

# Microscope Set

## INSTRUCTIONS

### **WARNING!**

Only for use by children over 8 years old. Only for use under the supervision of an adult. This toy contains functional sharp edges.

### **ADVICE FOR SUPERVISING ADULTS**

- a) Read and follow these instructions, the safety rules and the first aid information and keep them for reference.
- b) The incorrect use of chemicals can cause injury and damage to health. Only carry out those preparations which are listed in the instructions.
- c) This Microscope Set is for use only by children over 8 years.
- d) Because children's abilities vary so much, even within age groups, supervising adults should exercise discretion as to which preparations are suitable and safe for them.
- e) The instructions should enable supervisors to assess any preparation to establish its suitability for a particular child.
- f) The supervising adult should discuss the warnings and safety information with the child or children before commencing the preparations. Particular attention should be paid to the safe handling of chemicals if used.
- g) The area surrounding the preparation should be kept clear of any obstructions and away from the storage of food. It should be well lit and ventilated and close to a water supply.
- g) The microscope set contains functional sharp parts.



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## SAFETY RULES

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- a) Do read these instructions before use, follow them and keep them for reference.
- b) Do keep young children and animals away from the experimental area.
- c) Do store microscope sets out of reach of young children.
- d) Do clean all equipment after use.
- e) Do wash hands after carrying out preparations.
- f) Do not use any equipment which has not been supplied with the set.
- g) Do not eat, drink or smoke in the experimental area.
- h) Do not allow chemicals to come into contact with the eyes or mouth.
- i) Do not replace foodstuffs in original container. Dispose of immediately.

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## CAUTION FOR HANDLING

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- 1) The vital part of the microscope is the lens. Therefore, sufficient care must be taken in handling the lens.
- 2) If the lens gets dirty or dusty; wipe the lens surface with a clean lens tissue or soft cotton cloth. Don't rub the lens with a finger or dirty cloth etc.
- 3) After it is used, put a cover on the microscope or put it back into the box for screening from dust.
- 4) Microscope should be stored in a moisture free place. Moisture buildup on the light causes a reduction in light intensity.

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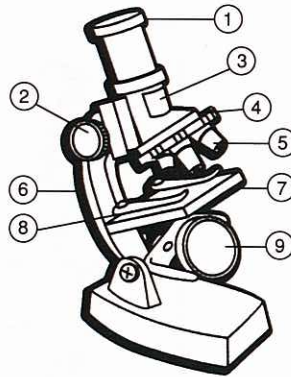
## INTRODUCTION TO A MICROSCOPIC WORLD

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In this world of ours there are an abundance of living things. Some are large and easily seen with our own eyes but others are so minute that millions could be placed on the head of a pin. These can only be seen through a microscope.

The microscope was invented many years ago and since then has opened a field of research as fascinating and beautiful as anything you can imagine. Now, all science from the most elementary study of biology to the highly specialised fields of astro-physiology use some form of microscope to enable the students of these sciences to better understand the intricate, complicated forms of living organisms or static materials that make up this world in which we live.

Your microscope will be a source of many hours of pleasure as a hobby or open the door to advanced knowledge in the varied fields of science. We hope you enjoy your experience.



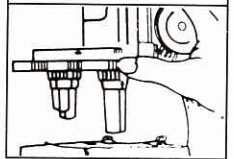
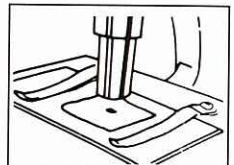
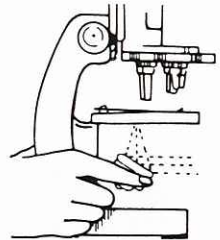
1. Eyepiece
2. Focusing Knob (HANDLE)
3. Body Tube
4. Revolving Turret
5. Objective Lens
6. Arm
7. Stage
8. Clip
9. Mirror

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## INSTRUCTIONS FOR USE OF MICROSCOPE

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- 1) First tilt the arm and adjust the position of the reflector so that the light is fully caught by the mirror.
- 2) When the light is fully reflected by the mirror, as can be seen through the eyepiece, the microscope will be ready for observation.
- 3) Next, put the prepared slide on the stage and fix it in place with the clips.
- 4) Now decide what magnification to use. The greater the length of the objective lens the greater the magnification. Observation is generally made starting at a low setting.
- 5) In order to change the magnification turn the revolving turret until you feel a click.
- 6) Using the focusing knob, lower the lens as close as possible to the prepared slide without actually making contact. Then, while looking through the eyepiece, turn the knob in the opposite direction until the image comes into focus.



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## HOW TO MAKE A PREPARED SLIDE

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If the given sample is not thin and transparent, it cannot be observed by the microscope as the light from the reflector or the light source does not pass through it. Fibres of pollen or wool, or salt will be easy to observe and do not need a cover glass.