Practical Action – links to the science curriculum Wales

We hope the information below will help you when planning your school's science curriculum.

As well as being suitable for lessons our resources are very popular for Science/STEM clubs. Our STEM Challenges can be used to gain CREST awards and as the basis of projects to enter into the Big Bang Fair. All our materials are set within a strong global context, and many explicitly link to the UN Sustainable Development Goals (SDGs) also known as the Global Goals. For activities specifically on the SDGs; technical briefs; images; posters and all the resources below please go to practicalaction.org/schools.

Primary - KS2

The sustainable earth	Interdependence of organisms	How things work
3. A comparison of the features and properties of some natural, and man-made materials Beat the flood Plastics challenge Monsoon proof roof (Upd8) Recycling (concept cartoon)	**2. The need for a variety of food and exercise for good human health** Regreen the desert Growing food (concept cartoon) Yummy yoghurts Pumpkins against poverty Stop the spread Water!Water!	**1. The use of electricity and its control in simple circuits** Solar challenge Flood alert (Upd8) Energy and the Global Goals Moja island
4. The properties of materials relation to their uses **Floating garden challenge** Beat the flood Plastics challenge Monsoon proof roof (Upd8) Ditch the dirt	**4. Through fieldwork, the plants and animals found in two contrasting environments e.g. identification, nutrition, lifecycle, places in environment** Regreen the desert Floating garden challenge Pumpkins against poverty Sandy seeds (Upd8)	**2. Forces of different kinds e.g. gravity, magnetism and friction, including air resistance** Squashed tomato challenge Regreen the desert Pump it (video)
6. A consideration of what waste is and what happens to local waste that can be recycled and that which cannot be recycled Plastics challenge Recycling (Upd8) The 6R's Marvellous microbes (video)	**6. The environmental factors that affect what grows where e.g. sunlight, water availability, temperature** Regreen the desert Water!Water! Sandy seeds (Upd8) Growing food (concept cartoon)	**3. The ways in which forces can affect movement and how forces can be compared** Squashed tomato challenge Regreen the desert Wind power challenge Pump it video
	7. How humans affect the local environment e.g. litter, water pollution, noise pollution Ditch the dirt Water!Water! Smoky homes Recyling (concept cartoon)	

Secondary - KS3

The sustainable earth	Interdependence of organisms	How things work
2.The physical and chemical properties of some elements, compound and mixtures and how mixtures can be separated by simple techniques Ditch the dirt Iodine initiative (Upd8) Plastics challenge Global project ideas	**2. How food is used by the body as fuel during respiration and why the components of a balanced diet are needed for good health** The meal deal Iodine initiative (Upd8) Marvellous microbes (video) Global project ideas	**1. The behaviour of current in electrical circuits** Solar challenge Wind power challenge
5. The properties of sustainable materials and how these are related to their uses in everyday life Beat the flood Beat the flood (video) Stop the spread Flood Alert Global project ideas	**5. How and why food webs are affected by environmental factors** Floating garden challenge Pumpkins against poverty Regreen the desert Design for a better world Growing food (Concept cartoon)	**3. How familiar devises/machine work by using electricity, light, sound and other energy transfers** Solar challenge Squashed tomato challenge Design for a better world Pump it (video) Global project ideas
6. A consideration of what waste is and what happens to local waste that can be recycled and that which cannot be recycled Plastics challenge Recycle or reuse (Upd8) The 6R's Marvellous microbes (video)	**6. How human activity affects the global environment and the measure take to minimise any negative effects and monitor them** Product lifecycle analysis Wild weather Design for a better world Small is challenge Plastics challenge Recycle or reuse (Upd8)	**5. How renewable and non-renewable energy resources are used to generate electricity and the implications and decisions made about their use** Moja island Wind power challenge Solar challenge Global project ideas
	7. Applications of science, medicine and technology that are used to improve health and the quality of life, including those in countries with different levels of economic development STEM challenges Global project ideas Design for a better world The meal deal Worldwide washing, Incredible inoculations Pump it, Beat the flood , Marvellous microbes (videos)	