

# Discovery™

AGES  
**6+**

## INSTRUCTION MANUAL



**AA**  
**AA** x2  
**1.5V**  
**NOT INCLUDED**

Do not mix old and new batteries. Do not mix alkaline, standard (carbon-zinc), or rechargeable (ni-cad, ni-mh, etc.) batteries.

**150x Power  
Student Microscope**  
Biological Experiments Gear



**WARNING:**  
CHOKING HAZARD – Small parts.  
Not for children under 3 years.



**WARNING:**  
FUNCTIONAL SHARP POINT – Not for children  
under 3 years.

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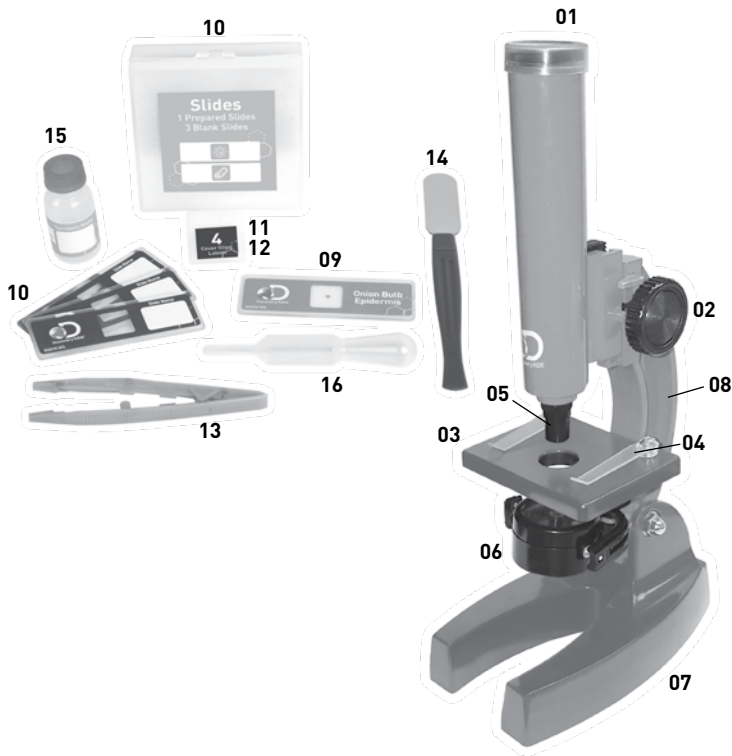
## **Microscope parts:**

- 01** Eyepiece
- 02** Focus Wheel
- 03** Stage
- 04** Metal Stage Clips
- 05** Objective Lens (15x)
- 06** Illumination Control
- 07** Base and Battery Compartment
- 08** Microscope Arm

## **Additional contents:**

- 09** Prepared Slide (Onion Bulb)
- 10** Blank Slides (3)
- 11** Slide Covers (4)
- 12** Labels (4)
- 13** Tweezers\*
- 14** Spatula
- 15** Empty Vial
- 16** Pipette

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## WARNING

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# INSTRUCTION MANUAL

## **Welcome To The World Of Microscopy!**

With the Discovery 150x Student Microscope, you can easily witness ordinary objects transform into the extraordinary! This single power device will show hidden details in larger objects like insect legs but still allow you to explore the unexpected structures in tiny subjects like sand and salt. It offers two types of illumination, which lets you experiment with both natural light and LED light to discover what type works better for which specimen. With the included lab set, you dive right into the world of microscopy with a prepared slide or launch your own investigations using the variety of collection supplies and the experiment guide!

## **How Do I Use My Microscope?**

Before you use your microscope, make sure that the table, desk or surface that you place it on is stable and is not subject to vibration. If the microscope needs to be moved, hold it by the arm and base while carefully transferring it. Once the microscope is in a suitable location and the batteries are installed in the compartment located in the base of the microscope, check the LED light source to make sure that it illuminates. Use a microfiber cleaning cloth to gently wipe the lenses off. If the stage is dirty with dust or oil, carefully clean it off.

## **How Do I Operate The Illumination?**

This microscope is equipped with two types of illumination – a mirror for natural light and an LED light. The light sources are located under the stage. To use the mirror, flip the light source so that the mirrored side is facing up toward the stage, and then angle the mirror toward a light source. The light will reflect up into the specimen. To use the LED light, flip the light source so that the mirror is facing down. The LED will come on once it is facing up toward the stage.

## How Do I Observe The Specimen?

Flip over the appropriate illumination source. Position the object or specimen in the middle of the stage under the stage clips, centered over or the light source. Focus the image by rotating the focus wheel until a clear image appears in the eyepiece.

**Troubleshooting Table**

<b>Problem</b>	<b>Solution</b>
No recognizable image	<ul style="list-style-type: none"><li>• Make sure the light source is directed at the specimen</li><li>• Readjust focus</li></ul>
No image	<ul style="list-style-type: none"><li>• Center object on slide under lowest power objective</li></ul>
No light	<ul style="list-style-type: none"><li>• Replace batteries</li><li>• Make sure the mirror is angled to reflect a light source</li><li>• Check on/off position</li></ul>

Place the prepared slide or specimen directly under the objective lens on the microscope stage. Secure all slides with the stage clips. The specimen should be located directly over the appropriate illumination source. Look through the eyepiece and carefully turn the focus wheel until the image appears clear and sharp.

For transparent objects (e.g. sea salt), light is projected by the lower light traveling from below the stage, through the objective and eyepiece, and finally into your eye. This process of light transmission is known as microscopy. Some specimens will need to be prepared for viewing. You can read more about creating specimens in the enclosed microscope experiments booklet.

## **Cleaning Tips**

To ensure your microscope has a long service life, clean the lenses (objective and eyepiece) with only a soft, lint-free cloth, like a microfiber cloth. Do not press down too hard while cleaning, as this might scratch the lens. Ask your parents to help if your microscope is really dirty. To avoid causing damage to electrical components, do not apply cleaning fluids directly to the device. If necessary, the cleaning cloth can be moistened with cleaning fluid and the lens wiped clean using very little pressure. Make sure your microscope is always protected against dust and dirt. After use, leave it in a warm room to dry off before storing. Batteries should be removed from the device if it will not be used for a long period of time.

## SAFETY WARNINGS

### Read and follow the instructions, safety rules, and first aid information.

- This microscope set is intended for children older than age 6. Children should only use this device under adult supervision. Never leave a child unsupervised with this device. Accessories in the experiment kit may have sharp edges and tips. Please store the device and all of its accessories and aids out of the reach of young children when not being used due to a risk of injury.
  - Chemicals: Any chemicals and liquids used in conjunction with the device should be kept out of reach of children. Do not drink any of the chemicals contained in this set. Hands should be washed thoroughly under running water after working with these chemicals. In case of accidental contact with eyes or mouth, rinse the affected area with water. Seek medical treatment for ailments arising from contact with the chemical substance, and take the chemicals with you to the doctor.
  - Choking hazard: Children should only use device under adult supervision. Keep packaging materials like plastic bags and rubber bands out of the reach of children as these materials pose a choking hazard.
  - Battery guidelines: This device contains electronic components that are powered by batteries. Batteries should be kept out of children's reach. When inserting batteries, please ensure the polarity is correct. Insert the batteries according to the displayed +/- information. Never mix old and new batteries. Replace all batteries at the same time. Never mix alkaline, standard carbon-zinc and rechargeable nickel-cadmium batteries. Never short circuit the device or batteries or throw either into a fire. Leaking or damaged batteries can cause injury if they come into contact with the skin. If you need to handle such batteries, please wear suitable safety gloves. Remove batteries from the product before extended storage to prevent leaking.
- Do not immerse the battery compartment in water.
- Risk of fire: Do not place device, particularly the lenses, in direct sunlight. The concentration of light rays could cause a fire.
  - Do not disassemble this device. In the event of a defect, please contact your dealer. The dealer will contact the Customer Service Department and can send the device in to be repaired if necessary.
  - Do not subject the device to temperatures exceeding 60° C (140° F).



- Disposal: Keep packaging materials, like plastic bags and rubber bands, away from children as they pose a risk of suffocation. Dispose of packaging materials as legally required. Consult the local authority on the matter if necessary and recycle materials when possible.



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CONFORMS TO THE SAFETY REQUIREMENTS OF ASTM F963

