National Curriculum Presentations

Primary Science: successfully implementing the new 2014 curriculum

Presenter: Peter Riley
• Approaching the new science curriculum
Signs of the scientifically literate

- They understand the way that scientists work
- They have a wide knowledge of the areas of science
- They are able to understand a scientific topic and use it as a basis for making rational decisions
Signs of a scientist

• Observant, curious, imaginative, creative
• Disciplined; can analyse data; can construct rational explanations and draw conclusions
• Sceptical of their work and that of others
Enquiring scientifically

- Grouping and classifying
- Observations over time
- Comparative and fair testing
- Pattern seeking
- Research using secondary sources.
Aims of the curriculum

• They understand the way that scientists work
• They have a wide knowledge of the areas of science
• They are able to understand a scientific topic and use it as a basis for making rational decisions
Areas of study

What are the new areas of content?

**Year 1:** Animals  Plants  Materials  Seasonal changes
**Year 2:** Animals  Plants  Habitats  Use of materials
**Year 3:** Animals  Plants  Rocks  Forces and magnets  Light
**Year 4:** Animals  Habitats  Sound  States of matter  Electricity
**Year 5:** Animals  Habitats  Materials  Earth and space  Forces
**Year 6:** Animals  Habitats  Evolution  Light  Electricity
Progression in science

Key Stage 1: ‘The budding scientist’ Exploring by mainly first-hand experience with some research. Recording and reviewing their work in a variety of ways.

Lower Key Stage 2: ‘The blossoming scientist’. Exploring, talking about, testing and developing ideas. Awareness of the function of things, their relationships and interactions. Increased use of writing about science.

Upper KS2 ‘The growing scientist’. Going deeper and wider still into the three sciences. asking own questions, analyzing functions, relationships and interactions. More thorough investigation with emphasis of trust in results and the consideration of more abstract ideas.
Resources: Planning
Resources: Progression
Resources: Lessons

Lesson 2: Evolution in action

Introduction

Objectives: By the end of the lesson, students will be able to:

1. Define key terms related to evolution.
2. Understand the process of evolution.
3. Explain the concept of natural selection.

Materials:

- yup!-by-the-library-1.pdf
- Lesson Plan: Evolution in Action

Procedure:

1. Introduce the concept of evolution and its importance.
2. Discuss the history of the theory of evolution.
3. Explain the key concepts of natural selection and genetic variation.
4. Conduct a class activity where students create their own species through natural selection.
5. Review the importance of evolution in the natural world.

Assessment:

- Students will complete a quiz on key terms and concepts.
- Group projects showcasing species created through natural selection.

Differentiation:

- Provide additional resources for struggling students.
- Challenge advanced students with deeper questions.

Science in the wider world

- Discuss the impact of evolution on human history and modern science.
- Highlight the role of evolution in understanding biodiversity.

Resources:

- yup!-by-the-library-1.pdf
- Lesson Plan: Evolution in Action

I can understand that modern humans are one of a number of human species that have existed on Earth.

How did you do it?
Review

• Consider the signs of a scientist in children
• Develop these abilities through the content of the curriculum
• Develop these abilities by creating a coherent and stimulating science curriculum
• Apply assessment strategies to identify the children’s steps on their way to scientific literacy.