Unit 1: Year group(s) - Years 5 and 6	Our World	Science & Religion in Schools

Introduction to the unit:

This unit is concerned with how we perceive and learn about the world. Our primary experiences of the world are through the senses. As we grow and develop our sense experiences remain central to our knowledge and understanding of the world, although our perceptions become increasingly coloured by our basic assumptions, cultural presuppositions, learned experiences and memories.

Learned experiences lead us to being guided by what we call 'common sense'. This is not a reliable guide in science, where the unexpected often prevails. Neither is common sense an infallible guide in the areas of religious belief or non-belief. Both science and religion accept that the world is open to investigation by the human mind, but not that its workings are totally predictable or that we can always imagine what is to be revealed.

In **lesson 1** pupils take part in experiential activities to understand that sense experiences are a primary way of finding our way around the world.
In **lesson 2** they question whether our sense data can *always* be relied on. They examine the views of a realist (Newton) and a sceptical scientist (Descartes).
In **lesson 3** pupils ask whether we can depend upon common sense in science. They consider the purposes of fair and repeat testing.
In **lesson 4** they question whether what we perceive is all that there is, through activities loosely based on a Victorian novel called Flatland. In the Flatland world all the characters live in a world of 2 dimensions and cannot contemplate our 3-dimensional world.

Links to the RE NSNF

1.1 **Belief and teachings (what people believe)**
1.2 Practices and lifestyle (what people do)
1.3 Expression and language (how people express themselves)

2.1 Identity and experience (making sense of who we are)
2.2 **Meaning and purpose (making sense of life)**
2.3 Values and commitments (making sense of right and wrong)

Unit Aim:

To explore our perceptions of the world – how we perceive, and whether what we perceive is all there is.

Unit Objectives / Learning outcomes

(1) Sense experience as a primary point of contact with the world around us.
(2) Realist and sceptical approaches to sense experiences.
(3) The counter-intuitive nature of science.
(4) The limitations cast on us by what we can and cannot perceive.

Key Questions

(1) How do we know about the world?
(2) What do we know about the world?
(3) Is science common sense?
(4) Is what we see of the world all there is?

Prior Knowledge

Science work on Forces.

<table>
<tr>
<td>Links to the Science NC

Sc1.1 Ideas and evidence in science
Sc1.2 Investigative skills

Sc2.1 Life processes
Sc2.2 Humans and other animals
Sc2.3 Green Plants
Sc2.4 Variation and classification
Sc2.5 Living thing in their environment

Sc3.1 Grouping and classifying materials
Sc3.2 Changing materials
Sc3.3 Separating mixtures of materials

Sc4.1 Electricity
Sc4.2 Forces and motion
Sc4.3 Light and sound
Sc4.4 The Earth and beyond</td>
<td>Key Quotes

Scientists have for some time recognised the counterintuitive nature of science- that it comes up with answers which are the opposite to what one might expect.
Teaching about Science and Religion (Culham College Institute) by Michael Poole p.44

An argument rumbled on for decades among abstract thinkers even after a Flemish engineer, Simon Stevin, actually did such experiments with lead weights of different mass dropped from a height of about 10 metres, and found they fell at the same rate in 1586.
Deep Simplicity (Penguin) by John Gribbin p.9

If, for example, when my Father, the Triangle, approaches me, he happens to present his side to me instead of his angle, then, until I have asked him to rotate, or until I have edged my eye round him, I am for the moment doubtful whether he may not be a Straight Line, or, in other Words, a Woman.
Flatland (Dover Thrift) by Edwin A. Abbott p. 20</td>
<td>Prior Knowledge

Science work on Forces.

Classroom Resources

Recommended reading for more able pupils: ‘Here I am’ (Faber and Faber) by Russell Stannard.
Lesson 2: stick and beaker of water;
Lesson 3: heavy and light weights, table tennis balls, kitchen towel, beaker of water, balls.
Lesson 4: 2D and 3D shapes.

ICT opportunities

Lesson 2: Explore given optical illusions websites.</td>
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<td>Links to other parts of the NC

Speaking and Listening
Literacy
Numeracy
Foundation subjects
Thinking Skills
Creativity
SMSC</td>
<td>Learning Styles / Intelligences

Visual / Auditory /Kinaesthetic

Linguistic intelligence ("word smart"):
Logical-mathematical intelligence ("number/reasoning smart")
Spatial intelligence ("picture smart")
Bodily-Kinaesthetic intelligence ("body smart")
Musical intelligence ("music smart")
Interpersonal intelligence ("people smart")
Intrapersonal intelligence ("self smart")
Naturalist intelligence ("nature smart")</td>
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