# MOBILE MICROSCOPE Means to Inspiration

μHandy

# MOBILE MICROSCOPE

Seeing the Micro, Being the Macro 2020 CATALOGUE v2

## μHandy

Looking into the world with a whole new perspective. Official Website:

https://www.loveuhandy.com

#### **Social Media:**

Facebook: uHandy Mobile Microscope Instagram: @loveuhandy YouTube: uHandy Mobile Microscope



## With uHandy

uHandy reinvents the process of using a microscope. By cohering intuitive usage and good resolution, the hidden beauty and details become accessible to everyone. When it is easier to see the unseen, one can discover surprises, answer curiosity, raise questions and get inspiration whenever they desire.

Through this booklet, we will share the latest progress and user adventures. It is our sincere hope to create a new way of using a microscope, a microscope that is friendly to master, like a handy photo studio. Yet, it is powerful when serving as a mobile micro-laboratory.

Let's see the micro and be the macro. Go!

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## **Contact Us**

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## **O1**<sub>chapter One</sub> **Microscopy is Important for** Now and the Future

Back in the 17th century, because of the invention of microscopes, humans could finally see small structures beyond naked eyes. The foundation of biology was established and developed into modern medicine. As microscopes became more professional and sophisticated, scientists approached atomic scale and boosted breakthroughs in almost every aspects. It is certainly one of the most important abilities for modern science and technology. Today and tomorrow, Microscopy will continue to be very important in fostering discoveries and vivid imaginations.



Robert Hooke discovered the dead cell walls of plant cells (cork) under a microscope.



Henry Clifton Sorby developed the techniques for studying iron and steel with microscopes. This paved the way for the mass production of steel.

**Early 17th Century Artisans and Scientists** kept upgrading the microscopes on the basis of telescopes.



Antonie van Leeuwenhoek created many powerful lenses. His single-lens microscope magnified up to 300x. Blood cells, sperms, and mold were then discovered. Leeuwenhoek inspired the use of microscopes in future scientific research.

19th Century Mass production of optical microscopes



Ernst Ruska started building the first electron microscope.



2016



uHandy by Aidmics, designed to

make microscopic world accessible

to more people as well as a handy

and pro alternative for specialists.



Erwin Wilhelm Müller invented the Field

Emission Electron Microscope (FEEM). Erwin

first people to experimentally observe atoms.

and his student, Kanwar Bahadur, were the

1953 Frits Zernike invented phase-contrast microscopes. Phase-contrast microscopy is particularly important in biology. It reveals cellular structures that are invisible with a simpler bright-field microscope

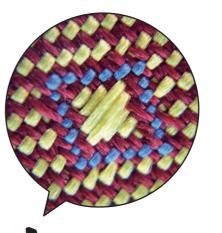
without staining.

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# Remarkables within our Reach

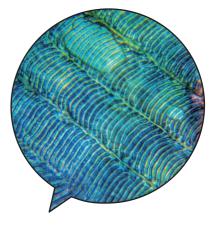
In daily life, for things created by nature or made by human, we find many of them fun to zoom in, and some of them are even breathtaking on a micro scale. Absorb all the wonders with a friendly microscope.





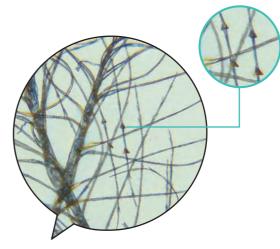


Feel the textures with hands. See the details and patterns of different cloths.





Humans wrinkle when aged. How about Fishes? Fish scales tell you the secrets of their life.





Down Feathers Hi-Mag Lens

See how down feathers keep us warm in winter days!





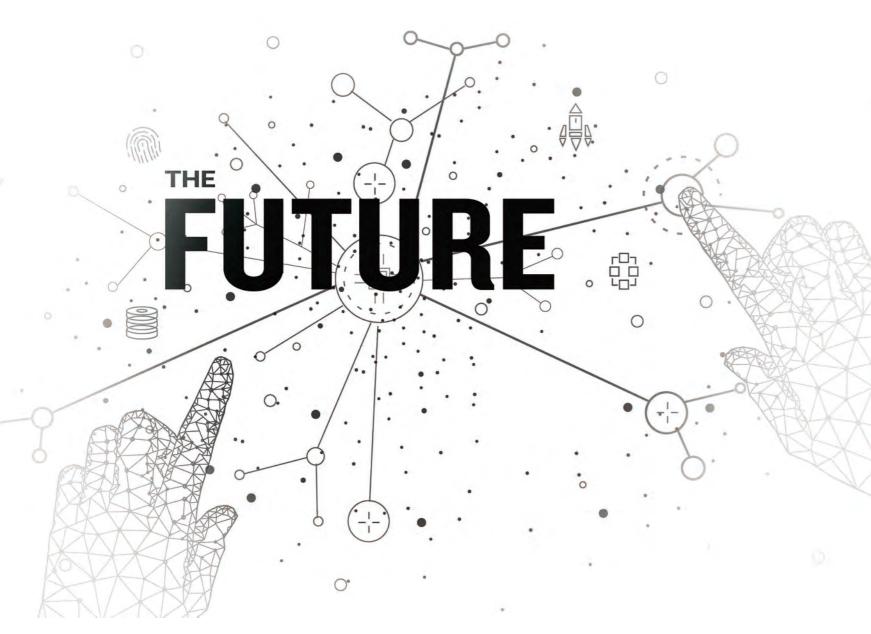
Crystallization is not exclusive to chemical experiments. Tears can also be your samples at home!

## **Broaden Your View, Deepen Your Vision**

The patterns protect butterfly by camourflage, mimicry, and warning. The micro-structures of the scales and hairs reflect vibrant colors like fireworks. Playful and inspirational.



**60X** Lo-Mag Observation Structural Coloration of Scales and Hair. **200X** Hi-Mag Observation Multi-functionality of Butterfly Scales



## **Equip the Crucial Capability**

Early scientists devoted themselves to the development of modern technology after discovering and revealing the secrets in the microscopic world. Now microscopy, merging with mobility, enables people to travel between macro- and micro-world anytime and anywhere. It empowers not only microscope veterans like field researchers and scientists, but also everyone else to find out the possible reasons behind and to resolve things better.

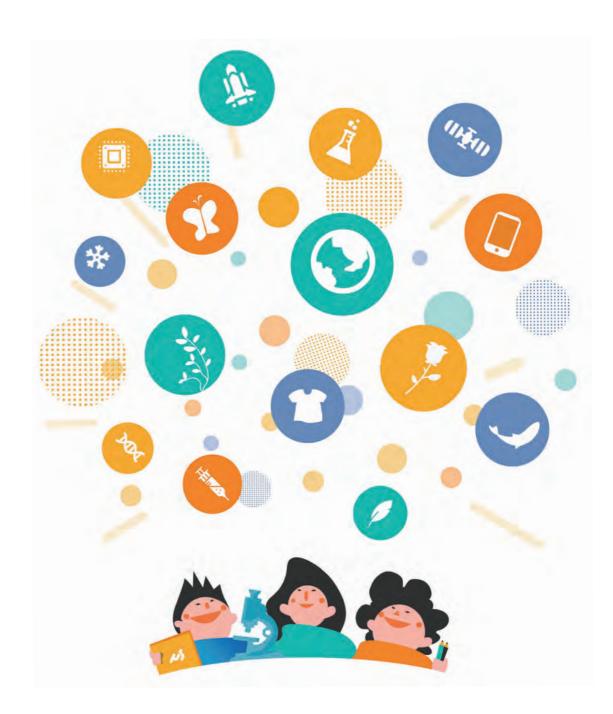
uHandy is powerful when applied to different scenarios, and is friendly to be commanded by everyone. On top of that, the concept of MicroLab was introduced at the beginning of this year.

It is a new attempt to elevate and expand the meaning of a microscope to beyond a simple apparatus.

## **O**2<sub>hapter Two</sub> Easier to See, Easier to Perceive

It's never easy to trigger and nurture interests for kids. uHandy serves as a second pair of eyes for everyone to use whenever feasible, blending the hands-on energy and dynamics into the learning/teaching process.

By lowering the entry barriers, such as high expense, time in training, safety concerns, bulk in weight and space, adopting uHandy is pragmatic and promising in scientific disciplines and also many other subjects.



## **Blend Dynamics into Various Disciplines**



**Social Studies** 

Catch me if you can: Real Bills vs Counterfeit Ones



When looking closer, you'll find cultural, architectural, artistic, social, and historical elements on a bill. You don't have to travel afar to explore the cultures of different countries as long as you've tried to study those banknotes from across the world. On the other hand, textures, security threads, color-shifting ink, and fine-line microprinting patterns on a note are also something worthwhile learning. Now grab some bills and even toy banknotes to unwrap the amazement!

#### **Banknotes of different countries:**

01. Malaysia	02. Slovenija	03. America
04. Nigeria	05. Thailand	06. Taiwan



Biology

## Life in Action: Rice Weevils





Catching small insects is a childhood memory. Kids often love and start to appreciate small creatures after they have a chance to watch them closely. Handling it carefully, now you can see how a tiny insect, say, a rice weevil, moves freely inside a uHandy's mini chamber when it is 10-100 times bigger.

\*Reminder: Two ways to make a mini chamber. One is the "mini petri dish" clipped in front of the Lo-Mag Lens. The other is using the blue "Bubble Sticker" to make a even smaller chamber.



"POP" rocks! Popping candies are fun to eat in terms of the flavor and the crackling feel they're running on your tongue. Let's see what is really going on while having some of them dance in the mouth, too. Just clip Lo-Mag Lens over the front camera and keep your tablet display upright. Now add some popping candies and water out there, and check it out! \*Hint: You can record the whole process!



Have fun with friends in the microscopic world! The microscopic exploration now allows 4 eyes and more. Participants may experience multiple tasks during observation -- exploring, learning, teaching, discussing, teamworking, and any tasks popped up.

> Team of uHandy

## **CASE SHARING**

# From a Subject Study to a Photomicrography Exhibition

Nature is amazing. We all have experiences fooling around in gardens and parks. In June 2018, Mrs. Lung brought the kids to the field and conducted a series of sessions on the topic "Flowers & Bees". The following are the snapshots along the way.



## 01 Depicting Bees before Observing

What do the bees look like within your memory? Mrs. Lung firstly led the kids to draw pictures of the bees per impression. Kids were drummed up and started to compare their pictures with each other. It was full of actions and laughs.

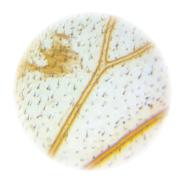
## Introducing Flowers & Bees

How do flowers attract bees? How do bees manage to co-exist with flowers? Where do bees store nectar? How pollens are spreaded by bees? Basic introduction to the connections between flowers and bees was discussed before diving deeper.



## 03 Making Samples-Bee's Body Dissection

The steps of knowing specific body parts, preparing samples and microscope operation were intertwined. Back and forth reinforcements (either basic knowledge or hands-on) were added. Kids seemed to have fun and got to know bees better along the way.



## 04 Microscopic Skills: Photoshoot & Improvement

Searching and identifying features, taking clear and good photos/videos, exchanging discussion, Googling subjects when needed, and making more samples - kids were focused and repeated all these autonomously. Mrs. Lung attempted to root learning, skills and initiatives better during these cycles.



## "

Through the journey, students learned how to communicate effectively with each other, to collect the information needed strategically, and to show creativities collaboratively. In this way, classes did help students shape the capabilities in interdisplinary integration.

B Mrs. Lung Elementary Teacher

## Wow Moments

Mrs. Lung led the students to present their photos to the whole school. Topics ranged from biological structures to honey plants. Students proudly introduced the mysteries and ecology of the bees.

## 06 Photomicrography Exhibition

With all these findings and excitement, a week long exhibition was later on curated. Students and teachers from the school became their guests. Mutual interactions came naturally.

## Depict Again: Before and After

05

It was surprising to see the differences when kids depicted bees again. They had added features impressed them the most to the new drawings, which appeared to be more real yet still cute and energetic.



#### **SUBJECTS SHARING**

## Things in our Daily Life

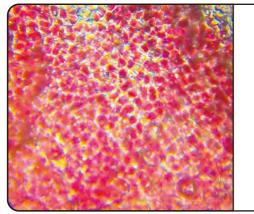
## Crystallization: Tears, Soy Sauce & Salt

What does the crystal of salt look like? How about tears, soy sauce, and others when they dry out? These are amazing things to get from daily life. Try them!



## Weaving & Knitting

Different types of weaving and knitting result in various textures and functionalities of clothing. This is one of the easiest ways of using a mobile microscope, the outcome is fruitful and fun.



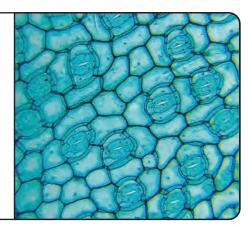


If peeling off the outer skin of an apple or a grape, one can hardly imagine that the peel is actually transparent. Color would change when PH value is changed. Add a drop of baking soda solution or white vinegar on a grape skin. See if the color changes and whether it can be reversed.



## "Noses" of a plant

While humans breathe with noses, plants respire with stomata. Now one can see the paired guard cells (which formed a stoma). Make samples during daytime and at night respectively to see whether they are closed or open.





### Summon Your Needle Forest

Salicylic acid is one of the most important treatments for acnes. Can you imagine using it to form a forest? Watch the soul soothing video:



Scan to watch the video! https://bit.ly/2TEE80g



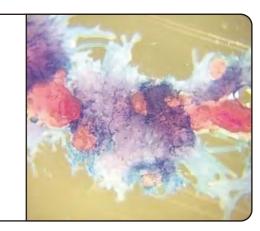


## **Chemical Garden**

This video shows the process of a popular experiment, the chemical garden. Add metal salts to the waterglass, and see the burst of branches in minutes.



Look how colorful it is: https://bit.ly/2sVc9Ps





New Zealand **Q** 



## US Department of Agriculture

AgDiscovery is a program affiliated to US Dept. of Agriculture. Middle or high schoolers gain a first-hand look at career paths related to agricultural sciences through this program. uHandy is an indispensible part incorporated to the class design.



## Texas Homeschool Convention

uHandy offers the microscopic ability that is only accesible by students on campus. It's a great fit for kids to learn through hands-on experience back at home and outdoors. That's why they are excited to use uHandy.



## British Science Program Presenter/YouTuber

The strange fluid dynamics of micro-scopic animals and other daphnia facts.

Steve used uHandy to do experiments on how microorganisms change their behaviors in different mechanical settings. This video brings a wide range of discussion.



## Science Classroom for Educational Community!

uHandy team was invited by CANVAS, an educational NPO, to instruct the K-12 kids and their parents on campus of the University of Tokyo. They were impressed by all the photomicrographs and enjoyed time spending with the uHandy team.



"If you are homeschooling, love inquiry based learning... I would highly recommend it. I personally love the back ground noise recorded. Looking back at videos I can hear them discovering, creating theories, and forming new questions. It truely is research having fun."



## amazon ++++

#### https://amzn.to/2PytMNf |



"This product has really impressed me." "Had been looking for a decent smart phone microscope for several years - literally."

"Definitely worth it."

"I think anyone with a knowledge of microscopy will not be disappointed."

"It DOES blow me away, so easy to mount and use,the product is really well-done."

## 03<sub>Chapter Three</sub> uHandy: Best EdTech of 2019

uHandy is motivated by two driving forces. One is a technology that condenses high-end but sizable computerized microscopy into a portable smart analyzer. The other is K-12 educators who long for a friendly hands-on technology to facilitate the learning  $\rightleftharpoons$  teaching into a bidirectional and more fruitful interaction.

As species evolves, so do the microscopes. Having gone through a series of challenges, uHandy fuses ingenious designs into a pocket-sized microscope and beyond. In this chapter, popular features and functional descriptions are listed for your reference.



A Japanese comprehensive design evaluation and recommendation system, believing that a good design is essential and indispensable to daily life.



Taiwan Excellence Award reviews candidatesbased on R&D, design, quality, and marketing capabilities to give the award.



At the end of 2019, uHandy was reviewed as **Best EdTech of 2019** out of hundreds of brands in competition.

Common Sense Education is the education arm of Common Sense Media, the independent, national, non-profit organization dedicated to helping kids and families thrive in a world of media and technology.

# uHandy Resolution Spec

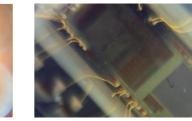


## Resolution: 3.6µm

## Lo-Mag Lens

Often used for observing an object's surface texture.





Apple snail eggs

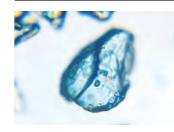
Electronic components

#### **User guidelines:**

- 1. No need for sample preparation in most of the cases.
- 2. Works well with ambient light. Enhanced if adding extra light.
- 3. Magnification: optimized for 10x~120x, maximum\*300x.
- 4. Resolution: around 3.6μm or 139 line pairs/mm.
- 5. Field of view is 5mm in diameter, equivalent to conventional optical microscope (OM) 40x magnification.

## Resolution: 1.2µm Hi-Mag Lens

Often used for seeing through structural details.





Copper sulfate

Volvox

#### **User guidelines:**

- 1. Need to make a very thin sample for light to penetrate.
- 2. Use the embedded active lighting.
- 3. Magnification: optimized for 30x~360x, maximum\* 800~1000x.
- 4. Resolution: around 1.2 $\mu m$  or 417 line pairs/mm.
- Field of view is 1mm in diameter, equivalent to conventional optical microscope (OM) 200x magnification.
- \* The actual performance depends on mobile device's image sensor specification. It gets better and better as phone/tablet releases newer generations.



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# **LO-MAG LENS**

## **Ready in 3 Simple Steps**





STEP 1 Clip Lo-Mag Lens over the camera on a tablet/smartphone.

STEP 2 Center the field.



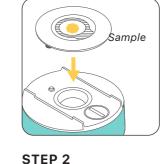
**STEP 3** Lean Lo-Mag lens against the surface of the objects.





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STEP 1 Clip Hi-Mag Lens over the camera on a tablet/ smartphone. Center the field.



Put the sample on

Circular Slide and

attach to Light Stage.



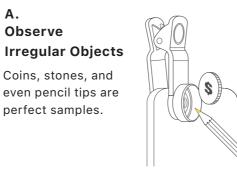
STEP 3

Move the Light Stage intuitively to scan the sample.

## **Three other** interesting ways to use Lo-Mag Lens.

Α. Observe **Irregular Objects** Coins, stones, and even pencil tips are

C.



#### В. Observe **Tiny Creatures**

Clip Lo-Mag Lens over

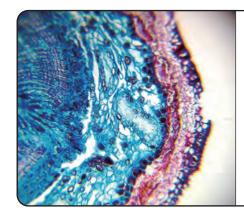
the front camera. Watch how ants or bugs move around in Mini Petri-dish chamber.

Mini Petri-dish

## **Do Chemical** Experiments Utilize a limited amount of chemical solutions and materials to do experiments.



# Most Popular Features RES



#### **Lab-Grade Resolution** Mobile, compact while retaining performance.

Customized nonspherical optics with less distortion ensure the performance quality and compatibility for various smart devices.



## **A Designated Focal Plane** Get clear image instantly!

No more coarse/fine focus knobs; no more "be careful, don't damage expensive lenses". Simply put a sample on the designated focal plane and click it on, clear image is available right away.



## Intuitive Scanning Move the sample as if you

are holding it on your hand.

To scan the sample and find interesting area, you can move the sample in the direction as if you are holding it on your hand. No need to memorize "up is down, left is right".



## Easy Sampling

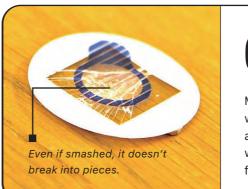
Collecting, viewing and storing a sample with one sticker.

Tap the sticker on a flower and "pollen sample collection" is done. It can be viewed under 1000x magnification directly. Store it in a booklet and take notes after observation. Thousands of samples can be carried around easily.



### **5 Innovated Bubble Stickers** Real time observation of tiny creatures and chemical reactions.

Bubble Stickers contain a concave serving as a micro reactor tank for chemical reactions or a space for aquatic organisms.



Safety Glass
Durable and safe for kids
to handle.

Made of tempered glass, it is highly resilient and would stay intact when dropped to the floor by accident. It might be broken if excessive force were applied, but would still be attached to a thin film without scattering.

## **Performance Benchmark**

uHandy Lo-Mag Lens is designed to reconcile the following six key yet conflicting aspects of a mobile microscope.



Work well with both cameras on a smart device, front and back, and be compatible with as many kinds of smart devices/brands as possible.

- 2 Lighting is optional - ambient light is sufficient, extra light for enhancement.
- 3 Wide viewing area and less image distortion.
- 4 Easy to center optical axis.
- Able to handle liquid samples easily 5
- 6 Able to protect living beings properly



uHandv Lo-Mag Lens Feather





## Magnification Claimed: 40x-640x Incompatible with cell phones.



Brand B Magnification Claimed: 100x Narrow View

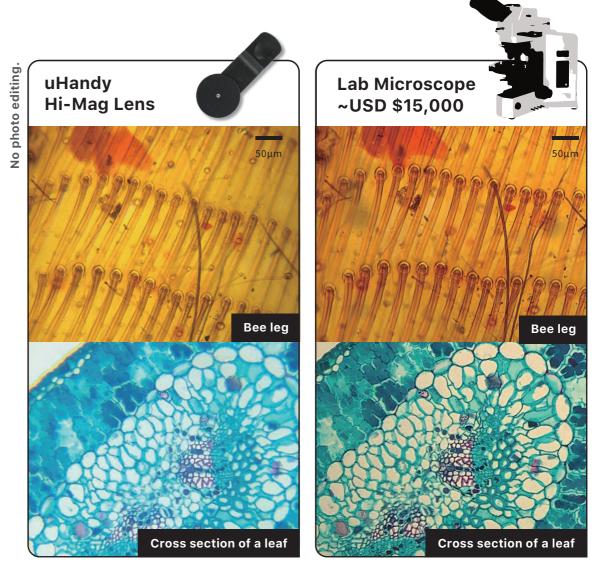
Brand C Magnification Claimed: 100x-150x **Decentered Lens** 

Lo-Mag Lens presents the highest quality compare with other microscopes.

## 

The resolution of uHandy Hi-Mag Lens is around 1.2 micrometer. The following are two samples examined by uHandy and a high-end laboratory desktop microscope. The first sample is a bee leg (surface view), and the second sample is a leaf (cross-section view). While the high-end microscope is doing a great job on both samples, one can see uHandy is also doing a good job, showing sufficient details and comparable resolution.

With such performance, easy-to-use and portability, uHandy makes it possible to facilitate teaching/learning/experimenting/exploring activities all together. Constraints are removed and effectiveness is elevated. Now any place can be the right place and any time can be the right time.





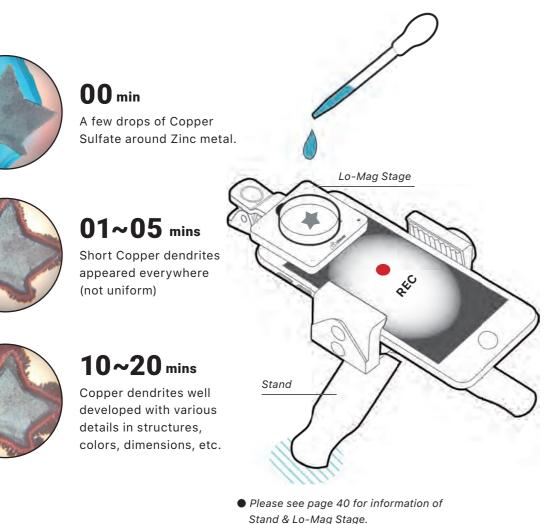
Hi-Mag Lens Resolution is comparable to a professional desktop microscope.

uHandy: Best EdTech of 2019 31

## Using as a Laboratory

uHandy can be more than a microscope. Conduct a real-time experiment with only a drop of liquid.

For example, set up Lo-Mag lens and stage to the front camera, put a piece of zinc (Zn) metal on the petri dish, and add a drop of copper sulfate ( $CuSO_4$ ). A live redox reaction kicks in right away. You can record from time zero and thereafter to capture progressive growth of copper dendrites.

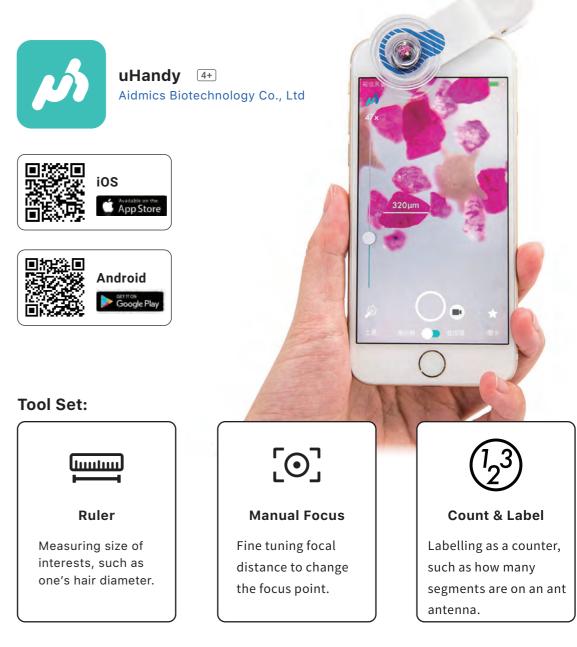


#### **Engaging Your Students**

Make a laboratory out of a smart device. The process can be recorded as photos/videos seamlessly. Because of the very limited amount of chemicals required, a drop bottle will do. The whole process is much safer to do, easier to repeat/change conditions, and simpler to clean when completed.

## More Useful with App

Two major benefits: Additional tool set or a personal tutor





## **A Personal Tutor**

Need clues for what to see? There are more than 50 topics to work with both Lo- and Hi-Mag lenses. More tools will be developed in the near future.

## 04<sub>Chapter Four</sub> Line-up of Educational Kits

After arranging hundreds of workshops for K-12 educators and receiving much feedback, we found that after applying uHandy to teaching various subjects, students absorbed what is taught even better, and new ideas germinated more than expected. Consequently, being adaptive to fit different subjects, ages, learning/ teaching tempos and depth of topics has become our goal to achieve.

As friendly and powerful as a gadget could be, an entry barrier is always there for anyone trying to pick up a new capability. Hence, extra considerations are taken into and lead to the birth of educational kits.

## **CORE CONCEPTS OF**

# MICROLAB

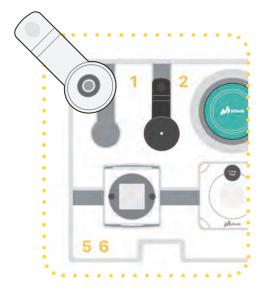
#### **Customization for Educators**

Teachers find the application of uHandy mobile microscope bringing much positive impact in class. Like food recipes, tastes are changed when chefs randomly add different ingredients to the dishes or adjust the way they cook. Diverse lesson plans and freeness in class are available when teachers can grab any items precisely to fit different scenarios. uHandy Mobile Microscope is then optimized into a form of "MicroLab," a compact set in which collects nine, the most needed, and education-enhanced items. Microscope and parts are now organized and extended to a lab-worthy ability, resulting in more creative curriculum designs and intense use.

#### ■ Inside a MicroLab:

- 1. Lo-Mag Lens
- 2. Hi-Mag Lens
- 3. Light Stage
- 4. USB light
- 5. Slide Holder

6. Circular Slide
 7. Lo-Mag Stage
 8. 35, 60mm Petri dish
 9. Dropper, Tweezers



## I. Checking Items within seconds

Transparent cover and a checklist help teachers do a quick check before/after every class and make sure all the items are in place. Nine major items are collected into the corresponding compartments and numbered.

## II. Keeping everything in place

Each compartment is designed to hold every item properly, such as slots for item #3 [Light Stage] and #7 [Lo-Mag Lab Stage] have magnetic force. Items won't fall off easily even when the box is open and upside down. The corresponding shape of each slot ensures that the item is put back to the right place nicely.



## Stackable boxes yield spacious work area

Take only the item(s) needed and pile up the MicroLabs in the middle if kids are sitting around a big table. In this way, we leave the workspace clean for every individual.

## **A Real Case in Focus**

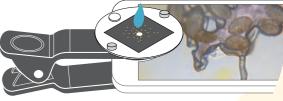
Plant life cycle is always a science 101 topic. Take pollination as an example, while introducing related knowledge to students, a teacher can incoperate MicroLab to zoom in all the details of a flower and to grow pollen tubes.

## 02 Instant Switch Based on Needs

Teachers may now lead students to observe the pollen on a smaller scale. Simply take item #2 [Hi-Mag Lens], item #3 [Light Stage], and item #6 [Circular Slide] out for higher resolution.



## 03 Experiments Onsite



The formation of pollen tubes is an important step of propagation, as pollen tubes help transport the male gamete to the ovules. Take item #6 [Circular Slide] and item #9 [Dropper] to set up an experiment for pollen tube formation. Do the experiments and record the whole process for future review.

## Hands-on Attempt

After introducing different parts of a flower, grab item #1 [Lo-Mag Lens] and take a closer look at the petal, stamen, and stigam. Pollen on the stamen looks like powder under Lo-Mag Lens.

## TIPS:

Very often, image quality is enhanced with sufficient lighting. When needed, item #4 [USB LED Light] is available, which also allows educators design more experiments with it.

> SCHOOL LECTURING

> > X

HANDS ON

**ATTEMPT** 

## 

μHandy

MicroLab energizes teachers and students bi-directionally to form a positive cycle in different ways and scales. Slide Holder Conventional Slide

μHandy

## **4** Expand Knowledge with Conventional Slides

Prepared slides are always perfect teaching aids most schools would possess. Teachers may show the slides of vascular bundle crosscut to students, extending (or reviewing) the content from flowers to leaves.

WELL FOUNDED

DISCUSSION

X

#### Educational Line-up #1 T-101G

# **TEACHER'S KIT**

Teacher's Kit is a complete bundle of a MicroLab plus frequently used accessories for a teacher to do upfront preparations, use/demo in a classroom or coach others.

#### MicroLab + 3 types of Stickers + Stand(s):

#### MicroLab:

#### **Stickers Details:**

- 1. Lo-Mag Lens 6. Circular Slide 2. Hi-Mag Lens 3. Light Stage 4. USB light 5. Slide Holder 10. MicroLab Stand
  - 7. Lo-Mag Stage 8. 35, 60mm Petri dish 9. Dropper, Tweezers
- **Teaching Materials:**

Original educational resources x 3 (samples included)

- a. Sample Flat & Bubble Stickers (90 pieces of Flat & 90 pieces of Bubble) b. Sample Flat Stickers (180 pieces) c. Sample Hubs (120 pieces)
- d. Collecting Album

#### Slides

- a. Prepared (3 pieces)
- b. Blank (2 pieces)





## **FLAT & STABLE STAND TO FREE BOTH HANDS**

Set up both Lo-Mag and the Tablet/ Phone Stand. Free both your hands to design the curriculum, make paper notes of the experiment results, or show other materials during classes.



## **3 EDUCATIONAL** MATERIALS

These materials come with 3 originally created hands-on activities with the matching specimens for use. With these, teachers can pick the kit up quickly on one hand, and come up with new ideas for designing their own curricula or lab works right away - be it an in-person or virtual one - on the other.

## Educational Line-up #2 T-105

# **CLASSROOM KIT**

### 10 MicroLabs plus accessories for classroom usage

Classroom's kit is a big outer box to store mainly 10 MicroLabs and partial must-have accessories. Extra accessories can be ordered separately.

#### **Product Details:**

#### MicroLab x 10 Boxes

- 1. Lo-Mag Lens
- 2. Hi-Mag Lens
- 3. Light Stage
- 4. USB light
- 5. Slide Holder
- 6. Circular Slide
- 7. Lo-Mag Stage
- 8. 35, 60mm Petri dish
- 9. Droppers, Tweezers
- 10. MicroLab Stand

### Stickers Details:

a. Sample Flat & Bubble Stickers

- (90 pieces of Flat & 90 pieces of Bubble)
- b. Sample Flat Stickers (180 pieces)
- c. Sample Hubs (120 pieces)

#### Spare Consumables

- a. 35mm Petri Dish (10 pieces)
- b. Droppers (50 pieces)
- c. Tweezers (14 pieces)
- d. Mini Petri Dishes (24 pieces)

## **VIDEO TUTORIAL:**





#### REQUIRED PARTS Dight Stage Light Stage Circular Silde Hi-Mag Lens Mi-Mag Lens

Follow the steps to Explore the tiny World! ► ► ►





Classroom Kit

## 05<sub>Chapter Five</sub> Kits & Accesories

#### T-101G

## **Teacher's Kit**

Coming with one Hi- and one Lo-Mag lens sets respectively, the accessories, and the consumables.



Ideal for a teacher or a coach to prepare their curricula and courses in classes/workshops.

## "

After putting the uHandy Mobile Microscope Duet through its paces and trying all the included options, I would recommend this for grades 6-12 science classrooms. It would make a great addition to a traditional science lab table as students could use their own mobile devices, capture the samples as images or videos, and use their findings in reports and for research purposes. Also, all the students can view a sample at the same time via a single, larger tablet, and discuss the topic of the lab as a group. The kits can also be used as content remediation or extension by having students work on the project topics included in the app.



Kathy Schrock EdTech Influencer Original Link https://bit.ly/2ZWQWk5



## **Classroom Kit**

Coming with 10 boxes of the uHandy Classroom Kit, extra consumables (droppers, tweezers, Sample Stickers, Sample Hubs), and a storage case. Great for a group of students in a class.



Specifically for a group of learners in science classes or other interdisciplinary workshops/trainings.



## A-001

**Flat Sample Stickers** 

1 pack180 pieces of the Flat Sample Stickers are included.



#### A-003

**Sample Hubs** 

2 packs

120 pieces of the Sample Hubs (stickers for keeping sampled stickers) are included.



A-002 Flat & Bubble Sample Stickers

1 pack180 pieces of the Sample Stickers(90 pieces of the Flat ones)(90 pieces of the Bubble ones)

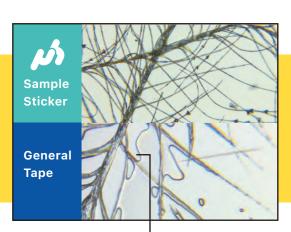


#### A-007

#### Circular Slides (for Hi-Mag Lens)

5 pieces

Five uHandy Circular Slides and a caddy box are included. Working with the uHandy Hi-Mag Lens, it can be magnetically attached to the light stage. Made of tempered glass, it doesn't go into pieces when being broken.



Residue and bubble.



Clear Images, No Obstructions

Made of optical materials with highest quality, Sample Stickers possess great adhesivity without sticky residue nor air bubbles hindering the observation.



## A-008

### Slide Holders (for Hi-Mag Lens)

5 pieces

Five uHandy Slide Holders and a caddy box are included. For use with conventional rectangular slides. Teachers can work on their prepared slides directly without having to make the samples again.



## A-101

Tweezers

**14 pieces** Designed with safety, the tips of the tweezers are round-shaped.



A-104

## MicroLab Stands

5 pieces

Stands compatible with all phones and tablets, holding your smart devices stably. Ideal for use with uHandy Classroom Kit and Teacher's Kit.



## A-102

Mini Petri Dishes (for Lo-Mag Lens) 24 pieces

The specimens can be located and used economically with the Lo-Mag Lens.

 Please see page 26 for information of Mini Petri Dishes



## A-106

Lo-Mag Stages 5 pieces Working with the Lo-Mag Lens, it allows a petri dish to be stacked on for observation

at larger areas.

## **Notes**

#### **Contact Us**

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**Official Website:** 

https://www.loveuhandy.com



Chapter Five

#### Social Media:

Facebook: uHandy Mobile Microscope Instagram: @loveuhandy YouTube: uHandy Mobile Microscope