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› [AmScope M30-ABS-KT2 120X-1200X 52-Piece Kids Beginner Microscope STEM Kit Instruction Manual](#)

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MODEL: M30-ABS-KT2

Brand: AmScope

1. Introduction

The AmScope M30-ABS-KT2 52-Piece Kids Beginner Microscope STEM Kit is designed to inspire curiosity and facilitate learning about science, technology, engineering, and mathematics (STEM). This kit provides a durable metal-bodied microscope with various accessories to explore the microscopic world.

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52-Piece Beginner Biological Microscope Kit



Figure 1: AmScope M30-ABS-KT2 52-Piece Kids Beginner Microscope STEM Kit.

Key Features:

- Magnification: 120x, 240x, 300x, 480x, 600x, 1200x

- Light Source: Built-in LED for direct illumination and reflecting mirror for natural illumination.
- Construction: Durable metal body.
- Stage: Specimen stage with stage clips.
- Power: Battery operated.
- Color Filter: Built-in rotating color filter wheel.

2. Safety Information

WARNING: Adult supervision is required for children using this kit due to small parts and sharp objects.

Battery Safety Information:

- Battery installation and removal should be performed by an adult.
- Use only batteries recommended in this instruction manual.
- Be careful to install the batteries with correct polarity as indicated.
- Do not mix old and new batteries.
- Remove all batteries when replacing.
- Do not mix alkaline, standard, rechargeable, or different types of batteries.
- Rechargeable batteries are to be removed from the microscope before being charged.

Caution (Chemicals):

- The following chemicals in this package could be harmful if misused: Eosin Biological Dye, Gum Media.
- Avoid eye and skin contact. Do not swallow. Do not inhale. May cause irritation. In case of accident, call a doctor. Keep away from young children.

Safety Information (Slides & Tools):

- Glass slides and slide covers are very delicate. Please handle with care.
- The incorrect use of chemicals can cause injury and damage to one's health. Use only the slide preparations listed in the instructions.
- Because children's abilities vary, even within age groups, supervising adults should exercise discretion regarding which slide preparations are suitable and safe for children. The instructions should aid adults in assessing slide preparations to discern their suitability for each child.
- Supervising adults should discuss the warnings and safety information with the child before commencing the preparation of slides. Pay particular attention to the safe handling of chemicals (if used).
- There is a sharp needle tool included. Exercise extreme caution.

3. Kit Contents

The AmScope M30-ABS-KT2 kit includes 52 pieces, neatly organized in a durable carrying case:



Figure 2: The 52-piece kit contents organized in the carrying case.

Microscope Components:

- **Microscope Body:** Durable metal framework with eyepiece, objective lenses, stage, and light source.
- **Eyepiece:** For viewing specimens.
- **Objective Lenses:** Rotatable turret with multiple magnification settings (120x, 240x, 300x, 480x, 600x, 1200x).
- **Focus Knobs:** Coarse and fine adjustment for clear viewing.
- **Stage:** Flat platform with stage clips to hold specimens.
- **Illuminator:** Built-in LED light and reflecting mirror.
- **Color Filter Wheel:** Rotating wheel with various colored filters to enhance contrast.

Accessories:

- **Prepared Plastic Slides:** 5 pre-prepared slides (e.g., apple, cotton, goldfish scale, broad bean leaf, onion bulb epidermis).
- **Blank Plastic Slides:** 7 blank slides for preparing your own specimens.
- **Cover Slips:** 7 cover slips to protect specimens on slides.
- **Slide Labels:** 7 labels for organizing your prepared slides.
- **Petri Dish:** For culturing or observing small specimens.
- **Test Tubes:** For holding liquids or specimens.
- **Graduated Cylinder:** For accurate liquid measurements.
- **Tools:** Tweezers, stirring rod, dropper, and a plastic scalpel for specimen handling.
- **Chemicals/Specimens:** Sea salt, Gum Media, Eosin Dye, Brine Shrimp Eggs for experiments.
- **Shrimp Hatchery:** A dedicated container for hatching brine shrimp eggs.
- **Carrying Case:** Durable case for organized storage and portability.

4. Setup

4.1 Installing Batteries:

1. Locate the battery compartment at the base of the microscope.
2. Unscrew the cover and insert the required batteries (AA, not included) according to the polarity markings.
3. Securely replace the battery compartment cover.

4.2 Adjusting the Microscope:

1. Rotate the focus knob to raise the body tube to its highest position.
2. Rotate the objective lens turret to select the desired magnification.
3. Adjust the microscope arm to a comfortable viewing angle. The arm can pivot up to 90 degrees.



Figure 3: Microscope arm can be tilted for ergonomic viewing.

5. Operating the Microscope

5.1 Placing a Specimen:

1. Place a prepared or self-made slide onto the microscope stage.
2. Use the stage clips to gently secure the slide in place.
3. Ensure the specimen is centered over the light source opening.

5.2 Using the Light Source:

1. To use the LED illuminator, switch it on from the base.
2. To use natural illumination, rotate the mirror to reflect ambient light onto the specimen.
3. Adjust the brightness dial to control the intensity of the LED light.
4. Rotate the color filter wheel to select a filter that provides the best contrast for your specimen.



Figure 4: Built-in LED light for clear illumination.



Figure 5: Rotating color filter wheel to enhance specimen contrast.

5.3 Focusing:

1. Look through the eyepiece.
2. Slowly turn the coarse focus knob to bring the specimen into view.
3. Use the fine focus knob for detailed adjustments to achieve a sharp image.

5.4 Preparing Your Own Slides:

The kit includes blank plastic slides, cover slips, and various tools to prepare your own specimens. Always ensure adult supervision when using sharp tools like the plastic scalpel.

Wet Mount Slides:

1. Place a specimen on a clean slide.
2. Using a dropper, place a drop of water on the specimen.
3. Then place one edge of the cover slip over the specimen and carefully lower the cover slip into place using a toothpick or equivalent. This method will help prevent air bubbles from being trapped under the cover slip.
4. Your objective is to have sufficient water to fill space between cover slip and slide. If there is too much water, the cover slip will slide around. Take a piece of paper towel and hold it close to one edge of the cover slip. This will draw out some of the excess water. If there is too little water, add a drop of water beside the cover slip. Practice this until you get used to it.

Dry Mount Slides:

1. Select a clean slide. Make sure it is free of dirt & smudges.
2. Inspect the specimen to determine if it needs to be sliced. (Try to use a translucent to transparent specimen for light to pass through.)
3. Place the sample specimen on the slide using tweezers or toothpick – just enough to fit under a cover slip.
4. Carefully place a cover slip over your specimen to flatten it out. There is no need to worry about air bubbles, as you can just drop the cover slip onto the specimen.

5.5 Brine Shrimp Hatchery:

The kit includes brine shrimp eggs, sea salt, and a hatchery unit to observe the life cycle of brine shrimp. Follow the instructions provided in the user guide to set up your hatchery and observe your own shrimp.

6. Maintenance

- Always handle the microscope and accessories with care.
- Clean lenses with a soft, lint-free cloth. Avoid touching optical surfaces with bare hands.
- Store the microscope and all accessories in the provided carrying case when not in use to prevent dust and damage.
- Remove batteries if the microscope will not be used for an extended period.

7. Troubleshooting

Common Issues and Solutions:

- **Image is blurry:** Adjust the coarse and fine focus knobs. Ensure the objective lens is clean.
- **No light:** Check battery installation and ensure the LED switch is on. If using the mirror, ensure it is correctly positioned to reflect light.
- **Image is too dark/light:** Adjust the brightness dial or rotate the color filter wheel for optimal illumination.
- **Cannot see anything:** Ensure the specimen is properly placed on the stage and centered. Check that the objective lens is correctly rotated into position.

8. Specifications

- **ASIN:** B08L58GW4F
- **Light Source Type:** LED
- **Material:** Metal, Plastic
- **Color:** Silver
- **Real Angle of View:** 45 Degrees
- **Magnification Maximum:** 1200 x
- **Objective Lens Description:** Achromatic
- **Power Source:** Battery Powered

9. Warranty and Support

This AmScope microscope kit comes with a **5-year warranty**, ensuring long-term reliability and support for your educational endeavors.

For questions or support, please visit the official AmScope website or contact customer service.