

Year 7 Curriculum Area - Activate Science

What concepts will we be covering this half term?

Curriculum mapping for students

Key concepts:

Chemistry: Topic 3 – Acids and Alkalis

Acids and Alkalis
Indicators and pH
Neutralisation
Making Salts

Physics: Topic 3 – Light

Light
Reflection
Refraction
The Eye and The Camera
Colour

Physics: Topic 4 – Space

The Night Sky
The Solar System
The Earth
The Moon

What resources can you use to support your learning?

BBC website: Any resources not on Oak Academy links will be found here.

Y7 & 8: <https://www.bbc.co.uk/bitesize/subjects/zng4d2p>

Oak National Academy:

Chemistry: Topic 3 – Acids and Alkalis

Acids and Alkalis

<https://classroom.thenational.academy/lessons/acids-and-alkalis-chk38d>

This lesson looks at what an acid and an alkali is, how to use simple indicators to identify them and some common hazards associated with using them.

Indicators and pH

<https://classroom.thenational.academy/lessons/ph-scale-60r3gc>

How to use universal indicator to identify a substance as acid, alkali, or neutral based on its pH and why universal indicator is better than simple indicators.

Neutralisation

<https://classroom.thenational.academy/lessons/neutralisation-6xjpac>

What happens during neutralisation when an acid and an alkali react, how to represent this as a word equation and how to predict the name of the salt produced in this reaction.

Making Salts

<https://classroom.thenational.academy/lessons/making-a-salt-ccu3ad>

This lesson looks at what a salt is and how they can be made, including details about filtration and crystallisation.

Physics: Topic 3 – Light

Light

<https://classroom.thenational.academy/lessons/light-waves-c5h38c>

This lesson looks at the properties of light, how to draw accurate ray diagrams and what happens to light when it meets different surfaces.

<https://classroom.thenational.academy/lessons/the-electrical-and-chemical-effects-of-light-60vkce>

This lesson looks at the effect of light hitting a surface and a practical to investigate this.

Reflection

<https://classroom.thenational.academy/lessons/reflection-c5jp2r>

This lesson looks at the law of reflection, how to draw a reflected ray accurately and a practical to demonstrate the law of reflection

<https://classroom.thenational.academy/lessons/reflected-images-61gket>

This lesson looks at properties of reflected images and the differences between specular and diffuse reflection.

Refraction

<https://classroom.thenational.academy/lessons/refraction-71hkqd>

This lesson involves looking at the practical for drawing and measuring the angles of refraction and explaining why refraction takes place.

The Eye and The Camera

<https://classroom.thenational.academy/lessons/vision-c5jkcd>

This lesson looks at the function of different parts of the eye, how we see light and how pinhole cameras work.

<https://classroom.thenational.academy/lessons/correcting-vision-75k64c>

This lesson looks at dissecting an eye to examine the parts and looking at what causes short and long sightedness and how this can be corrected.

Colour

<https://classroom.thenational.academy/lessons/colour-cru3at>

This lesson looks at the colours of the visible light spectrum and why we see objects as a particular colour.

Physics: Topic 4 – Space

The Night Sky

The Solar System

The Earth

The Moon

<https://classroom.thenational.academy/lessons/review-of-space-65gk2r>

In this review lesson we will recall key terms, definitions and structures related to space and gravity and apply knowledge to a range of questions.

<https://classroom.thenational.academy/lessons/case-study-of-maggie-aderin-pocock-6mt3jc>

In this lesson we will look at the life and work of Maggie Aderin-Pocock. She is a space scientist, science communicator and presenter of the BBC's The Sky at Night.

Tasks to complete so we can assess your understanding/ Key Performance Indicator tasks	<ul style="list-style-type: none">• Complete any of the revision tasks, watch the videos and do the tests on the BBC bitesize page.• Complete the lessons on the oak national academy website – follow the lesson to watch the video and complete the activities and the quiz.
What can you do if you need help/ support?	If you need help please email your teacher – sfox2@netherthorpe.derbyshire.sch.uk gwatkins@netherthorpe.derbyshire.sch.uk mraybold@netherthorpe.derbyshire.sch.uk sparry@netherthorpe.derbyshire.sch.uk jmccammon@netherthorpe.derbyshire.sch.uk shutton@netherthorpe.derbyshire.sch.uk icarr@netherthorpe.derbyshire.sch.uk pgreenwood@netherthorpe.derbyshire.sch.uk bchristmas@netherthorpe.derbyshire.sch.uk nconnolly@netherthorpe.derbyshire.sch.uk jroberts@netherthorpe.derbyshire.sch.uk