards_2/

TIME FRAME:

2 days (designed for 50-60 minute class periods)

STEPS:

DAY 1:

Creating the trading cards - Have students log on to the Interactive Trading Card Creator website at the address listed above. On the home screen, type in Name and click Start. On the next screen, type in a Topic name (the name of one of the organelles) and click on the Physical Object button to generate the card.

Enter a topic and choose a type for your new card.

Topic:

Use this card to describe a physical object, something that can be seen, touched, or in some way perceived. It does not need to be an object that exists in the real world.

Students can now begin to fill in the information about the organelle on their trading card by typing into the boxes on the right. Note: students may have to get creative with how they enter the information about each organelle onto the card!

TRADING CARD CREATOR

Open Save

Mitochondria
Physical Object

Click here to insert an image.

1 Description
Definition:
organelle found in both plant and animal cells
Senses:
bean shaped with inner membranes

2 Purpose
Location:
in the cytoplasm
Function:
breaks down sugar molecules into energy
by: Student

FLIP

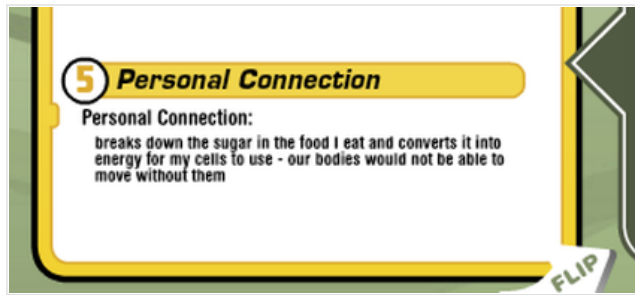
Complete the information to create your new card.

2. Purpose
Location:
Where is Mitochondria typically used?
In the cytoplasm

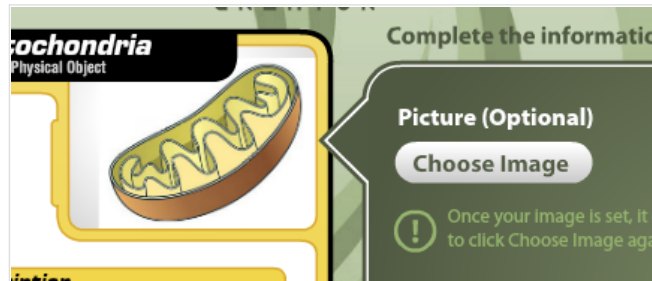
Function:
What does Mitochondria do or how does it work?
breaks down sugar molecules into energy

Edit Topic

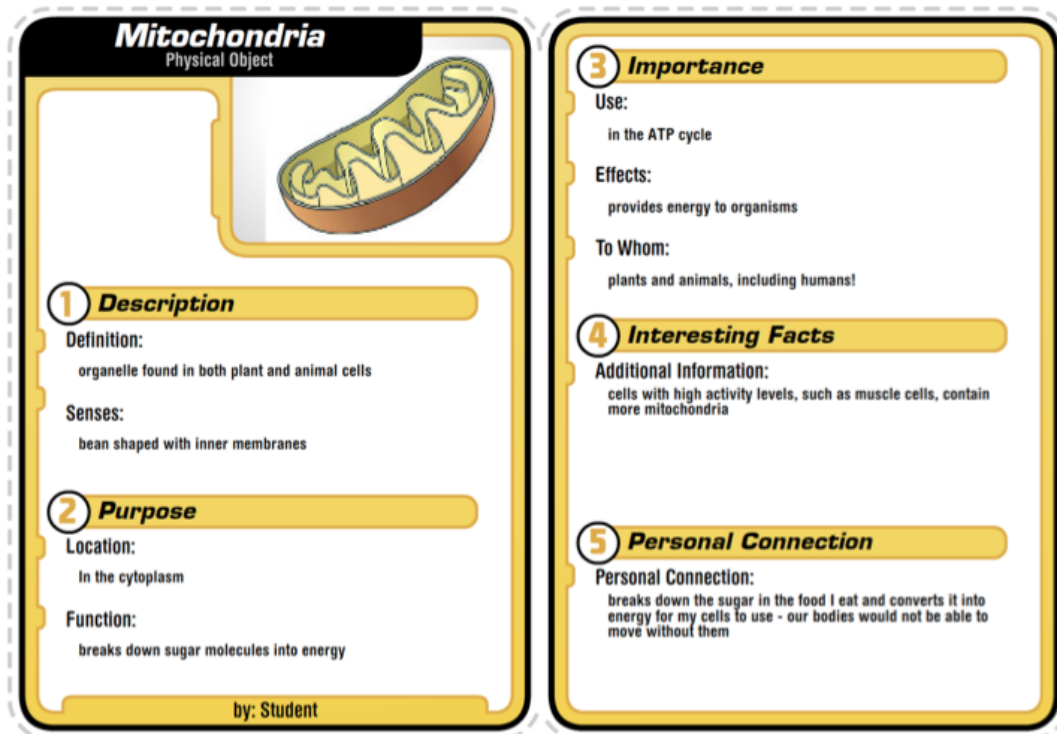
Start Over Finish Editing



Once students are finished entering all of the information about a particular organelle, they can add an image to the top of the card.



Click Finish Editing to save the card. Students can add up to 8 cards to a collection and then click Finish to either print a hard copy of the cards or save their work to come back later. When printed, students just cut out the card, fold in half, and glue together.



DAY 2:

Classroom activity ideas:

- Divide students into groups of about 6, assign each student in the group a few organelles that they will become "experts" on. Have students create trading cards for their assigned organelles. Jigsaw the information within the groups and have students teach the others in their group

about their assigned organelles. Have each student print out enough copies of their trading cards to share with the rest of the group.

- Create an alternative form of assessing student knowledge about the organelles, their functions, and connections to the human body. Give each student a list of the organelles that they are to know (perhaps choose 8 of the most important to know), and have them create trading cards for each organelle.

- Divide students into groups of about 3 and assign each group one organelle that they will become "experts" on to teach the rest of the class. Each group will create a trading card, then enlarge the cards and print out on poster paper - or have groups create a poster based on the card they've created. Hang the giant cards or posters around the room!

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