

**Year 8 Microscope Assessment** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Total Marks: \_\_\_\_\_\_\_\_\_\_\_/22**

**Attempt all** of the following questions.

1. Provide information of 2 people that contributed to the development of the microscope by completing the table below: *(6 marks)*

|  |  |  |
| --- | --- | --- |
| Person | Date | Contribution-what did they do? |
| Antony Van Leewenhock (1) | 1674 (1) | Developed object with lenses that magnified x 220 normal size (1) |
| Ernst Ruska (1) | 1933 (1) | Built first electon microscope (1) |
| \*Any other suitable alternative | | |

1. Outline the main difference between how the light microscope and the electron microscope work. *(2 marks)*

Light- Uses rays of light

Electron- Uses beams of electrons

1. Explain the main difference between the TEM (Transmission) and the SEM (Scanning electron microscope) when looking at cells.  *(2 marks)*

TEM- shows internal structure of cells (1)

SEM- shows images of the surface of cells (1)

\*Any suitable alternative

1. Provide two reasons why microscopes are useful. *(2 marks)*

-Be able to see objects too small to see with naked eye (1)

-Medical uses. Check cells for disease/deficiencies etc (1)

1. List any 3 safety rules to be considered when using a microscope. *(3 marks)*

-Carry microscope by arm (1)

-Be careful of touching hot light (1)

-Look from the side when adjusting objective lenses (1)

\*Any other suitable safety rule

1. Describe what happens to an image when viewed under a microscope. *(1 marks)*

Magnified/ Image is flipped or inverted

1. Complete the following table for a standard light microscope : *(6 marks)*

|  |  |  |
| --- | --- | --- |
| Eye Piece/ Ocular lens | Objective lens | Total Magnification |
| 10 x | 4 x | 40x |
| 10 x | 10x | 100x |
| 10 x | 40x | 400x |