

BRING IT ON Company Challenge - Legrand

What is the Engineering Challenge?

Legrand have been continually developing their products to make them more sustainable and one aspect of that is for them to use less energy. One of their new products is a light system that has a built in sensor. The sensor adjusts the brightness of the light to a pre-determined level depending on how much additional light is in the room. This replaces a light being just on or off and particularly saves energy when you just need a little extra light (such as at the end of the day). Can the pupils identify and design opportunities to reduce use of energy in other systems in the home, school or outside world. What uses energy when it is turned on? What could be done to reduce some of that energy use if it isn't actually all needed when turned on.

Ideas

This can be done simply as a design planner activity with labelled diagrams of ideas. It may focus on one item or it may focus on a setting such as a kitchen or a classroom. There is also an opportunity for children to make a model of their idea if appropriate to develop their D&T skills.

Additionally, many classrooms have various robots and kits that include light sensors which can be programmed to 'activate' at different levels. Scratch online also allows pupils to program using the camera on a device as a motion sensor so it only activates the next part of the code at a certain level of activation. This is a great opportunity to develop 'if' commands in a real context. A Microbit also allows you to define sensitivity to light (see links).

Who are Legrand?



Legrand are a specialist electrical engineering company with bases in the NE. They make automated systems such as lighting, home automation and even healthcare call systems.

Curriculum Links

Design and Technology - the challenge sits very much within the main themes of the D&T curriculum requirements. Teachers may focus on specific elements depending on pupil age and experience
Computing - use of sensors in conditional programs 'if, then'

Useful Links

Legrand website: www.legrand.co.uk
Scratch online (search for Video Sensing Tutorial): scratch.mit.edu
Microbit light sensor activity: <https://microbit.org/projects/make-it-code-it/sunlight-sensor/?editor=makecode>

If you have any questions please contact:
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www.bringitonne.co.uk

