

Student Worksheet # 1
Cells behaving good or bad (50 points possible)

Name -----

Period -----

Date -----

Points -----

Overview

Have you ever cut your finger badly, or have you had a surgery? Remember how did it feel around the scar? Did you ever wonder why? Well, your task for the next couple of days will be to come up with some sort of explanation for this phenomenon. You will use the scientific method to guide you through this investigation. You will need to develop experimental protocol, run the protocols and make observations. Finally, in the end you try to make some generalizations and try to develop conclusions, and explanations.

Student Worksheet #1

Objectives of this lesson are:

Design an experimental protocol, to test your hypothesis.

Materials:

Glass slides

Petri Dishes

Gelatin

Bovine Serum Albumin

Phosphate Buffer Saline

Light microscopes

Sterile disposable pipettes

Mouse cells

Day 1

Create a diagram to illustrate your experimental protocol

Check with your teacher for approval of your experimental protocol

Reminder: check the list of available materials, and keep them in mind as you design your experiment. If you think that you might need some other materials ask your teacher to see if it might be possible to get them.

Teacher's signature signifies approval of outline. -----

Student Worksheet # 2

Cells behaving good or bad (30 points possible)

Name -----

Period -----

Date -----

Points -----

Overview:

Have you ever cut your finger badly, or have you had a surgery? Remember how did it feel around the scar? Did you ever wonder why? Well, your task for the next couple of days will be to come up with some sort of explanation for this phenomenon. You will use the scientific method to guide you through this investigation. You will need to develop experimental protocol, run the protocols and make observations. Finally, in the end you try to make some generalizations and try to develop conclusions, and explanations.

Student Worksheet # 2

The objectives of this lesson are:

- To make observation on a given phenomenon
- Propose possible explanations (hypotheses) for your observation

Materials

- Light microscope
- Petri dishes with glass slides

Day 2

- Perform your experiment
 - Investigate each slide under the microscope – without removing it from the dish
 - Make careful observations and record them on your worksheet
 - Discuss amongst your group the observations
 - Collect data
 - Organize and analyze your results and establish if it does support your hypothesis

Observations				

Describe possible explanations for your observations:

Please answer the following questions:

1. What conclusions did you develop based on your experiments? Please provide a detailed answer.

2. What applications of the investigated phenomenon can you foresee?