Tissue Investigation

Purpose:

1. To relate the structure of different tissue types to their function.

Procedure:

1. Sketch the 4 different types of tissue (epithelial, muscular, connective, & nervous tissue).
2. Obtain a slide (strip) of the tissue and look at it using the micro viewer.
3. Describe the appearance of the tissue you examined in your own words beside the sketch.

NOT Biological Drawings (Do NOT use biological diagram rules – just show main structures)			
Tissue: _____	Description:	Tissue: _____	Description
Tissue: _____	Description	Tissue: _____	Description

Analysis & Conclusions:

1. For **each** of the four general tissue types you examined, **explain** how the **structure** (shape, density, arrangement, extracellular material, etc.) is related to its **function**.

Epithelial	
Muscle	
Nerve	
Connective Tissue	

2. Squamous epithelial cells are very susceptible to cancer. Provide a *hypothesis* (a theory with explanation) for this observation.

3. Leukemia is a cancer of the bone marrow cells that usually results in an abnormal increase in white blood cells.
   a) Why may adult stem cells (such as bone marrow) be prone to becoming cancerous?

   b) What possible effects could this have on the body? (see blood above)

4. Examine the shape of the 3 muscular tissue types.
   a) Describe the general shape of a muscle cell.

   b) Explain the reason for this shape by referring to their function

5. Red blood cells and the outermost layer of skin do not have nuclei. What do you think is the reason for this?

6. Correctly identify the role of the major tissue types and enter the appropriate letter in the box. (C,M,N,E)

	Forms membranes		Its cells shorten to exert force
	Allows for the movement of limbs and for organ movements within the body		Forms endocrine (hormone) and exocrine (ie salivary, mucous) glands
	Uses electrochemical signals to carry out its function		Allows you to smile, grasp, and swim, ski and throw a ball
	Supports and reinforces body organs		Surrounds and cushions body organs
	Cells of this tissue may absorb and/or secrete substances		Forms the bone
	Basis of the major controlling system of the body		Forms the brain and spinal cord