⚠ **WARNING:** THIS TOY CONTAINS FUNCTIONAL SHARP EDGE ON SCALPEL. USE ONLY UNDER ADULT SUPERVISION. KEEP OUT OF REACH OF CHILDREN UNDER 8 YEARS.

⚠ **CAUTION:** ADULT ASSEMBLY AND SUPERVISION REQUIRED.

⚠ **CAUTION:** BATTERY INSTALLATION BY AN ADULT IS REQUIRED.

⚠ **CAUTION:** DO NOT LOOK THROUGH MAGNIFIER DIRECTLY AT THE SUNLIGHT.

⚠ **WARNING:** FOR SAFETY REASONS , REMOVE ALL TAGS, LABELS AND PLASTIC FASTENERS BEFORE GIVING THIS TOY TO YOUR CHILD.

PRODUCT MAY VARY FROM THE IMAGE SHOWN
PLEASE KEEP PACKAGING FOR FUTURE REFERENCE.

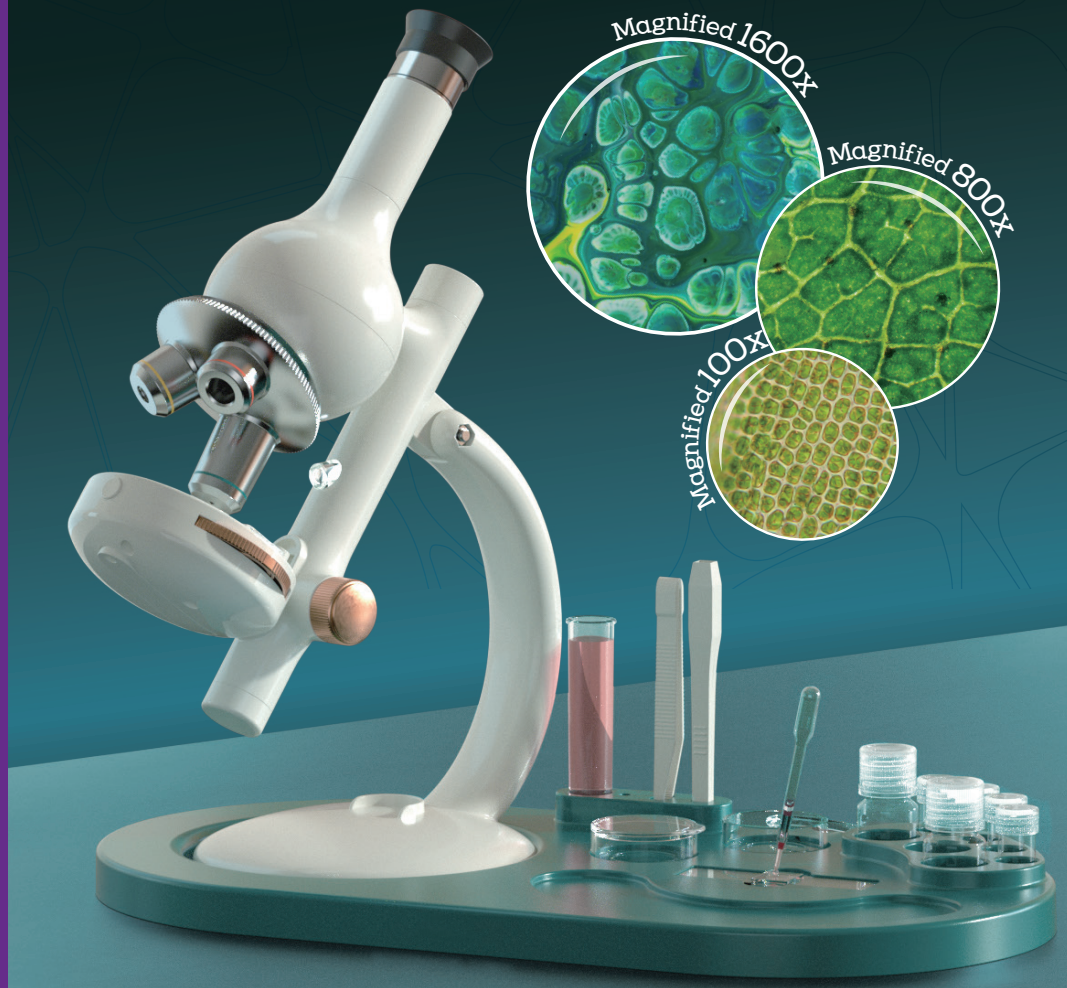
⚠ **WARNING:** BATTERIES ARE TO BE INSERTED WITH THE CORRECT POLARITY (+AND-). NON-RECHARGEABLE BATTERIES ARE NOT TO BE RECHARGED. RECHARGEABLE BATTERIES ARE ONLY TO BE CHARGED BY ADULT. RECHARGEABLE BATTERIES ARE TO BE REMOVED FROM THE TOY BEFORE BEING CHARGED. THE SUPPLY TERMINALS ARE NOT TO BE SHORT-CIRCUITED. REMOVE BATTERIES FROM THE TOY WHEN NOT IN USE FOR EXTENDED TIME OR WHEN BATTERIES BECOME EXHAUSTED. BATTERY INSTALLATION BY AN ADULT IS REQUIRED DISPOSE OF BATTERIES RESPONSIBLY.DO NO DISPOSE OF IN FIRE.KEEP NEW AND USED BATTERIES AWAY FROM CHILDREN.

⚠ **WARNING:** DISPOSE OF USED BATTERIES IMMEDIATELY. KEEP NEW AND USED BATTERIES AWAY FROM CHILDREN.

K:43-694-204 | T:72-439-197

CUSTOMER SERVICE:
KMART AU: 1800 124 125
KMART NZ: 0800 945 995
TARGET AU: 1300 753 567

DELUXE MICROSCOPE



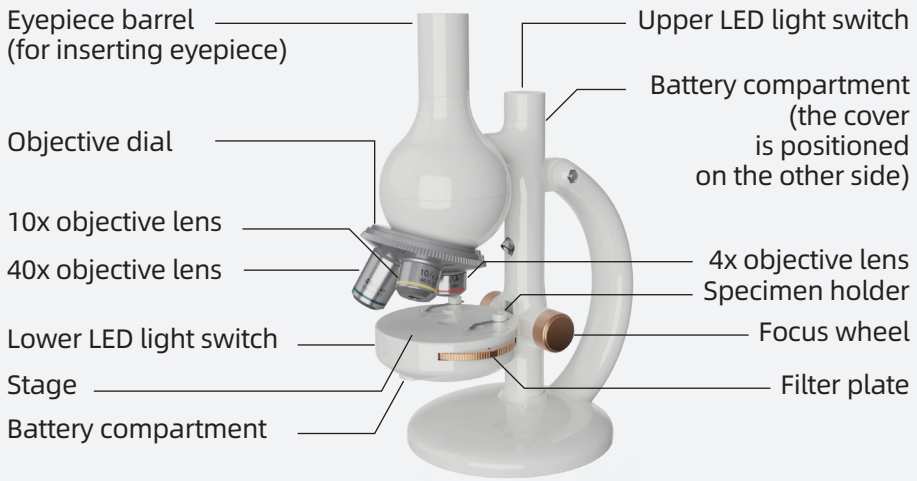
8+ years

STEAM
EDUCATIONAL PRODUCT

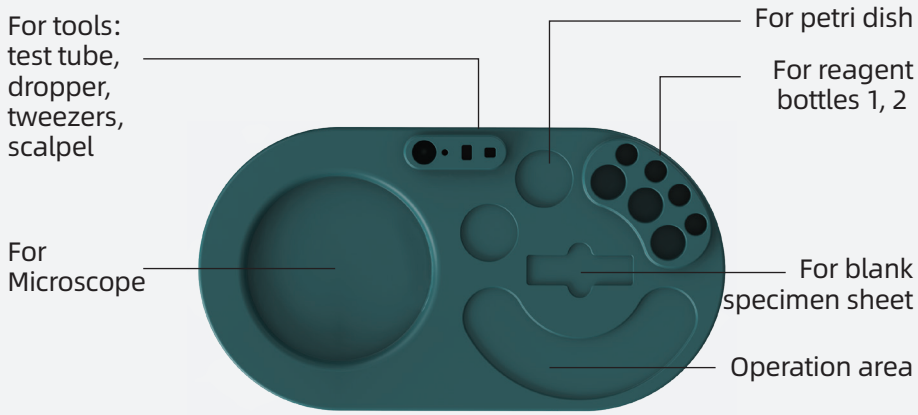
⚠ **WARNING:** CHOKING HAZARD - SMALL PARTS, NOT SUITABLE FOR CHILDREN UNDER 3 YEARS.

INDEX

ACCESSORIES



Stereo Microscope



Experiment Board

10x
eyepiece ×1

20x
eyepiece ×1

2X magnifying
lens ×1

Silicone
eyecup ×1

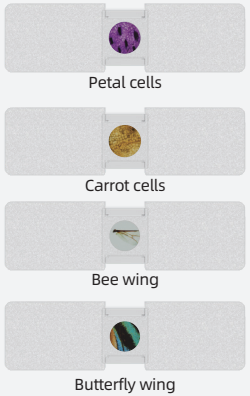
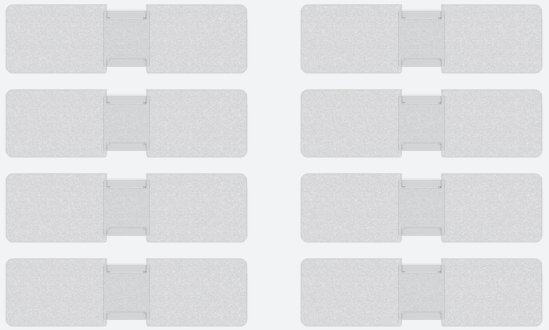


Image slide ×4



Blank specimen sheet ×8

Phone holder ×1

Petri dish ×2

Reagent bottle 1×2

Reagent bottle 2×4

Scalpel ×1

Tweezers ×1

Dropper ×1

Test tube ×1

Cotton swabs ×1 pack

Absorbent paper ×1 pack

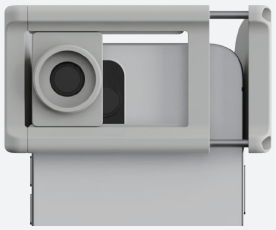
ASSEMBLY

Assemble microscope and eyepiece:

1. Insert the thin end of the 10X/20X eyepiece into the microscope eyepiece barrel

2. Apply the thin end of the silicone eyecup onto the eyepiece

Assemble microscope and phone holder:



1. Fix the phone holder onto a phone, and keep the center of the circular hole aligned with that of the phone camera. (Open the phone camera to confirm it is not blocked)

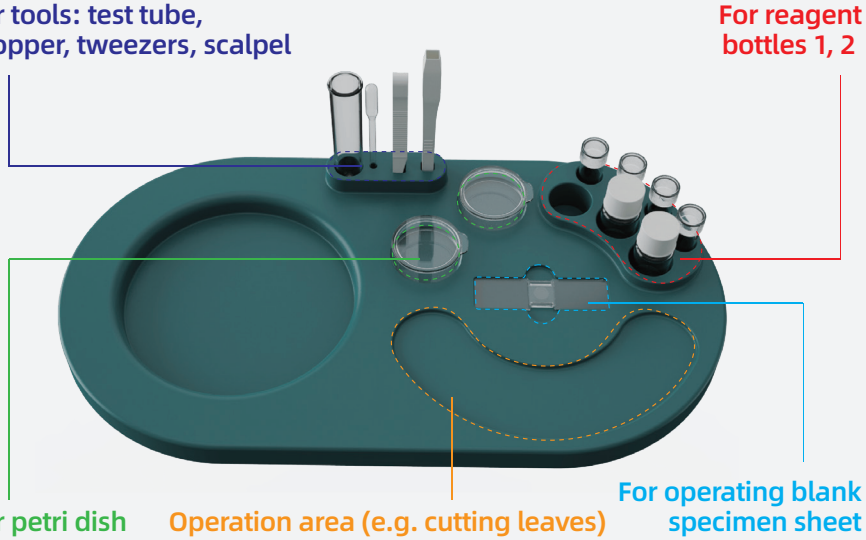
2. Take off the silicone eyecup, then screw the thread of the phone holder into the microscope eyepiece.

Assemble microscope and experimental board:

1. Place the microscope directly in the circular area on the left side of the experiment board

2. The microscope can be rotated 360° on the board for observation

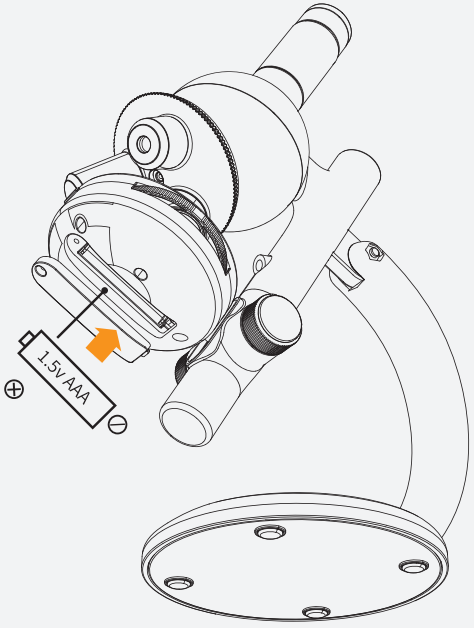
Placement :

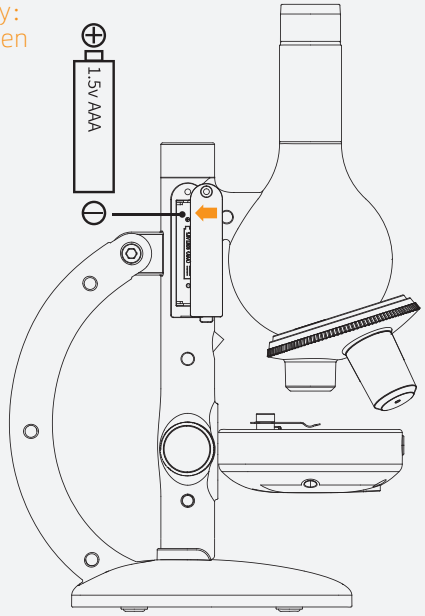


BATTERY INSTALLATION

1. Ensure that the device is turned off
2. Unscrew the screw on the battery lid (as shown in the picture)
3. Install a new 1.5V AAA (LR03/7) battery with the correct polarity (+, -) in the main frame as shown in the figure below.
4. Close the battery lid

1. Assembly method for lower LED light battery:
Put the battery in, cover the battery lid, and then tighten the screws





2. Assembly method for upper LED light battery:
Put the battery in, cover the battery lid and then tighten the screws

OPERATION

Observation function (specimen sheet mode) of stereo microscope:

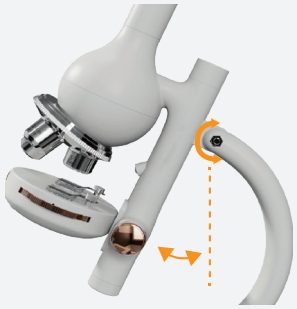
Required accessories:stereo microscope, specimen sheet

Step 1: Assemble the stereo microscope , eyepiece and silicone eyecup as shown in the below figure, and turn on the lower LED light.

Step 2: Fix the specimen sheet using the specimen holder until the circular area on the specimen sheet aligns to the circular hole on the stage.

Step 3: Rotate the objective dial until it rotates to the magnification desired.

Step 4: Adjust the vertical stand of the microscope according to what is the most comfortable and easy observation for the viewer.



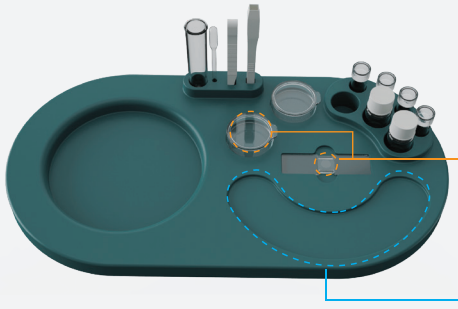
Step 5: Keep your eye aligned and close to the eyepiece observation hole (if you wear glasses, take them off). Rotate the microscope focus wheel to move the stage up and down until your sight is clear.

Observation function (stereo mode) of the stereo microscope:

Required accessories: microscope, experimental board, tools, petri dish/specimen sheet, target objects (like leaves)

Step 1: Assemble the stereo microscope eyepiece and silicone eyecup as shown in the below figure, and turn on the upper LED light.

Step 2: Cut the target object to the right size on the bottom plate and place it in the Petri dish & the circular area of the blank specimen sheet.



Step 3: Place the petri dish (without lid) and the specimen sheet (without lid slip) on the stage and align the petri dish and circular area of the specimen sheet to the circular hole on the stage.

Step 4: Rotate the objective dial until it rotates to the magnification desired

Step 5: Keep your eye aligned and close to the eyepiece observation hole (if you wear glasses, take them off). Rotate the microscope focus wheel until your sight is clear.

USE OF TOOLS:

Required accessories: tools (scalpel ,tweezers, dropper, test tube) , target object (such as leaves)

1. Scalpel:

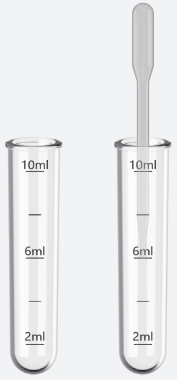
1) The front end is used as the scalpel. With it you can carve the "target object" into a 1cm x1cm square for quick preparation of specimens.
(Note: it can only carve thin sheets such as leaves but can not carve thick objects)

2) The Back End of the scalpel can be used to squish specimen items to fit a desired size.

2.Tweezers:
Can be used to clip objects such as plants.

3.Dropper:
Can be used to drip/draw solution.

4. Test Tubes:
Store the solution in use in the test tubes, by adding it in with the dropper.



5. Petri dish:
1) By removing the lid, the petri dish can be used for storing target objects under stereo mode.

2) By covering the lid, it can be used for the culture of mold.

OPERATION INSTRUCTION

Q1:How to use the microscope?

A1:

1. Place the microscope on a flat surface or at the microscope placement area on the left side of the experiment board.

Fig.1

Fig.2

2. Select the desired eyepiece magnification -10X or -20X marked on the eyepiece, (as shown in Fig.1) , and insert the thin end of the eyepiece into the eyepiece barrel (as shown in Fig.2).

If you want to add the magnitying lens, insert the thin end of the magnifying lens into the eyepiece barrel (as shown in Fig.3) , and then insert the thin end of the eyepiece into the magnifying lens (as shown in Fig. 4).

Fig.3

Fig.4

3. Apply the thin end of the silicone eyecup onto the eyepiece (as shown in Fig. 5). If you observe with a phone holder. The silicone eyecup will not be required.

Fig.5

Fig.6

4. Turn the objective dial until the shortest objective lens (4X) is directly below the eyepiece (as shown in Fig. 6). Press the lower LED light switch, and keep your eye aligned and close to the eyepiece for observation (as shown in Fig.7). If the view is optimal, you can proceed to the next step; if the view is unclear, you can turn on the upper LED light switch to increase the brightness (as shown in Fig. 8)

Fig.7

Fig.8

5. Put the specimen sheet into the specimen holder for fixing, and keep the circular area on the specimen sheet aligned to the circular hole on the stage (as shown in Fig. 9)

Fig.9

Fig.10

6. Raise the stage to the highest position by turning the focus wheel (as shown in Fig.10) and keep your eye aligned and close to the eyepiece for observation. Observe whether there is a target object in your sight. If not, move the specimen sheet left and right until it appears in your sight;
if observation material can be seen, slowly turn the focus wheel to lower the stage until your sight is clear (as shown in Fig.11)

Fig.11

Note: The vertical stand can be adjusted. You can tilt the microscope and adjust the angle for easy observation.

Q2:What if I can't see anything ?

A2:

Cause 1: The target object is not directly below the objective lens
1. Adjust the circular area on the specimen sheet until it is aligned to the circular hole on the stage (as shown in Fig.12).

Fig.12

Fig.13

2. Keep your eye aligned and close to the eyepiece and move the specimen sheet until the target object appears in the center of your sight.

Note: The specimen sheet moves towards the opposite direction to that in your sight (as shown in Fig.13)

Cause 2: Your vision is too dark
1. Open the lower LED light (as shown in Fig.14).
2. If it is still dark, you can turn on the upper LED light (as shown in Fig.15), or put the microscope in a bright place.

Fig.14

Fig.15

Cause 3: Not focusing
1. Turn the focus wheel until the stage rises up to the highest position (as shown in Fig. 16).
2. Keep your eye aligned and close to the eyepiece. Slowly turn the focus wheel to lower the stage (as shown in Fig.17) until your sight is clear.
3. If you still cannot see the target object after focusing, you can adjust in accordance with steps in cause 1.

Fig.16

Fig.17

Q3: How do i observe with higher magnification?

A3:

1. According to the operation of Q1, confirm that you can see the target object clearly with the objective lens at the lowest magnification (4X).

2. Keep the target object in the center of your sight. If it is, move the specimen sheet back and forth until the target object appears in the center of your sight (as shown in Fig.18)

3. Turn the objective dial until the objective lens of high magnification is directly below the eyepiece. It is recommended to use the lens of low magnification first and then lens of high magnification.

Fig.18

Fig.19

4. Keep your eye aligned and close to the eyepiece. Turn the focus wheel slightly until your vision is clear (as shown in Fig.19).

5. Pull out the low magnification eyepiece and replace it with one of high magnification. Adjust the focus wheel until your vision is clear.

Note: In principle, only when you can see the specimen sheet under the lens of low magnification, can you replace it with one of high magnification.

Q4: What if there is nothing in my sight after changing to a high magnification lens?

A4:

1. If you can see the target object under the low magnification lens, but nothing under the high magnification lens, it may be because the target object is not in the center of your sight.

2. Turn the objective dial back and change back to the low magnification lens. Move the specimen sheet back and forth until the target object appears in the center of your sight.

3. Do not move the specimen sheet, but directly turn the objective dial and change to the high magnification lens. Confirm that you can see the target object in your sight.

4. Keep your eye aligned and close to the eyepiece. Turn the focus wheel slightly until your sight is clear.

Q5: How to install/remove the phone holder?

A5:

1. The phone holder contains an adjustable lever on it's end, by which you can adjust the view-hole to your preference (Fig.20 and Fig.21).

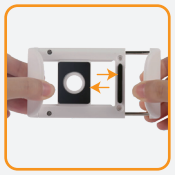


Fig.20

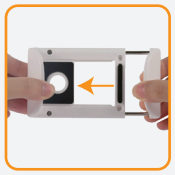


Fig.21

2. Slide the viewing hole to one side away from the lever when using (as shown in Fig.21).

3. Put your hand in front of the lens to test the main lens. The main lens shall be the lens in which your hand appears (as shown in Fig.22). Place the phone upside down, keep the viewing hole on phone holder at the same side of the camera, and then pull the lever to clip the holder onto the phone (as shown in Fig.23)

Fig.22

Fig.23

4. Slightly adjust the height of the phone holder and the position of the viewing hole until the camera is directly opposite the viewing hole (as shown in Fig. 24).

Fig.24

Fig.25

5. Open the photo mode. Confirm that the phone camera is not blocked.

6. Remove the silicone eyecup, align the threads on the inside of the microscope eyepiece with those of the viewing hole on the phone holder and rotate to connect the microscope and the holder.

7. To remove the holder, pull the holder lever out (as shown in Fig.25).Then put the silicone eyecup back on the eyepiece.

Q6: How can I observe other objects besides the given specimen sheet?

A6:

Method 1: Soft and thin objects like leaves

1. Place the object on the operation area of the experimental board (as shown in Fig. 26).

Fig.26

Fig.27

2. Use the back end of the scalpel to press the object into a 1cm x1cm square (as shown in Fig. 27), or use the front end of the scalpel to cut the object into the desired shape (as shown in Fig.28).

3. Use tweezers to tear the single layer of the leaf epidermis or use the front end of the scalpel to scrape off the fleshy part of the leaf.

Fig.28

Fig.29

4. Take out a blank specimen sheet. Clean it with a piece of wet tissue, and use a dropper to draw a drop of clear water to drip in the middle (as shown in Fig.29).

5. Lay the processed target object flat on to the clear water on the specimen sheet using tweezers (as shown in Fig. 30).

Fig.30

Fig.31

6. Gently put on the specimen cover. If the target object is colourless, you can draw a drop of dye (e.g., iodine or homemade purple cabbage water) to drip on one side of the cover , and draw colour from the other side using the absorbent paper.

7. Place the specimen sheet on the stage. Keep the circular area on the specimen sheet aligned to the circular hole on the stage (as show in Fig.31) and then observe.

Method 2: Observing specimens in water

1. Open the lid of the petri dish and pour in a small amount of the collected water sample.

2. Do not pour in too much water, just cover the bottom of the petri dish.

Fig.32

3. Place the petri dish on the stage for observation without the lid.

4. When turning the focus wheel, the objective lens shall not contact the object in the petri dish (as shown in Fig. 32).

Method 3: You can refer to the steps on the attached activity card to make the specimen for observation.

Note: The target object shall be as thin and transparent as possible.

WARNING!

Any packaging material, including adhesive tapes, plastic pieces, binding wires, tags, etc, is not a part of the product and is not safe for children to play with. For the safety of your children, please dispose of the above packaging materials properly. The user manual contains important information, so please keep it for future reference.

NOTES ON BATTERY USE:

1. Alkaline batteries or carbon batteries can be used.Do not mix alkaline, standard (carbon-zinc), or rechargeable battery.
2. Non-rechargeable batteries are not to be recharged.
3. Rechargeable battery shall only be charged in the custody of an adult.
4. Rechargeable battery shall be removed from the toy before charging.
5. Different types of batteries or new and used batteries are not to be mixed.
6. Batteries are to be inserted with the correct polarity (+ and –).
7. Exhausted batteries are to be removed from the toy.
8. The supply terminals are not to be short-circuited.
9. Please remove the batteries if the toy is to be left unused for a long time.
10. Do not throw the battery into the fire.

MAINTENANCE:

1. Wipe the toy housing gently with a piece of soft, dry cloth to keep the frame clean.
2. Keep the main unit away from sunlight and any other heat source.
3. Please remove the batteries if the toy is to be left unused for a long time.
4. Do not touch the main unit with any hard object or try to disassemble it.
5. Do not put the main unit in water; please keep it from moisture.

COMMON TROUBLES AND TROUBLESHOOTING:

If the microscope stops responding for some reason , please

1. Shut down the main unit ;
2. Remove the batteries and cut off power supply ;
3. Keep the main unit powerless for a few minutes, and then install the batteries again ;
4. Restart the main unit ;
5. Please install new batteries if the main unit still doesn't work .