



Particle physics/ fine art workshop

Scientific developments have seen reality dissolved into smaller and smaller invisible particles that the physicist has to make visible, a process mirrored by the artist attempting to express thoughts and emotions through the manipulation of materials. Taking the same journey from something hidden to something revealed. Come and experiment with ways of visualising using mark-making, simple three-dimensional materials, photography and film to explore the intriguing connections between art and science.

10.00-10.10

Welcome and house-keeping.

10.10-10.40

Introduction to Physics: **Particles and Forces**

15 mins

Interpretation through art intro.

15 mins

10.40-11.30

First activity

50 mins

Drawing interpretation- creating a charcoal surface/ground and then working into the ground with an eraser, revealing the white paper underneath to create the images. Working from cloud bubble/ chamber images of particle movements. The charcoal ground is disturbed by the movement of the eraser in the same way that the substance in the chambers would be disturbed by the movement of the particles.

11.30-11.45

Introduction to Physics: **Accelerators, Detectors, and CERN**

15 mins

11.45-12.15

Second activity

30 mins

Drawing interpretation- development of drawing using more experimental approaches; restriction on the movement of the pencil by elastic to explore forces acting on the particles and the transferring of your drawing to your neighbour to explore the decay of one particle into another.

12.15

Lunch break

1.00-1.15

Introduction to Physics: **Higgs boson and beyond**

15 mins

1.15-2.15

Third activity

Rotation around different experimental areas

Introduction to further ways to imaginatively visualise and interpret particle movement through a medium,

1. Use of a glue gun on various surfaces to interpret the movement extending beyond drawing to **more experimental approaches in two dimensions** and the use of wire and other materials to create a **three-dimensional interpretation** of the movement in space. Material could include wire and air-drying clay.
2. Use of **shadows on the screen** involving actual movement to be filmed and photographed. Using techniques of a shadow puppet theatre.

Students rotate around these areas. 30 mins each

2.15-3.00

45 mins

Group discussion, critique, evaluation and **feedback**

Photos from the physics and art workshop











