

Small Is... Challenge

PowerPoint notes

1.		<p>This presentation accompanies a set of Small Is challenge pupil activity sheets and a technology/product timeline poster. They can be downloaded at - practicalaction.org/small-is-challenge.</p> <p>A free poster can be requested from - schools@practicalaction.org.uk</p>
2.		<p>Ask pupils to guess the year these technologies/products were invented.</p>
3.		<p>The dates have been sourced from - thoughtco.com/invention-timelines-4133297</p>
4.	<p>Starter activity</p> 	<p>You might choose to run this as an extended research task where pupils can spend time finding out about new technologies/products.</p>
5.	<p>Technology timeline</p> 	<p>Pupils can choose a technology from the timeline or any other technology or product of their choosing.</p> <p>Please do email us before hand for a free two meter long Technology timeline poster at - schools@practicalaction.org.uk</p> <p>Hand out the Pupil activity sheets (one per pupil)</p> <p>One interesting idea for a classroom display is to put pupils completed 100 years of inventions sheets above and below the Technology timeline poster, then use string to connect to the year the products were invented.</p>
6.		
7.		<p>There are many people around the world thinking about technologies we might need and want in the future.</p> <p>Ask the pupils to think of the range of Scientists, Designers, Technologists, Engineers and Maths professionals that might be involved in developing ideas for new products/technologies in the future. For case study examples go to - practicalaction.org/careers</p>
8.	<p>Global Goals</p> 	<p>The Sustainable Development Goals are also commonly known as the Global Goals. To find out more about the targets behind each one look at the display materials - practicalaction.org/global-goals.</p> <p>If you have time, we recommend that you run the Global Goals string activity and Who's responsible? They help to get the pupils thinking about the roles of Scientists, Technologists, Engineers and Maths professionals in developing technological solutions to many of the targets.</p>

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10.		If you decided to link the challenge directly to the SDGs, you might want to specify that the design for their technology/product should be feasible to help reach the SDG targets before 2030.
11.		A number of the SDGs are dependent on STEM skills and technologies to develop solutions to reach the targets by 2030. They include Zero hunger, Clean water and sanitation, Affordable and clean energy, Sustainable cities, Climate action, Sustainable production and consumption.
12.		
13.		We suggest you ask pupils to have a think about the technologies and product they feel are really needed rather than wanted.
14.		You might want to extend pupils thinking around the impact of technology on people with our Winners and Losers activity. It can be downloaded from here - practicalaction.org/winners-and-losers
15.		If your pupils are not familiar with doing a lifecycle analysis of products/technology, then you might want to introduce them to the concept with our activity Product Lifecycle Analysis. It can be found here - practicalaction.org/product-lifecycle-analysis
16.		When pupils are ready to get started hand out the sheets below and encourage them to draw and annotate their designs to include materials: Technology for the future: Initial ideas Technology for the future: Final ideas Allow pupils to share their own ideas and feedback on the ideas of others. You may like to display pupil ideas by extending the Technology timeline poster, and asking them to indicate when they think their technology might be possible, then connecting to the time line.
17.		
18.		Please share examples of your pupils design ideas on: Facebook - /PracticalActionSchools Twitter - @PA_Schools Instagram- @PA_Schools