

## Chemistry Enrichment Activities

Just how small is an atom? Watch this [video](#) :

Just how small are atoms? Really, really, really small. This fast-paced animation from TED-Ed uses metaphors (imagine a blueberry the size of a football stadium!) to give a sense of just how small atoms are.

Watch this [film](#)

Write a review of the documentary

Summarise the documentary for a younger sibling/friend

How do we use plastics in the body?

Read the [article](#) from this webpage:

(This Catalyst article looks at how scientists are learning to use polymers for many medical applications, including implants, bone repairs and reduction in infections.)

Over to you, make a list of all the items you can find in ONE room of your home that contain plastic - where they made?

Play with [Smart Materials](#)

Ink that conducts electricity; a window that turns from clear to opaque at the flip of a switch; a jelly that makes music. All this stuff exists, it's time to play with it. A tour of surprising and cool new materials.

Bake a cake that chemistry related !

Ideas:

Atomic structure

Geology - rock types - igneous, metamorphic, sedimentary

Periodic table

Elements

Chemistry equipment - conical shaped cake!

Read this [article](#): Catching a Cheat

This Catalyst article looks at analytical chemists who are involved in many kinds of testing, including drug testing to catch cheats in sport

Watch the [video](#): Battling Bad Science

Every day there are news reports of new health advice, but how can you know if they're right? Doctor and epidemiologist Ben Goldacre shows us, at high speed, the ways evidence can be distorted, from the blindingly obvious nutrition claims to the very subtle tricks of the pharmaceutical industry.

Make a detailed atomic model - Choose one of the first 20 elements

1. Sketch out the structure - electrons in shells, protons and neutrons in the nucleus
2. Decide on which materials you are going to use -
3. Make your model

Read the [article](#): Diamond: More than just a gemstone

This Catalyst article looks at diamond and graphite which are allotropes of carbon. Their properties, which depend on the bonding between the carbon atoms, are also examined.

Watch this [video](#): How Spectroscopy Could Reveal Alien Life

Garik Israelian is a spectroscopist, studying the spectrum emitted by a star to figure out what it's made of and how it might behave. It's a rare and accessible look at this discipline, which may be coming close to finding a planet friendly to life.

Watch this [movie trailer](#)

Then read this [article](#)

Do you think it looks like a good movie?

How does it relate to science/chemistry?

Watch this BBC [Documentary](#) called Drowning in Plastic

Wildlife biologist Liz Bonnin works with some of the world's leading marine biologists and campaigners to discover the true dangers of plastic in our oceans

Read this [article](#): Microplastics and the Oceans

This Catalyst article looks at microplastics. Microplastics are tiny particles of polymer used in many products. They have been found to be an environmental pollutant especially in oceans

Watch this [video](#) on The Causes of Climate Change

The concepts covered include: • the greenhouse effect • naturally occurring greenhouse gases • natural variations in climate • industrialisation and population growth • use of fossil fuels and carbon dioxide emissions. The programme also considers the reasons why climate change can appear to be controversial. It looks at how scientists ensure their research is valid and discusses some of the moral and political dilemmas posed by climate change.