

What's the Universe made of?

Key Stage 3

Topics covered: Cosmology, dark matter, dark energy, pie charts, percentages

Watch the video "How will the Universe end?",
<https://vimeo.com/122515139>



Cosmologists study the nature of the Universe. The Universe is made up of three things:

- Matter + energy = **4.9%**
- Dark matter = **26.8%**
- Dark energy = **68.3%**

1. The matter in the Universe is used to form various structures. What kinds of things would you find in space?
2. Dark matter has a gravitational pull. Dark energy behaves like anti-gravity – it pushes things away. How do you think these two components affect the growing Universe?
3. Draw a pie chart using a compass and protractor to show the composition of the Universe. Convert the percentages into degrees, $360^\circ = 100\%$. Colour in the different sections and label them.

What's the Universe made of?: **ANSWERS**

Key Stage 3

1. Galaxies, stars, black holes, planets, moons, comets, asteroids, quasars, nebulae, galaxy clusters
2. Dark matter slows the expansion of the Universe; dark energy speeds up the expansion
3. Pie chart:

