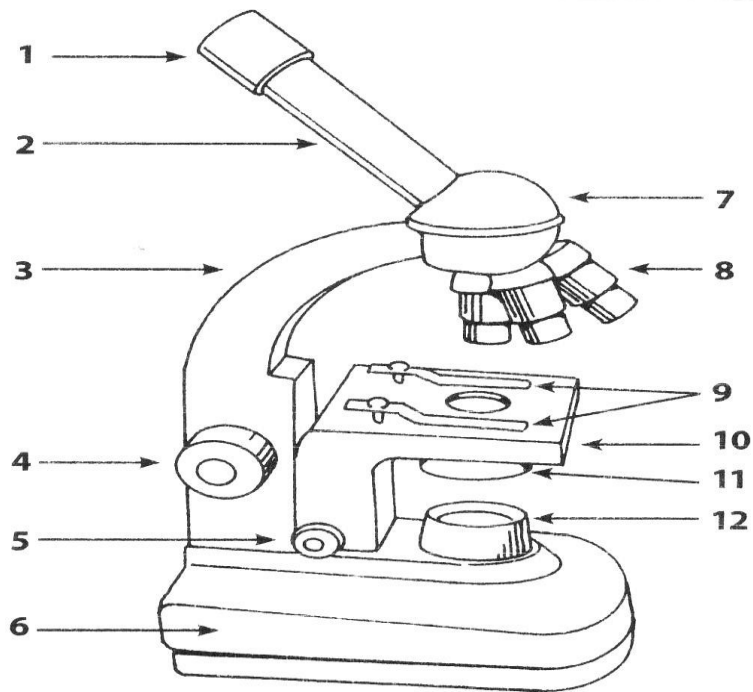


**MINISTRY OF EDUCATION**  
**SECONDARY ENGAGEMENT PROGRAM**  
**GRADE 8**  
**INTEGRATED SCIENCE**

Week 1

Lesson 1- Worksheet 1

1. Identify the parts of the microscope indicated below



2. Calculate the total magnification of a light microscope with an eyepiece lens of 10x and the following objective lenses:

- (i) 4x
- (ii) 10x
- (iii) 40x
- (iv) 100x

3. List four ways in which you can care for a microscope.

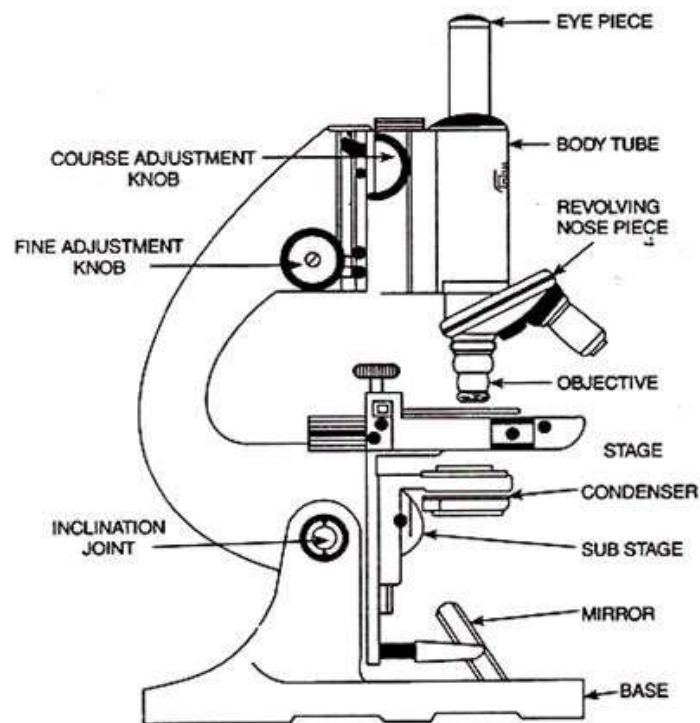
**4. Match each part of the microscope with its correct function.**

<b>Parts of the microscope</b>	<b>Functions</b>
Eyepiece	connects the eyepiece to the objective lenses
Stage	it supports the tube of the microscope and connects to the base of the microscope
Coarse adjustment knob	provides magnification that allows for microscopic specimens to be seen
Arm	it is used to reflect light from an external light source up through the bottom of the stage.
Base	is used for all focusing when using high power lenses
Objective lens	is the lens present at the top of the microscope and is used to see the objects under study.
Fine adjustment knob	the platform that is flat used for placing the slides under observation.
Stage clip	provides basal support for the microscope.
Body tube	moves the stage up and down to bring the specimen into focus.
Mirror	holds the slides in proper place

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**Lesson 1: Worksheet 1 - Answer Sheet**

**1. Parts of the microscope**



**FIG. 15.1.** The compound microscope showing its various parts.

2. Total magnification = magnification of the eyepiece x magnification of the objective lens.
- (i) eyepiece (10) x objective lens(4) = 40x
  - (ii) eyepiece(10) x objective lens(10) = 100x
  - (iii) eyepiece(10) x objective lens (40)= 400x
  - (iv) eyepiece( 100) x objective lens(100) = 1000x

### 3. Ways of caring for the microscope

- Always use both hands to carry the instrument. Hold the limb with one hand and place the other hand under the base.
- When placing the microscope on a bench or a table, place it down carefully so that the delicate mechanism is not jarred.
- Clean the lenses by wiping them with lens paper or soft tissue. Never touch the lens with the finger or coarse cloth. Never wet the lens.
- Keep the stage of the microscope dry and clean. Wipe it immediately if it becomes wet.
- Do not tilt the microscope when using wet preparations on the slide.
- Always cover the object with a coverslip to protect the objective lens.
- Always move the lens upwards when focusing to avoid breaking the slide

### 4. Matching

- Eyepiece- is the lens present at the top of the microscope and is used to see the objects under study.
- Stage- is the platform that is flat used for placing the slides under observation.
- Coarse adjustment knob- is used for all focusing when using high power lenses
- Arm -it supports the tube of the microscope and connects to the base of the microscope
- Base -provides basal support for the microscope
- Objective lens -provides magnification that allows for microscopic specimens to be seen
- Fine adjustment knob - moves the stage up and down to bring the specimen into focus.
- Stage clip- holds the slides in proper place
- Body tube- connects the eyepiece to the objective lenses
- Mirror- it is used to reflect light from an external light source up through the bottom of the stage.