**Colourful Chemistry** KS3

**Duration:** 1 hour, max capacity: 30 students

An illuminating, lab-based insight into the wonderful world of chemistry and some of its real-life applications. Students use polarising microscopes to reveal the hidden colour in rocks, experiment with universal indicator, glowing reactions and more to explore a variety of contrasting and highly visual reactions.

**Supported by the Curry Fund**

**Key Words:**
Chemistry, Reactions, Colour, Light, Laboratory, Chemiluminescence, Atoms, Compounds

**Learning objectives**
- Apply observation skills to a variety of chemical reactions to describe what is happening
- Identify that chemical reactions involve a transfer of energy and result in the formation of new materials
- Recognise that chemical reactions can result in a colour change due to new products that are formed
- Distinguish between an atom, element and compound
- Understand the chemical equations for reactions conducted during the workshop
- Appreciate some practical applications of chemistry
- Understand that reactions can be represented in the form of equations, using words or symbols

**Content**
- Observe and describe the physical properties of a variety of chemical substances
- Identify the pH scale using universal indicator and a range of substances
- Investigate chemiluminescence and bioluminescence
- Carry out a precipitation reaction to illustrate pigment production

**Curriculum Links:**
**KS3 Chemistry**
**Atoms, elements and compounds:**
- Differences between atoms, elements and compounds
- Chemical symbols and formulae for elements and compounds

**Chemical reactions:**
- Chemical reactions as the rearrangement of atoms
- The pH scale for measuring acidity/alkalinity; and indicators
- Representing chemical reactions using formulae and using equations
- Combustion, thermal decomposition, oxidation and displacement reactions

**Energetics:**
- Exothermic and endothermic chemical reactions (qualitative)
- The Periodic Table: the principles underpinning the Mendeleev Periodic Table

**Potential Hazards and accessibility**
Students will use glassware and chemical solutions