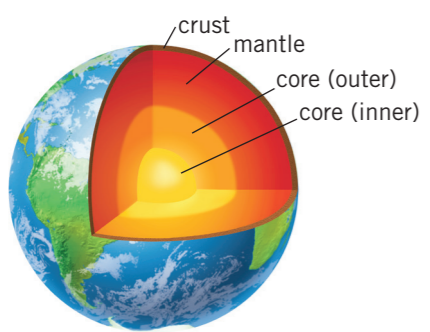


### The Earth

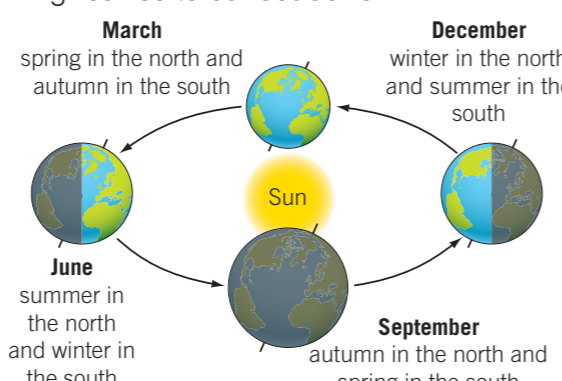


The Earth has three main layers:

- The **crust** is rocky and solid
- The **mantle** is made from mainly solid rock but this can flow
- The **outer core** is liquid metal and the **inner core** is solid

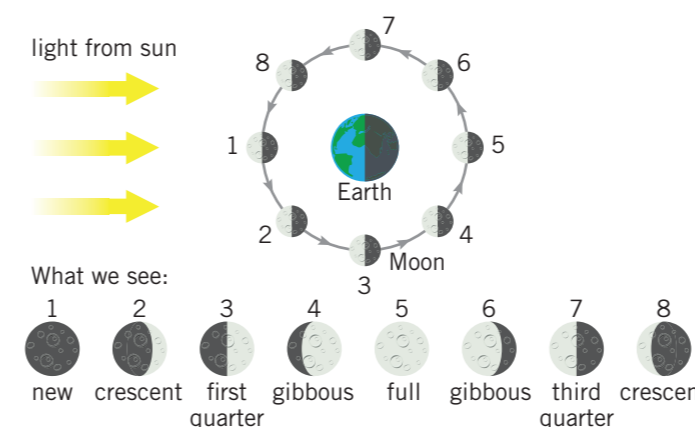
### The spinning Earth

- The Earth takes 365 days to **orbit** the Sun, this is one Earth **year**
- The Earth takes 24 hours to spin on its axis, that is why we have day and night
- The Earth's **axis** has a tilt of 23.4° which gives rise to our **seasons**



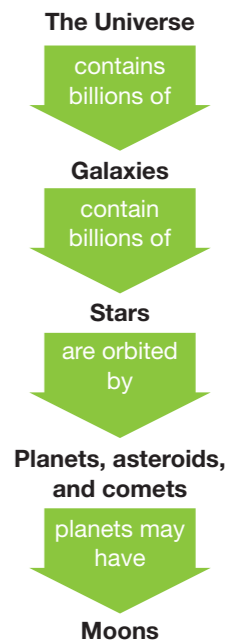
### The Moon

- The Moon is a **natural satellite** which orbits the Earth
- One orbit of the Earth takes 27 days and 7 hours, this causes us to see the **phases of the moon**
- The different phases of the moon are caused by different parts of the Moon being lit by the Sun



### The night sky

- A **galaxy** is a collection of **stars**, our galaxy is known as the **Milky Way**
- Stars** produce their own light
- Planets** are large objects which do not produce their own light but orbit stars
- Natural satellites** include moons which can orbit planets
- Artificial satellites**, such as the International Space Station, are man made structures which can orbit planets



### Types of rock

Type of rock	How it is formed	Properties	Uses
<b>sedimentary rock</b>	<ul style="list-style-type: none"> <li>sediment piles up in one place and, over many years, sticks together by compaction or cementation</li> <li><b>compaction:</b> weight of sediments above squeeze them into rocks</li> <li><b>cementation:</b> another substance sticks the sediments together</li> </ul>	<ul style="list-style-type: none"> <li><b>porous:</b> made of small grains stuck together so there are holes that water can pass through</li> <li>soft: easy to break apart the sediments</li> </ul>	building materials (e.g. <i>sandstone</i> and <i>limestone</i> )
<b>igneous rock</b>	<ul style="list-style-type: none"> <li>when liquid rock cools it turns into igneous rocks these are made of crystals locked tightly together</li> <li><b>magma:</b> liquid rock underground-cools slowly and forms large crystal</li> <li><b>lava:</b> liquid rock above the ground-cools quickly and forms small crystals</li> </ul>	<ul style="list-style-type: none"> <li><b> durable</b> and hard (difficult to damage): the crystals are locked tightly together</li> <li>not porous: there is no space between crystals</li> </ul>	pavement rail tracks
<b>metamorphic rock</b>	<ul style="list-style-type: none"> <li>other rocks under that Earth are heated and put under pressure</li> <li>over time, these rocks become metamorphic</li> </ul>	<ul style="list-style-type: none"> <li>not porous: there is no space between crystals</li> </ul>	marble used for kitchens slate used for roofing tiles

### The Solar system

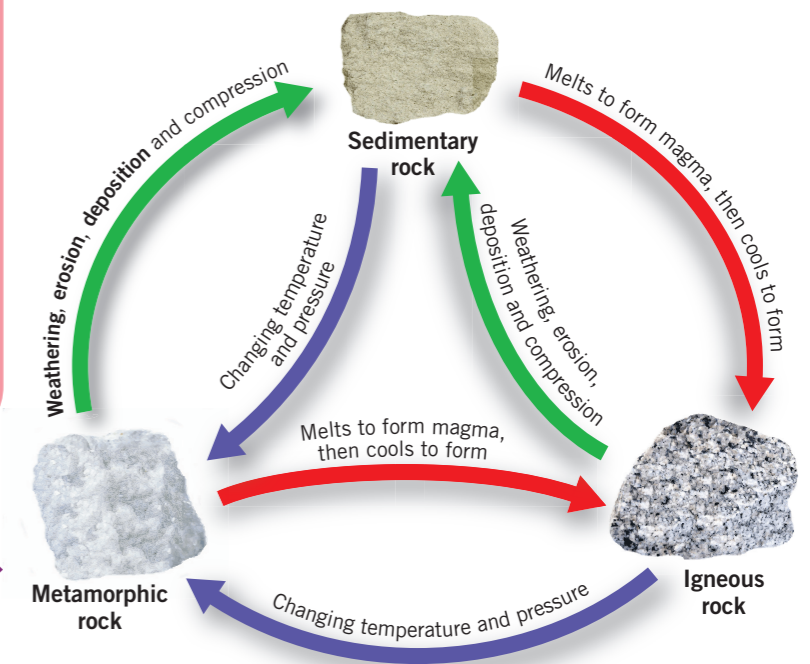
Our **solar system** consists of eight planets which orbit the Sun, four inner and four outer planets

Inner planets	Outer planets
<i>Small and rocky planets (dwarf planets)</i>	<i>Gas giants</i>
Mercury, Venus, Earth, Mars	Jupiter, Saturn, Uranus, Neptune

- Between the inner and outer planets, between Mars and Jupiter, there is the **asteroid belt**
- The planets all orbit the Sun, but the path of their orbits are all slightly different, giving them the look of 'wandering' in the sky

### The rock cycle

The **rock cycle** shows how rocks change and how their materials are recycled over millions of years



### Key terms

Make sure you can write definitions for these key terms.

asteroid belt   artificial satellite   axis   crust   deposition   durable   dwarf planet   galaxy   gas giants   igneous rock   lava   inner core  
 magma   mantle   metamorphic rock   milky way   natural satellite   outer core   orbit   phases of the moon   planet   porous   rock cycle   season  
 sediment   sedimentary rock   solar system   star   sun   universe   year