

## TASK 1

Democritus in 450BC asked a great question and this still not yet fully answered: **What is the smallest particle?**

Examples of tasks could include:

- Research task: identify 5 scientists who contributed to find the smallest particle
- Note down on a theory or concept each scientist developed
- Watch an online resource and make notes
- Is atom the smallest particle? Give reasons to your answers.
- Write a 500 essay which compares the **planetary model** of the atom and the **electron cloud** model of an atom.

### Will the large hadron collider destroy Earth?

News article <https://tinyurl.com/j4jl264>

Discussion article <https://tinyurl.com/yd8b6mzy>

Real article <https://tinyurl.com/y8kow9b7>

### Task 2:

You need to produce a 1 page essay on whether the large hadron collider could cause an Earth destroying black hole.

<b>Introduction</b>	Does experiments at the large hadron collider could destroy the Earth?
<b>Describe</b>	Describe how the Higgs boson and other particle are formed during the particle accelerator collisions
<b>Explore</b>	Give 3 reasons why experiments at the large hadron collider could not cause destruction of the Earth.

## OVERVIEW

AQA A level Course outline.

Year 12	Year 13
Particle physics	Further Mechanics
Mechanics	Fields
Materials	Thermal Physics
Electricity	Nuclear Physics
Waves	Astrophysics

### AQA Examinations

Paper 1 (AS), Paper 2 (A2) and Paper 3 (Practical)

#### Task 3

What is the standard model of particle?

<https://www.youtube.com/watch?v=HVxBdMxgVX0>

What are fundamental particles?

<http://www.bozemanscience.com/ap-phys-002-fundamental-particles>

### Websites for Further Reading

**Video 1 – Higgs boson what you don't know.**

[https://www.youtube.com/watch?v=sw4\\_9xhGzjo](https://www.youtube.com/watch?v=sw4_9xhGzjo)

**Video 2 – The discovery of the God particle**

[https://www.youtube.com/watch?v=Pv\\_DtHuj5Ds](https://www.youtube.com/watch?v=Pv_DtHuj5Ds)

### DUE: First lesson in September

A bridging Booklet form Oxford is due on 09/20