

# METEORITE SCIENTISTS



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# INTRODUCTION

In this activity you are going to:

Learn about the different types of meteorites, how they form and where they come from

Investigate 5 different objects from the meteorite box

Use your understanding of meteorites to identify the 5 objects

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# PLANETARY SCIENTISTS

Planetary scientists apply the science of geology and space to other worlds.

This includes other planets, moons and meteorites!



Jane MacArthur, Planetary Scientist – University of Leicester



# WHAT IS A METEORITE?

Simply: A rock from space that hits the Earth

Scientifically: A bit more complicated!



# 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

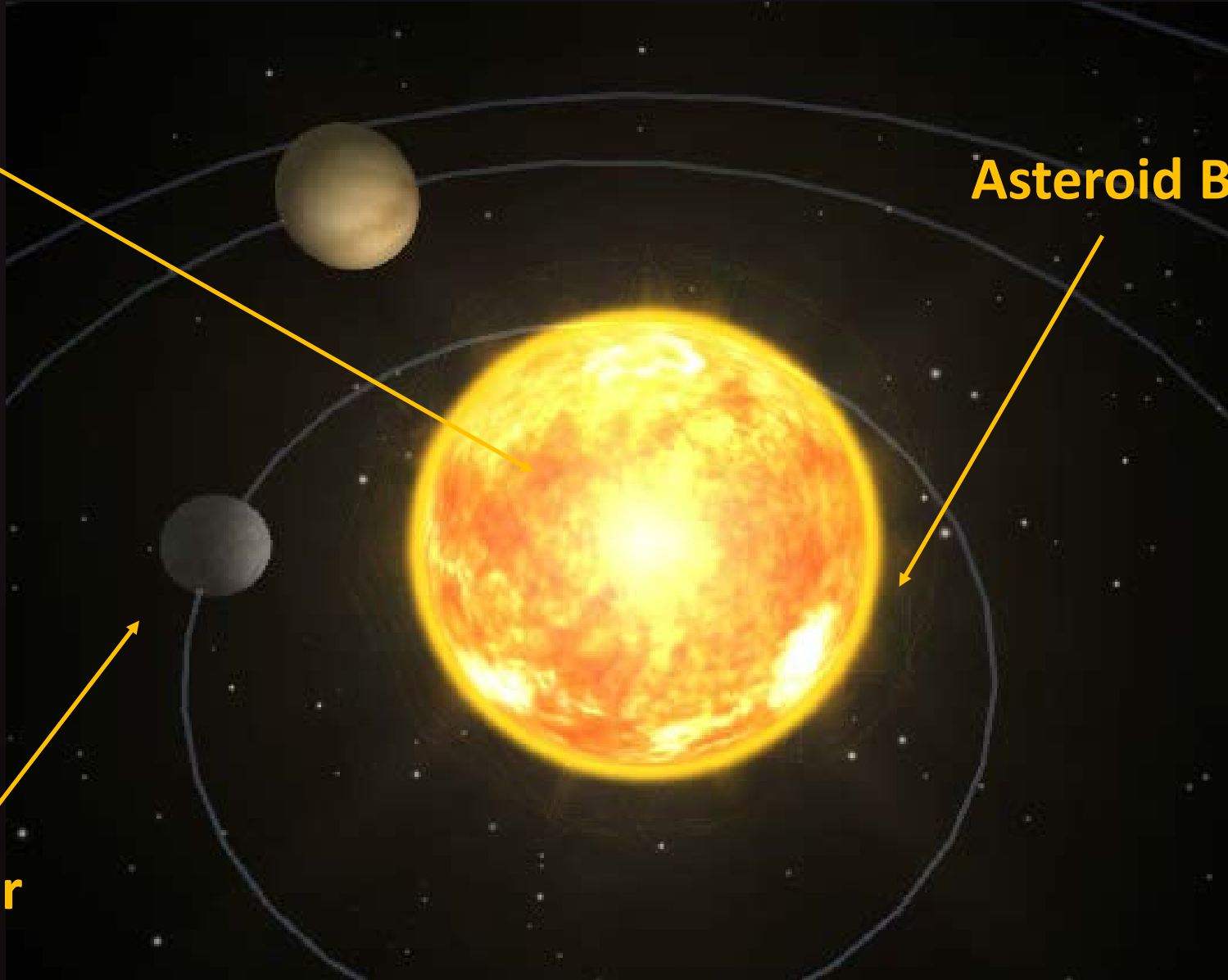


# WHERE DO THEY COME FROM?

Mars

Asteroid Belt

Jupiter



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# THREE MAIN TYPES

STONY

NOTE! All asteroid belt meteorites  
contain some iron

IRON

STONY - IRON

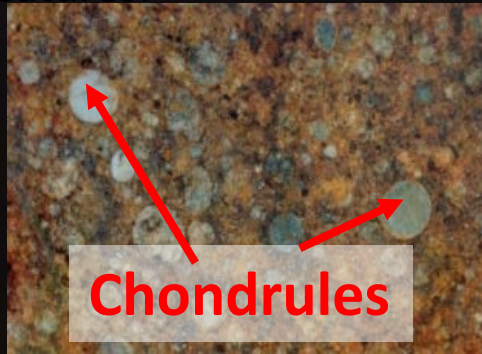


# TYPES OF METEORITE

## 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





# METEORITES ALSO HAVE...

What happens to a meteorite as it tears through the Earth's atmosphere?



The outside of the meteorite heats up as it squashes the air in front of it

## Fusion crust



Dark brown/black surface with ripples, waves or bubbles in from the melted rock and escaping gases



# IMPACTITES

Melted material from below a meteorite impact. Gets solid as it cools. Looks like bubbly glass. Can be different colours.



Tektite



Glass Impactite



# CHALLENGE!

Investigate the samples and use describing words (adjectives) for each one.

Can you work out what your sample is?



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# STATION 1



## IRON METEORITE



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# STATION 2



## CHONDRITE METEORITE



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# STATION 3



## LIBYAN GLASS IMPACTITE



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# STATION 4



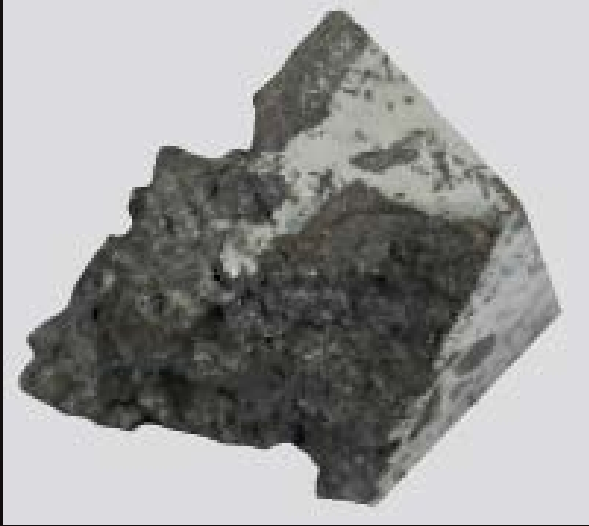
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# STATION 5



## IRON METEORITE



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