

**Main subject:**

Design &amp; Technology: Graphic Products

**Linked subjects:**

1. Science (Chemistry)

2. Geography

**Year****8**

## Title

**The aim of this extension task is to:**

develop your understanding of smart materials, how they are constructed and the possible environmental impact they have.

**Why Not?**  
It's just for fun!

**Context of task:**

Your mug features a thermochromic smart material. As you know this is a material that reacts to heat. You have also explored photochromic and phosphorescent materials; however, there are many more materials available. You need to identify 2 of these materials and generate an informative poster/leaflet that identifies their chemical composition and the potential environmental impact they have.

**Questions / Issues to address:**

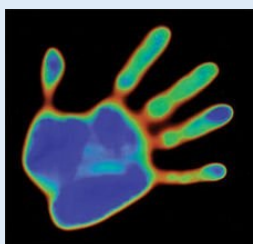
What is the material, what does it react to and how is it used?

Are there any possible applications beyond technology?

How are they created from raw components and how are these components extracted?

What will happen to each of these materials once your product has reached the end of its life?

Can they be recycled or reused?

**Expectation**

1 Graphical poster that highlights the material, uses, raw material extraction, construction & environmental impact

**Deadline:**

By the end of the current module.

**Note to students:**

It is not essential, but you are encouraged to extend this task into an area of your own particular interest. If you would like to do so, please discuss your ideas with your teacher.

You could find this website useful: [www.nationalstemcentre.org.uk/](http://www.nationalstemcentre.org.uk/)