# Peek Inside a Planetesimal!

Natural Environment Research Council

UNIVERSITY OF LEEDS

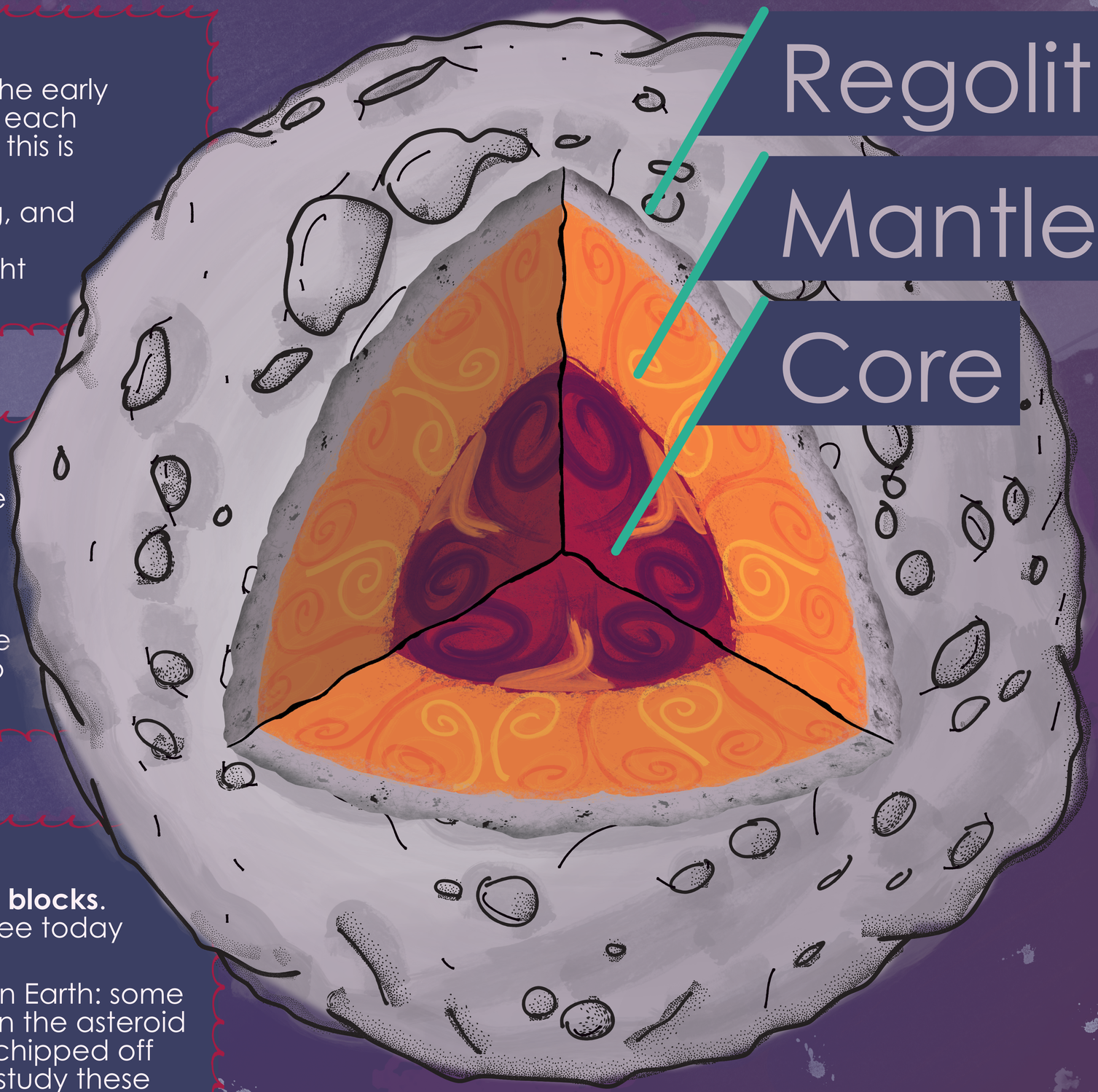
## What is a planetesimal?

Planetesimals were small rocky little bodies in the early Solar System. Most of them either crashed into each other and stuck together to build the planets - this is called **accretion**!

Some didn't survive this smashing and crashing, and were broken to pieces - the leftover scattered fragments formed the **asteroid belt**. A few might have survived... we think **Vesta** might be one!

## What is inside?

Some planetesimals heated up enough for the rock inside them to begin melting. Denser materials like iron sank down towards the centre to form a core. This is called **differentiation**. Lighter materials formed a mantle. Smaller pieces of rock crashed into the surface of the planetesimal, breaking it up into a dusty regolith.




## Why are they interesting?

Planetesimals are known as **planetary building blocks**. They help us understand how the planets we see today came to be.

We have some pieces of planetesimals here on Earth: some planetesimals were broken up into fragments in the asteroid belt, then little pieces of these **asteroids** were chipped off and delivered to Earth as **meteorites**. We can study these meteorites and figure out how big their **parent body** was!

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