



Outta This World - Teacher Notes

Many people are not aware that there are small pieces of rock and dust constantly entering our atmosphere from space and burning up. These are what are commonly known as shooting stars. Sometimes, a tiny fragment of a rock that enters our atmosphere may survive the fiery journey and land on Earth. These rock fragments are quite tiny (like dust) and are called micrometeorites. Micrometeorites are quite dense and metallic so can be collected using a strong magnet, such as a neodymium magnet. *These magnets are extremely strong and care should be taken when using them as they can pinch little fingers and skin when attracted to other objects.*

To search for micrometeorites, it is best to wait until your local area has dried out, after a heavy shower of rain. The rain will help to wash the micrometeorites into cracks and gaps in the pavement. Put your strong magnet into a press seal bag, as it will be very difficult to remove the micrometeorites from the surface of the magnets.



Students should move the magnet slowly along the ground, concentrating on areas like gaps in paving or cracks in concrete. Once fragments have been collected they can be put them into a container by simply removing the bag from the magnet whilst holding it over a piece of paper or wide container. To examine the micrometeorites, you have to use a microscope or strong magnifying lens, as they are extremely small. A USB camera such as a Dino-Lite or one that can be attached to a tablet or smart phone is ideal. A standard microscope, if you have one available, could also be used. The micrometeorites will be quite spherical and metallic in appearance.



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Some are shown in the photographs below.

