# Smartphone macro lens

#### **Overview:**

Taking pictures of the macroscopic world with your smartphone is as easy as clipping on a lens. These smartphone camera lens allow you to get even closer to nature. Take images and share your discoveries on the Operation Earth social media pages.

#### Programme use:

Meet the expert and hands on demonstrations.



### How to set up the microscope:

Today, citizen science is a very important method of collecting large quantities of data from a wide geographical spread. Sometimes this may require looking at objects and recording them in greater detail. Microscopes can be relatively expensive and not easy to carry around with you. Modern mobile phones have high quality cameras and can be used to take an image of items that are found, however the magnification is often very poor. By adding a macro lens to your phone, you can get a closer image with even greater detail. This allows every member of the public to investigate in greater detail the natural world without expensive equipment.

#### How it works?

- **1.** Using the macro lens attachment, clip the lens over the camera lens on any smart phone.
- **2.** Load up the camera app, and reposition the macro lens clip as required.
- **3.** Hold the lens approximately 1-2cm away from the item you want to view.
- **4.** Take photos or videos and share on Facebook and Twitter.

#### **Experiments to try:**

- Look closely at a sample of sand or soil and look for signs of pollution.
- Look closely at a range of different flowers and see if you can spot the pollen that our insects move around from one flower to another.
- Try drawing what you see and keeping a record of all your findings in a notebook.

## Key take home messages:

- Investigate the macroscopic world around you and see how complex and inspiring the natural world is.
- Discover, explore and be inspired to find out more.

## **Applications:**

- Citizen science.
- Exploring the world in greater detail.