### Problem Set "Simcell 2010-2011" id:[22067]

#### 1) Assistment #104784 "104784 - Simcell Pretest"

A) What do the Mitochondria do?

## Multiple choice:

- ✓ Produce Energy
- Store Protein
- Direct cell activities
- X Protect the cell

### B) What do Ribosomes do?

### Multiple choice:

- Produce energy
- Protect the cell
- ✓ Produces protein
- X Stores water

# C) What does the Endoplasmic Reticulum do?

# Multiple choice:

- Produces water
- Produces energy
- X Is the brain of the cell
- ✓ Transports protein and other materials to the golgi body

# D) What do Lysosomes do?

### Multiple choice:

- X Transports protein and other materials around the cell
- X Is the brain of the cell
- Secretes carbohydrates
- ✓ Break down food particles

### E) What do vacuoles do?

## Multiple choice:

- ✓ Store Nutrients
- Produce energy
- X Transports protein
- X Protects the nucleus

# F) What does the Nucleus do?

## Multiple choice:

- Breaks down food particles
- Directs cell activites
  Transports protein and other materials around the cell
- **X** Produces energy

## G) What does the Nucleolus do?

### Multiple choice:

- X Transports protein and other materials around the cell
- ✓ Produces Ribosomes
- X Protects the cell membrane
- X Stores water

# H) What do golgi bodies do?

### Multiple choice:

- X Breaks down dead organelles and other waste
- Produces Ribosomes
- X Stores Water
- ✓ Transports protein and other materials around the cell

## 2) Assistment #142579 "142579 - Orienting Task"

Today you are going to be a scientist and conduct a virtual science experiment!

First, using a microworld, you will explore the science concepts under study.

Then you will make a hypothesis and test it. Then you will examine your data and use it to back up your conclusions.

## Multiple choice:



# 3) Assistment #138183 "138183 - Simcell Explore"

Follow the instructions in the activity below and click submit answer when you are done exploring the cell.

# Multiple choice:



✓ I think I understand the cell and the functions of its organelles.

4) Assistment #138185 "138185 - Simcell Problem Scenario 1"

## Processed externally (e.g., by a Flash object or Java applet):

B) The cell you just worked with was low on energy. If your hypothesis was correct, describe what actions you took to fix the cell. Otherwise, if you think you know, describe what you think needs to be done to fix the cell.

## Ungraded open response:

5) Assistment #138187 "138187 - Simcell Problem Scenario 2"

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# Processed externally (e.g., by a Flash object or Java applet):

**B)** The cell you just worked with could not store nutrients or break down food. If your hypothesis was correct, describe what actions you took to fix the cell. Otherwise, if you think you know, describe what you think needs to be done to fix the cell.

# Ungraded open response:

#### 6) Assistment #138189 "138189 - Post Test Explanation"

Now we are going to repeat the problems you saw at the start of this activity. We are doing this to see if you learned anything by working with the cell.

Please be patient, you are almost done!

### Multiple choice:

I understand

#### 7) Assistment #138182 "138182 - Simcell Posttest"

A) What do Mitochondria do?

## Multiple choice:

- ✓ Produce Energy
- Store Protein
- Direct cell activities
- X Protect the cell

## B) What do Ribosomes do?

### Multiple choice:

- X Produce energy
- **X** Protect the cell
- ✓ Produces protein
- X Stores water

## C) What does the Endoplasmic Reticulum do?

# Multiple choice:

- **X** Produces water
- Produces energy
- X Is the brain of the cell
- √ Transports protein and other materials to the golgi body

# D) What do Lysosomes do?

### Multiple choice:

- X Transports protein and other materials around the cell
- X Is the brain of the cell
- Secretes carbohydrates
- ✓ Break down food particles

### E) What do vacuoles do?

### **Multiple choice:**

- ✓ Store Nutrients
- X Produce energy
- X Transports protein
- X Protects the nucleus

# F) What does the Nucleus do?

# Multiple choice:

- Breaks down food particles
- ✓ Directs cell activites
- X Transports protein and other materials around the cell
- Produces energy

### G) What does the Nucleolus do?

### Multiple choice:

- X Transports protein and other materials around the cell
- ✓ Produces Ribosomes
- Protects the cell membrane

X Stores water

H) What do golgi bodies do?

# Multiple choice:

- Breaks down dead organelles and other waste
- Produces Ribosomes
- X Stores Water
- ✓ Transports protein and other materials around the cell