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Science equipment for Early Years Science

Posted by Anonymous on Thu, 2015-09-24 08:41

We intend teaching a unit on mini creatures at Year 1 level. The school has some magnifiers for viewing. The microscopes are not really friendly for younger students. Would you please advise me on equipment such as microscopes and magnifiers recommended for use in early years classes.

Voting:



No votes yet

Laboratory Technicians:

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Science equipment for Early Years Science

Submitted by on 25 September 2015

Reviewed 22 Feb 2023

For younger primary aged students, magnification tools and equipment need to be friendly, safe to use, used appropriately and with help to make the viewing of small items a successful and valuable experience. In response to your question, please consider the following information.

Magnifiers

Large, hand-held magnifiers, available in plastic, are transportable and provide immediate viewing for students. These are useful for outside activity. Pocket magnifiers are also a good addition to a set of viewing tools.

Microscopes

For indoor tasks where mini creatures have been collected in containers, microscopes are effective viewing tools. For an early years student, a microscope needs to be robust and simple so that a student can use it for independent viewing. A binocular microscope is advisable (often referred to as stereo microscope by suppliers) with up to 40x magnification. This magnification is quite appropriate for primary-aged students when viewing body parts of mini creatures, veins in a leaf, etc. There are many types of binocular microscopes available from suppliers, both digital and non-digital. A discussion of some non-digital types of microscopes follows.

One type of non-digital, binocular microscope relies on the ambient light available. This type of microscope can be easily transported and used outdoors. Other, more expensive, types of microscope are equipped with a lamp and require access to a powerpoint meaning they have limited transportability. This type of microscope comes equipped with a switch so that light can either be directed onto the object being viewed or directed up from below the viewing platform. Be aware that the lamp on this type of microscope does heat up, and when using this type of microscope students need to keep their hands clear of the lamp. Both types of microscope have focus wheels and the lens height may be adjusted.

Video-flex/ document camera

Again for indoor viewing, a video flex or document camera offers a magnified viewing for a shared experience where a camera attached to a flexible goose-neck transmits the image to a display screen (e.g., a television, a computer or a IWB). The flexible neck is manoeuvrable and can be placed to optimise the viewing experience.

iPad and other options

Alternatively an iPad could be used and the image projected onto a display screen.

See also a Q&A [Purchasing and maintaining microscopes](#),¹ which contains additional information about different options

Supply

There are numerous commercial suppliers of science educational equipment. Their websites and consultants are informative and offer a range of equipment for magnification and viewing for early years students. See the [School science suppliers](#) list.²

References

1 Science ASSIST. (2023). Purchasing and maintaining microscopes, Science ASSIST Q&A, Retrieved from the Science ASSIST website: <https://assist.asta.edu.au/question/4582/purchasing-and-maintaining-microscopes>

2 Science ASSIST. 2023. School science suppliers. Retrieved from the Science ASSIST website: <http://assist.asta.edu.au/resource/664/school-science-suppliers>

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