**Task 2 – Using Microscopes:**

Magnification – To work out the magnification of your image, you need to multiply the magnification of the eyepiece lens with the objective lens.

Lowest power - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /2

Highest power - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ / 2

**Task 3 – Making a Slide – Plant Cells**

**Equipment:**

Tweezers

Microscope slide and cover slip

Onion

Iodine stain

Microscope

**Method:**

1. Peel off a small piece of the clear onion skin found between the layers of the onion. You will only need approximately 5mm x 5mm. Place it flat onto the microscope slide using the tweezers.
2. Add a drop of iodine and then place the coverslip on, placing one edge down first and lowering the coverslip on an angle.
3. Using the edge of some paper towel, carefully soak up any excess liquid.
4. Observe the cells under low power first.
5. Using a sharp pencil, draw a few of the cells. Label the cell wall and nucleus. Record the magnification and stain used.

Label \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /1

 X \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /1

Stain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /1

Diagram /3

**Task 4 - Making a Slide – Animal Cells**

**Equipment:**

Microscope slide and cover slip

Toothpick

Methylene Blue Stain

Distilled water

Microscope

**Method:**

1. Using the blunt end of the toothpick, scrape the inside of your cheek.
2. Place the same end on the microscope slide and drop two drops of distilled water so that the cells are washed onto the slide.
3. IMPORTANT! Snap the toothpick to half and place in small plastic bag as directed.
4. Add a drop of methylene blue stain and then place the coverslip on, placing one edge down first and lowering the coverslip on an angle. You may need to press the coverslip gently with the blunt end of a pen to flatten the slide.
5. Using the edge of some paper towel, carefully soak up any excess liquid.
6. Observe the cells under low power first.
7. Using a sharp pencil, draw a few of the cells. Label the cell membrane and nucleus. Record the magnification and stain used.

Label \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/1

 X \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /1

Stain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /1

Diagram /3

What could you do better next time? How could you improve your results? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /2

What is a stem cell? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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