

Easi-Scope LESSON IDEAS

IT01120 EL00470 IT01121 SC10202

Whichever Easi-Scope you have, it is fascinating to take the time to observe everyday items and see the incredible detail that is not usually visible to the naked eye.



- ❖ Super magnifier of objects and images.
- ❖ Perfect for experiential learning.
- ❖ Great for encouraging speaking and listening.
- ❖ Can be used for the indoor and outdoor classroom.
- ❖ Many cross-curricular links.

Big Idea Thinking

The following activities focus on building children's scientific skills such as observation, reasoning and recording. Similar activities and skills can be used in other subjects such as history, while activities for younger children help them develop an understanding of the world around them.

We have put together an idea for using the micro-scopes with each age range. There are many ways these devices can be used. Enjoy using the micro-scopes. If you have any brilliant ideas for using these versatile and fun resources, we loved to hear from you.



How it connects to learning

The activities are ordered in an age-related progression which relates to both the scientific skills and use of the device. Younger children may need help using the device but as they get older, they will learn how to set up the Easi-Scope and use it autonomously with the computer-based software. The amount of time needed to complete the activities is dependent on the skills of the pupils and choice and range of resources studied.

Easi-Scope LESSON IDEAS

Inspirational Ideas 3-5 years

Key Focus: Provide opportunities to use ICT to investigate and explore the world around them.



SKILLS AND LEARNING

- Provide opportunities to use ICT (e.g. using digital microscopes for taking photographs) to investigate and explore the world.
- Develop curiosity and questioning skills.
- Develop observational skills.
- Record what they observe by taking photographs or by drawing.

PREPARATION

Ensure the Xplovview software is on the computers you are going to use.

Connect the Easi-Scope to the computer

Run the Xplovview software

If the Easi-View does not appear then check the device option is set to USB 2.0 Camera in settings (top right corner of the menu bar)

Note - Photographs and video taken from the software are saved by default in an Xplovview folder in 'My documents'.

INTRODUCTION

The teacher demonstrates how the Easi-Scope works (i.e. by attaching it to the computer via the USB cable and running the Xplovview software to see the image on a computer). Ideally the computer should be connected to a projector to provide a better view of the image.

ACTIVITIES

The teacher uses the Easi-Scope to show objects (e.g. stones, wood, leaves etc.) they have collected from a walk around the outside space. Ideally the teacher hides the object from being seen by the children. The children have to guess what the objects are by what they see on the screen describing what they can see.

The children view the objects from the walk under an Easi-Scope. They record what they observe by taking photographs or drawing some of the objects they view.

Children could also investigate objects associated with stories they have recently read (e.g. different fruit and vegetables from 'The Hungry Caterpillar') using the Easi-Scope.

EXTENSION ACTIVITY

Children could collect objects in their classroom/outside area as part of their continuous provision and investigate their surfaces by viewing them under the Easi-Scope. They could look for shapes and patterns in the objects they study and discuss what they have found. Play games describing what they can see for others to try and guess what the item is.

Easi-Scope LESSON IDEAS

Inspirational Ideas 5-7 years

Key Focus -To use scientific skills such as observation to compare and contrast plants.



SKILLS AND LEARNING

- Use observational skills to compare and contrast different plants.
- Record the results of the microscope studies using observational drawings and photographs.
- Use ICT and microscopy skills to enhance their understanding of Science (e.g. plant structure) and other subjects (e.g. artefacts for history, looking for patterns and shapes in Maths ...).

Create digital resources/artefacts (photographs/videos).

PREPARATION

Load the Xplovview software on the computers.

Connect the Easi-Scope to the computer.

Run the Xplovview software.

If the Easi-View does not appear then check the device option in settings (top right corner of the menu bar).

Buy or collect suitable plant samples for children to use.

INTRODUCTION

Teachers demonstrate how to use the Easi-Scope:- How to focus the Easi-Scope using the focussing ring- How to take photographs using the device and the software and how locate them on the computer.

Note - Photographs and video taken from the software are saved by default in an Xplovview folder in 'My documents'. Photographs can be taken from the software (top menu bar button) or via the shutter button on the device. Videos can be taken from the software (top menu bar button).

ACTIVITIES

The teacher demonstrates how to draw what the children observe.

The children investigate the plant samples using the Easi-Scope. They take photographs of what they find and choose a sample to draw.

The teacher discusses with the class what they have observed. They talk about the different specimens and encourage the pupils to explain their ideas and use scientific vocabulary.

EXTENSION ACTIVITY

Children with the teacher collect leaf litter and investigate any minibeasts they find by using an Easi-Scope. They draw and record (through photography) what they find (e.g. minibeasts) and discuss and describe their findings.

Easi-Scope LESSON IDEAS

Inspirational Ideas 7-9 years

Key Focus- Work scientifically to use observation to identify and classify different types of rocks.



SKILLS AND LEARNING

- Children make careful observations using ICT apparatus such as the Easi-Scope.
- Children to use their classification skills to study different types of rocks, grouping them according to their structure.

PREPARATION

Provide laptops with Xplovie software, Easi-Scopes and a range of rocks (e.g. sedimentary and igneous) for the children to investigate.

INTRODUCTION

Talk about how to use and demonstrate the Easi-scope and the Xplovie software.

Recap on the main features of the Easi-scope i.e. the shutter button to take photographs and the focusing ring for focusing.

Recap on the main features of the Xplovie software such as how to take photographs, timed shots and video. The 'timed shots' feature allows the user to take a series of photographs automatically at set intervals chosen by the user (see settings).

ACTIVITIES

Discuss different types of rocks and how they are formed.

The children prepare a table to record their observations. They use the Easi-Scopes to observe the structure of a range of rocks, noting down what the structure looks like (e.g. crystalline or granular). They can also take photographs as a record of what they have found. For this children could work in small groups listening and responding to other's ideas.

Discuss and conclude what types of rocks they are and what they have found from their observations.

EXTENSION ACTIVITY

The children are given different types of soils. They note down their observations and discuss any similarities and differences between the samples they are given.

Easi-Scope LESSON IDEAS

Inspirational Ideas 9-11 years

Key Focus – To make detailed observations and drawings of animals and plants from local environments.



SKILLS AND LEARNING

- To observe different fossils and identify what types of organisms they represent.
- To make detailed observations and drawings using an Easi-Scope.
- To classify and identify animals and plants using observational skills, keys and classification guides.

PREPARATION

Provide laptops with Xplovie software, Easi-Scopes and a range of animals and plants from local environments for the children to investigate. Teachers may decide that the children can collect some of the samples that they use with supervision.

Classification or keys to support observations.

INTRODUCTION

The teacher discusses the importance of detailed observations and drawings of organisms in Science, such as those made by famous naturalists such as Charles Darwin and Alfred Russel. Examples of how they were used by scientists to evidence evolution and classify the organisms when they were first discovered can be discussed.

ACTIVITIES

Small groups of children use the Easi-Scopes to observe the different organisms that have been collected.

They make detailed drawings and photographs of the specimens chosen.

They use classification guides or keys to identify the organisms and note down ways they think make the animals or plant adapt to its habitat.

How does this compare to other organisms from more extreme climates?

EXTENSION ACTIVITY

The children are given a fossil to study. They make detailed observations using the Easi-Scope and use them to identify what type of organism they think the fossil represents.