

## SwiftBasics SS30-8001 Kids Microscope User Guide

We are proud to present our new collection of microscopes – with absolutely good image quality and much easier application!

This microscope set will be the starting point to your many hours of fruition as a hobby or broader your opportunity to a wonderful world of science. Enjoy the new micro-observation experience now!

**Happy Experimenting!!!**

### Attention!

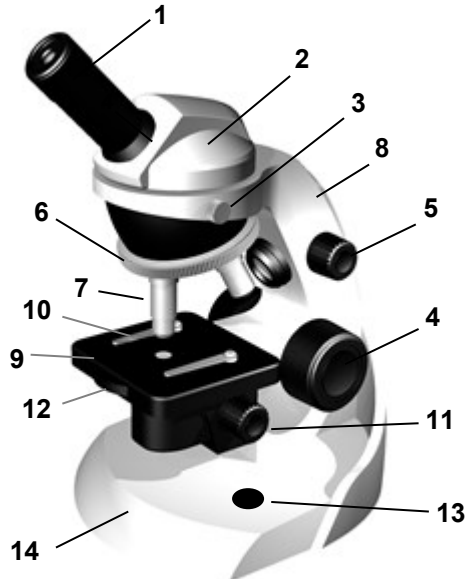
The following information should be read carefully in order to overcome confusions.

This microscope set is appropriate for children over 8 years old. Supervision of adult is required as this set comprises of sharp parts

Before using the microscope, carefully read the instructions, follow the guide, and have them for direction in case you need further helpful hints.

Always, reserve the microscope set in a place where young infant is out of reach.

### Components of Microscope



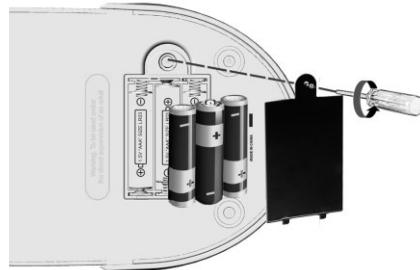
1. Eyepiece
2. Eyepiece base
3. Eyepiece base position lock
4. Focusing knob
5. Top illuminator brightness adjustment
6. Magnification revolving turret
7. Objective lens
8. Arm
9. Stage
10. Clip
11. Bottom illuminator brightness adjustment
12. Rotating colour/light filter
13. Power switch
14. Base with battery compartment

### Helpful Hints

- The essential component of the microscope is the lens. Consequently, adequate care must be exercised when dealing with the lens.
- Microscope should be stored in a moisture free place. Because moisture build up on the light encourages a reduction in light concentration.
- After it is utilized, protect the microscope from dust by covering the microscope or placing it back into the box.
- If the lens gets dusty or dirty, it is suggested to clear off the lens surface with a soft cotton cloth or tissue. Do not rub the lens with a finger or unclean cloth.
- If a microscope is not put to use for a long period of time, discharge the light source batteries.

### Procedures

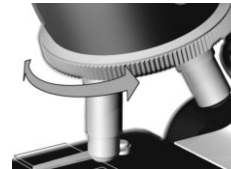
1. Firstly, insert 3 "AAA" (size 1.5V batteries in the back of the base. To open the base you will need to use a screwdriver to open it. (Batteries are not included)



2. Now put the prepared slide on the stage, and fasten it in place with the clips.



3. Next, choose which magnification strength you desire. Remember, the greater the length of the objective lens, the bigger the magnification. Generally, observation is started from a low magnification to locate targeted area.



4. To change the magnification strength, turn the revolving turret until you hear a click.



5. Press the Power switch (13) to turn on the illuminators. For slide viewing, change the bottom illuminator brightness by turning the adjustment knob (11). Use the upper illuminator adjustment (5) for solid object viewing.

6. The rotating colour/light filter (12) makes it easier to observe the slide preparation. Using a suitable coloured filter heightens the contrast of coloured preparation slides. Furthermore, the different apertures will focus the light. When the large aperture is used the slide appears very bright. The smallest aperture is helpful when examining a certain area in more detail.

7. Using the focusing knob, lower the objective lens as close as possible to the prepared slide. Next, looking through the eyepiece, turn the knob anti-clockwise slowly until the image is clear.



8. The eyepiece base can be rotated to different position by loosening the eyepiece base

position lock (3) and turn the eyepiece base (2) directly.

9. The microscope will power off automatically after one hour of idle time.

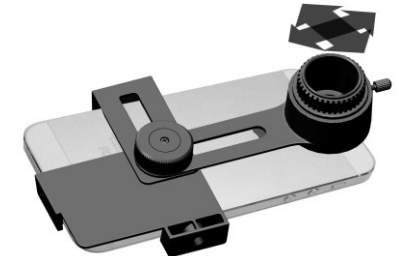
### Using the smartphone adaptor

1. Loosen the screw at the back of the adaptor and put the smartphone on it with face up.

2. Adjust the position of the horizontal arm to fit the width of the smartphone and tighten the screw just enough to keep the phone in position.



3. Align the centre of the adaptor hole of the swing arm to the smartphone camera. Tighten the screw so that the smartphone is securely held in the adaptor.



4. Loosen the small screw at the top. Attach the adaptor-smartphone assembly to the microscope eyepiece as shown. The adaptor should be fully inserted into the eyepiece for best results. Tighten the small screw



5. With the camera app opened, re-adjust the smartphone camera position by slightly loosening the main adaptor screw if necessary. The image circle should be at the centre of the screen. Adjust the focus knob until the image is clear.



### How To Make a Prepared Slide

**(Warning: Supervision of adult is required)**

Please note that if the given specimen is not thin and crystalline, it can only be inspected using the microscope upper illuminator. This is due to the fact that light from the bottom light source does not advance through.

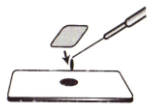
- Fiber of wool, pollen, or salt will be simple to see, and will not need a cover glass.
- Crystal-clear specimen is stained first with a drop or two drops of methylene blue. Eosin or other dyeing solutions are available on the market.

Also note these are dyeing solutions, and thus could induce staining of clothing, fabrics, and carpets. Extreme care should be handled when dealing with these solutions.

1. Temporary Mount

- Wipe the slide and cover glass clean
- Thin the sample with a razor blade. (Be extremely careful)
- Then pick it up with tweezers, and put it on the centre part of the glass slide.
- Next, add one drop of water on the sample with a dissecting needle. If the sample is clear, add one drop of methylene blue or eosin solutions. (Be extremely careful)
- Gently put the cover glass on it, take care not to let any air bubbles in it.
- Remove any excess water or dyeing solutions with blotting paper.
- Now, it is ready for observation.

Remember to wash your hands immediately after doing the preparations and dispose the dyeing solutions down the drain not into a sink.



2. Permanent Mount

- Wipe the slide and cover glass clean.
- Continue as above but before covering the slide with the cover glass, add few drops of gum media (or Canada balsam) solution or transparent adhesive glue with a dissecting needle to the slide.
- Put down on the cover glass with tweezers or fix it in place, and leave it to dry for about a day.

**Specifications:**

Magnifications: 60X, 120X, 200X  
Power supply: 3 x 1.5V AAA/LR03 Batteries

**IMPORTANT: Keep these instructions. DO NOT DISCARD.**



If any time in the future you should need to dispose of this product please note that Waste Electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice. (Waste Electrical and Electronic Equipment Directive)

1. Only adults should install and replace batteries.
2. Alkaline batteries are recommended.
3. Do not use rechargeable batteries.
4. Non-rechargeable batteries are not to be recharged.
5. If the device has not been used for a long time, remove the batteries.
6. Rechargeable batteries are to be removed from the toy before being charged.
7. Rechargeable batteries are only to be charged under adult supervision.
8. Do not mix old and new batteries.
9. Do not mix alkaline, standard (carbon zinc) or rechargeable (nickel cadmium) batteries.
10. Exhausted batteries are to be removed from the toy.
11. The supply terminals are not to be short-circuited.
12. Only batteries of the same or equivalent type as recommended are to be used.
13. Batteries are to be inserted with the correct polarity.
14. Do not dispose of batteries in fire, batteries may explode or leak.
15. Batteries may explode or leak if misused.

# SWIFTBASICS SS30-8001 KIDS MICROSCOPE USER GUIDE



**WARNING!** Not Suitable for Children Under 36 Months Due to Small Parts. Choking Hazard. Only for Use by Children Over 8 Years Old. Need to be Used under the Direct Supervision of an Adult. This toy contains Sharp Parts and Functional Sharp Edge.

**CAUTION!** Read the instructions before use, follow them and keep them for reference. Keep small children and animals away from experiments. Store the microscope set out of reach of small children.