

## 'Building Resilience for Future Success'

Session	Topic/Resources	Learning opportunities link to curriculum
1	<b>Reduce, Reuse, Recycle – How can we reduce our carbon footprint. Climate change quiz and discussion of ways to individually reduce carbon footprint. Worksheet filling in footprint outlines.</b>	PHSE L5. ways of carrying out shared responsibilities for protecting the environment in school and at home; how everyday choices can affect the environment (e.g. reducing, reusing, recycling; food choices)
2	<b>Science Bingo – using questions from all 3 sciences to give one word answers on a bingo card. Quick revision of key concepts at GCSE Science.</b>	GCSE Science
3	<b>Chromatography Flowers. Worksheet and discussion on ways to separate mixtures. Using chromatography creatively to produce paper flowers.</b>	GCSE Science Chemistry – separating mixtures
4	<b>Natural Selection/Evolution/Extinction – playing a game called Sticky Dogs to investigate how natural selection affects populations of living things. Followed by research into extinct animals and causes of extinction.</b>	GCSE Science Biology – Variation and evolution, Natural selection
5	<b>Muscles, bones and skeletons – how bodies move around joints. Putting together a paper skeleton model – session often runs around Halloween.</b>	
6	<b>Pathogens as caused of infection. Communicable/Non communicable disease. Immune system and importance of good hygiene. Discussion and worksheet – display poster.</b>	GCSE Science Biology – Communicable diseases PHSE H3. about choices that support a healthy lifestyle, and recognise what might influence these H4. how to recognise that habits can have both positive and

		<p>negative effects on a healthy lifestyle</p> <p>H17. to assess and manage risks associated with cosmetic and aesthetic procedures, including tattooing, piercings and the use of sunbeds</p> <p>H20. strategies for maintaining personal hygiene, including oral health, and prevention of infection</p>
<b>7</b>	<b>Periodic Table Storytelling. Using element symbols to make words to tell a story. Helps with familiarity of periodic table and learning symbols.</b>	GCSE Science Chemistry – Elements and the Periodic Table
<b>8</b>	<b>Biodiversity and animal adaptations. Owl quiz and wordsearch linked to key words. Creative session making owls out of paper.</b>	Science GCSE – Biology Adaptation, interdependence and competition.
<b>9</b>	<b>Climate change, pollution, plastics in the ocean</b>	Science GCSE – Chemistry – The Earth’s Atmosphere.
<b>10</b>	<b>Chromosomes, genes, DNA and inheritance. Inherited/Environmental Characteristics. Structure of DNA. Construct paper model of DNA</b>	Science GCSE – Biology Genetics and Reproduction
<b>11</b>	<b>Using Genome sequences of animals/plants to make bracelets matching base pairs.</b>	Science GCSE – DNA and the Genome

This document will continue to be populated as planning continues through the year. Some sessions may be repeated /adapted as the cohort changes. STEM lessons are often linked into physics ideas – this is documented separately.

## Science Group 2021/22 – Overview

Science group currently runs on Indigo Ward. on Thursday 11.30 to 12.30

Lessons are planned to link into the GCSE Science curriculum where possible. As the cohort varies from Key Stage 3-5 this provides an outline idea, but the planning around the lesson can be quite broad. Recent examples include **Science Bingo** which uses questions from all 3 sciences to give one word answers on bingo card, **Chromatography Flowers** linking into chemistry separating mixtures, and a game called **Sticky Dogs** which links to evolution and natural selection. We have also used the **periodic table** as a way to write words for a story – helpful for learning symbols.

Some lessons are based on requests from the ward and link to PHSE to enhance understanding of **healthy lifestyles**. This has recently included looking at **causes of infection, our immune system** and the importance of **good hygiene**. This also runs beyond science group and has also involved more bespoke 1:1 lessons on topics such as **puberty**.

Other lessons link science to the wider world by looking at problems associated with **climate change** for example, or how we can reduce our own carbon footprint, pollution and plastics in the ocean are other topics we have looked at.

Groupwork is really important in building confidence and social skills within the cohort at Ancora House School so some sessions maybe more informal using quizzes, puzzles etc. to engage all participants. Again these will be linked around a science theme. Recent examples include **animal adaptations** and a **time/motion** quiz.

## Post 16

Post 16 lessons are generally bespoke and relevant to individual interests of young people.

Science related lessons may link into healthy lifestyles eg. **Nutrition and healthy eating**

Some students have been encouraged to look at **Future Learn** as an opportunity for learning. One student successfully completed a unit looking at causes of **Mass Extinctions** through time.

We might also look at the wider world such as using maps to look at the **Commonwealth** and associated countries or closer to home, identifying countries in **Europe**.

A different lesson looked at the role of **Charity** within society.

