Materials in a Mobile Phone

From webpage: https://discovermaterials.co.uk/resource/students-materials-in-a-mobile-phone/

This video could be used to start a discussion about

- Light as a wave, polarisation and optical light microscopy
- Primary colours of light
- Crystal properties (liquid crystals)
- Capacitance and sensing touch
- Uses of electromagnets
- Sustainability, recycling and future circular economies

Curriculum Links:

Curriculum links to follow soon...

Some ideas for additional in class activities related to this video

- Ask students to label a picture of a phone with the materials and elements used for each component, what the properties of the component materials are, and if the component materials are rare, easy or difficult to recycle to make decisions about if these components are suitable for use in a sustainable future.
- If you have an old phone that you don't mind destroying, you could take it to pieces in class and look at the components (N.B. **Risk assessment required** as some components may have sharp edges and/or contain toxic elements).

Homework ideas

- There are many diagrams of the components of the latest and greatest mobile phones on the internet. List the properties of the materials that make each component and see if

there are sustainable alternatives being developed for these materials, that could replace these in our phones in the future.

- Research your phone: how does it rate on sustainability, recyclability, energy efficiency?

Any questions or suggestions?

We would love to know how you use this resource so please do not hesitate to get in touch at info@discovermaterials.co.uk