

METEORITE HUNTERS



NATIONAL
SPACE ACADEMY

Science & Technology
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INTRODUCTION

In this activity you are going to:

Learn that classification is a way of grouping objects together by their properties

Use a classification chart and scientific testing to find the two meteorites from the 6 samples in the meteorite hunters sample box

Branding

Science & Technology
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SPACE ACADEMY



CLASSIFICATION – SORTING INTO GROUPS

Colour

Living and not living

Shape

How could you sort
these cards into
groups?

Animals, plants,
shapes and clothes

Things you can
wear and things
you can't



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MANY DIFFERENT NAMES

Asteroid

A large rocky body found between Mars and Jupiter



Atmosphere

Meteoroid

A smaller fragment of an asteroid outside of the Earth's atmosphere



Meteor

A meteoroid that is burning up in the atmosphere



Meteorite

The fragments that make it to the surface of the Earth

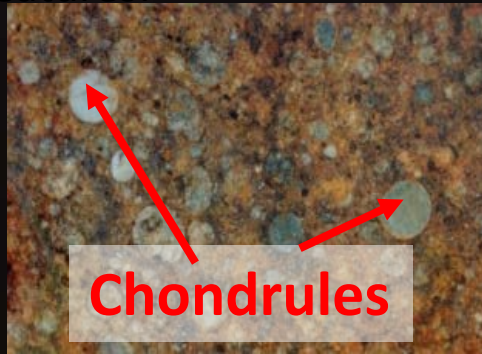


TYPES OF METEORITE

Meteorites

Stony

Some Stony Meteorites have small spherical shapes called chondrules. They all have some iron in.

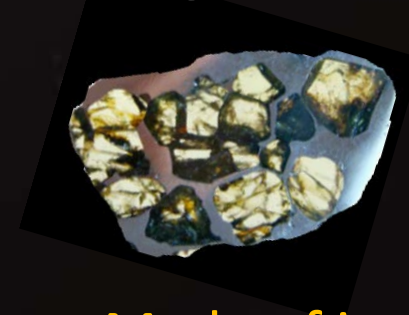


Iron



Iron meteorites are very dense (heavy for their size)

Stony - iron



Made of iron surrounding olivine (glass like) crystals



WHO HUNTS METEORITES?

Meteorite hunters can be scientists looking for meteorites to study, businesses looking for meteorites to sell, or collectors wanting to add to their meteorite collections.

Since meteorites are dark in colour we usually look for them in areas that are a constant pale background colour – can you think of a good place?



YOUR TASK

You are a planetary scientist who has just come back from a field trip collecting interesting objects in the hope of finding meteorites. Examine and test the objects to identify what each one is.

Examine

Examine your samples and try to find the meteorite amongst them. What are you looking for?

Identify

Identify each of the objects using the classification chart

Explain

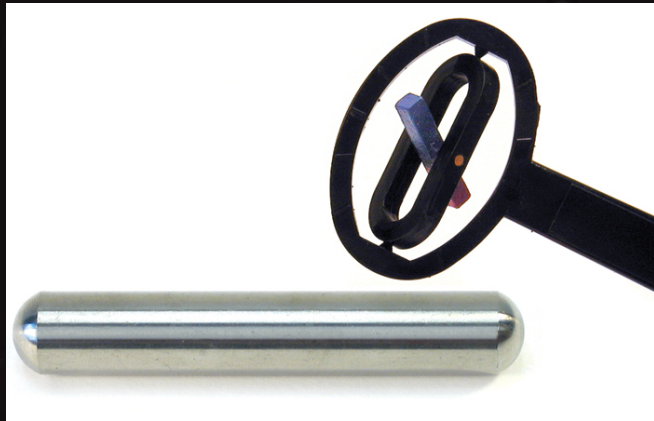
Explain to your class mates what you have found



RECAP

Meteorites...

Are magnetic



The mini magnet in the magnaprobe will be attracted to it

Are dense



They are heavy for their size

Have a fusion crust



A layer of material that melted as the meteorite came through the atmosphere

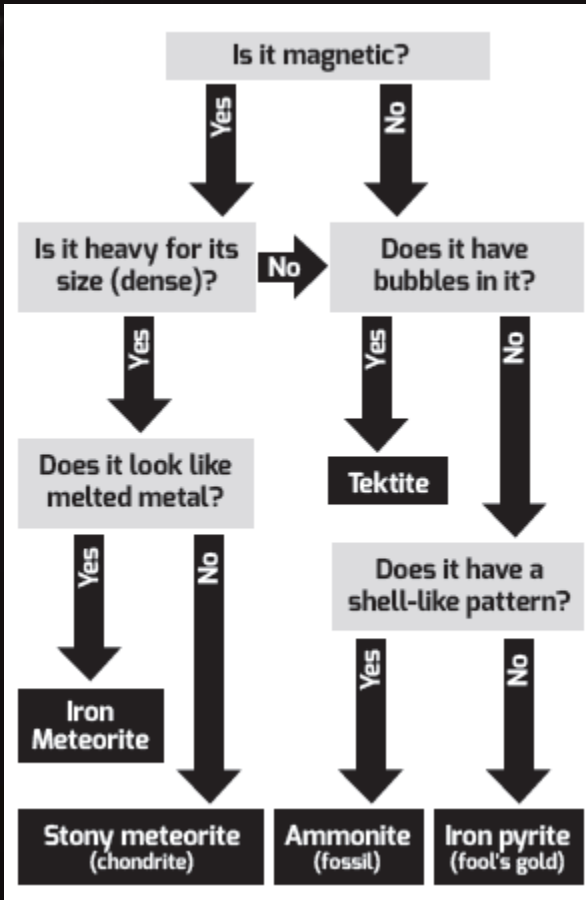
Tektites...



Are Earth material that was melted when a meteorite impacted the Earth. They are bubbly and look like dark glass



RESULTS



Colour dot	Is it magnetic? (use the magnaprobe to test)	Is it dense (you can use the scales to help you compare your samples)	Melted metal?	Bubbly ?	Shell – like pattern?	What do you think it is?
Purple	YES	YES (but hard to tell)	YES	NO	NO	Iron meteorite
White	NO	NO	NO	YES	NO	Tektite
Green	NO	NO	NO	NO	NO	Iron pyrite
Orange	NO	NO	NO	NO	YES	Ammonite
Light Blue	YES	YES	NO	NO	NO	Chondrite meteorite

