

NAME: _____



Activity One



DESIGN NEW TRIVIAL PURSUIT CARDS!

You have probably played the game "Trivial Pursuit" before. It's a game that has knowledge-based **QUESTIONS** on cards. Teams ask each other questions that are on the cards. If your answer is correct, you move your game piece ahead on the board.

Now it's time to create your own cards...

Using information you have learned about cells, come up with **TWO** new cards. Each card has FOUR questions on it. This means you will come up with eight questions and eight answers in total.

Use the front and back card format below as a guideline for setting up your questions and answers!

FRONT

SCIENCE	_____
	(Question)
SCIENCE	_____
	(Question)
SCIENCE	_____
	(Question)
SCIENCE	_____
	(Question)

BACK

SCIENCE	_____
	(Answer)
SCIENCE	_____
	(Answer)
SCIENCE	_____
	(Answer)
SCIENCE	_____
	(Answer)

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Activity Two



ORGANIZE A DNA CONFERENCE!

YOU have been chosen to be the STUDENT LEADER on the organizing committee of a conference. The conference will teach people what DNA is and how it works. As a student leader, you have a very important job to do. You need to figure out what information needs to be PRESENTED to people at the conference.

Use the steps below to carefully plan out this conference. The purpose of this activity is not to collect new information on DNA. The purpose is to use information you **already know** about DNA. Think about how you could present this information to a large audience.

Copy the following form into your notebook. Fill in the spaces with your own ideas and plans! Have fun with it – money or time is not a concern. You can create your dream conference!

Title of my conference: _____

Date of conference: _____

Who will come to my conference: _____

How many people will attend: _____

Topics to discuss: _____

Any other ideas: _____

Pictures of what I think the conference will look like:

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Activity Three



Local Newspaper Article:

“THERE HAS BEEN AN AMOEBIA SIGHTING IN TOWN!”

You have just been hired to be part of a writing team for your local newspaper. In groups of THREE, you will form the new LOCAL NEWS TEAM. This week’s report is: “There has been an Amoeba Sighting in Town!”

Together as a team, you will research the **amoeba**. Focus your research on this single-celled organism. Remember, an **amoeba** is a single-celled organism that lives in the ocean, in fresh water, in soil, and even inside the bodies of large animals! Your team should find enough information so that you can write a one-page article for the newspaper.

IN YOUR NEWSPAPER ARTICLE, you should include the following information:

- **Basic information about the amoeba**
 - **WHAT** the amoeba looks like
- **HOW** it is different from multicellular organisms
- **WHERE** in town it was spotted!!! (Be creative!)

BEFORE BEGINNING YOUR RESEARCH, spend some time with your team looking at a sample newspaper. Read a few articles that interest you.

While reading, think of the following things:

- What makes a good catchy title?
 - How is the topic introduced?
 - Is it introduced in the first paragraph?
- Are pictures or any other visuals used in addition to the writing?

This activity is heavily based on your own creativity. Be sure to answer the following questions before you write your article:

- How can you make your article very interesting to read?
- How can you use pictures to keep the reader’s attention?



Activity Four

BUILD A CELL MOBILE!

FOR THIS ACTIVITY, you will need the following materials:

- pipe cleaners (different colors, as many as you need)
 - string
 - scissors
- coat hanger

You will build your own 3-dimensional cell mobile to hang up in your classroom.

WHAT IS A MOBILE?

It is a hanging sculpture or decoration whose parts are balanced and hanging in the air.

In this activity, you will be constructing **four cells** out of pipe cleaners. These four 3-dimensional cells will be attached to your coat hanger to form your mobile. Before you start constructing however, you will need to think about what your cells are going to look like. Remember, these cells will be 3-dimensional. Therefore, they can not lie flat on a table. They will be round like a soccer ball!

IN YOUR CELLS, you should use pipe cleaners to show the following parts of the cell:

- cell membrane
- nucleus
- cytoplasm

STEPS:

1. Collect all of your materials.
2. Sketch out what you want your cells to look like.
3. Think about how you can construct with pipe cleaners.
4. You are ready to begin building!
5. Build the **cell membrane**. (Remember, it is round like a soccer ball! You will need to piece pipe cleaners together.)
6. Build the **nucleus**.
7. Build the **cytoplasm**.
8. Connect the three structures so that they join as one object.
9. Once you have completed your first cell, you are ready to continue building your three other cells.
10. Cut four pieces of string (each one of a different length). Attach a string to each cell you have built.
11. Attach your cells to the coat hanger and hang it up in your classroom.

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Activity Five



WRITE A CELL SPECIALIZATION RESUME!

To be **SPECIALIZED** in something means to have a very unique and specific function. For example, look at your teacher. He or she is specialized because they have a specific job to do... to teach you! Cells are specialized too. They each have a specific function which is needed to support the life of the organism of which they are a part.

In this activity, you will write a resume, pretending to be a cell.

WHAT IS A RESUME?

A resume is a **one-page report** that outlines information about you: some basic personal information, your education background, your work background and your personal interests. When you apply for a job, you present your resume to others to give them an impression of your strengths and experiences.

Copy the following resume format in your notebook, filling in the spaces with your own knowledge and ideas about a particular cell's specialization. Have fun!

RESUME

I am a _____ cell (plant or animal)

Personal Information:

 Name: _____

 Size: _____ Age: _____

What I look like: _____

What my function is: _____

Personal interests: _____

Pictures of what I look like:

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Activity Six



IT'S SHOW TIME! A PLAY ABOUT DIFFUSION AND OSMOSIS

For this activity, you will divide into drama groups of SIX to EIGHT people.

It's show time!

We have learned how particles move back and forth through a cell membrane.

In particular, we learned about **diffusion** and **osmosis**.

NOTE THESE DEFINITIONS:

DIFFUSION is the movement of particles from an area of many particles to an area of fewer particles.

OSMOSIS is a special type of diffusion. In osmosis, small particles are able to pass through the cell membrane. Others are too large to pass through the membrane. Since only some particles can move through the cell membrane, it is called a **semi-permeable** membrane.

NOW IT'S TIME TO START PLANNING YOUR PLAY!

Follow the steps below.

1. Divide your group members into different roles:
 - Some of you will be **particles**.
 - Some of you will be the **cell membrane**.
 - Some of you will be **water**.
 - One person might also be the **narrator**.
2. Now you are ready to start writing your play. Make sure that everyone in the play has **at least ONE line** to remember in the performance. The purpose of this play is to explain the following terms:
 - **diffusion**
 - **osmosis**
 - **semi-permeable membrane**
3. Before practicing your performance, write down the play on paper. Use your reading passages for information to explain the scientific terms. Remember, in an activity like this, you will need to expand your imagination quite a bit!

Any humor will make the play more enjoyable to watch! Pretend you were in the audience... what kind of play would you like to watch?