

'Museum Science'

KS3

In this 1hour* session pupils will explore the chemical reactions that take place in the Museum and how and why we try to prevent them

This session is accompanied by a trail which we hope the pupils will use to consolidate and develop their learning before or after the session.

Learning outcomes

Pupils should be able to:

- Be aware that some household substances contain acids and conduct an appropriate test for an acid
- Understand that acids can react with objects, causing them damage
- Recognise that Museums have a duty to look after their objects
- Identify other ways in which Museum objects could become damaged and recognise that some of these are due to chemical reactions

Curriculum Links

Chemical reactions

Acids and Alkalis

Chemistry in the real world

Ideas for the Classroom

Here are a few suggestions for things you could discuss and do with your class before and after your visit

Pre visit

Before your visit it would be helpful to talk to your class about museums, what they do, what they can expect to see at this museum, other museums and galleries they have visited before.

Some words we will use during the visit:

Curator, archaeology, geology, acid, alkali, reaction



Post Visit

What reacts with HCl and why? Explore the reactions of Magnesium, Aluminium, Zinc and Copper

Workshop Breakdown:

Activity	Description	Timing
Introduction	Identify some of the materials in Museum collections and discuss potential hazards to them	10 mins
Acid testing	Use litmus paper to test whether several household substances are acidic.	10 mins
Demonstration	Watch as HCl reacts with metal (zinc) and coke reacts with tooth enamel	5 mins
Is paper acidic?	Test two different types of paper with Universal indicator	10 mins
Acids summary	What acidic materials might be hazardous to Museum collections? How might they get there?	5 mins
Water damage	What reacts with water?	