



How to use the activity plans:

Each activity, apart from the introduction presentation, has a plan for you to follow, a powerpoint presentation and list of materials needed for the session.

Some activities recommend handing out materials during the session so it is advised to spend roughly 15 minutes prior to prepare.

Below is an example activity plan schedule, however, it is up to you how much you think the group you are supporting will benefit from the activities.

Example activity plan schedule:

Week 1: Introductory presentation & An introduction into AI activity (40 mins)

Week 2: Living Greener activity (40 mins)

Week 3: Product development activity 1 & Product development activity 2 (40 mins)

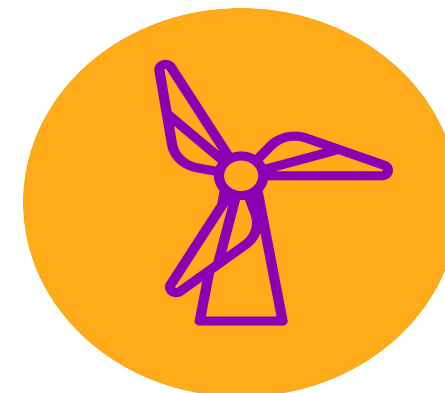
Week 4: Product development activity 3 & finalise your application form (40 mins)



Theme 4: Living greener

Learning objective:

This activity aims to provide young people with an understanding of the fourth challenge theme which is about how technology can help us to live greener (e.g. be more environmentally sustainable).



Time:

- 35-40 mins

Materials needed:

- Theme 4: Living greener presentation
- Living Greener information sheet
- Idea generation materials (whiteboard, pen/pencils, A3 paper, post-its)
- Design thinking template

Slide 1:

Explain that with industrial and population growth comes environmental challenges, but also that technology also provides new opportunities to help tackle these issues.

Slide 2:

Ask the participants to split up into small groups of 2 or 5. Hand out post-it notes, and ask them to write down at least 3 answers to the Q. What do you think some of the biggest environmental problems are?

If participants are struggling for ideas then you might want to provide some of these ideas:

- *Air pollution - Poor air quality is one of the largest environmental risks to public health in the UK, as long-term exposure to air pollution can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy.*¹
- *Plastic pollution - Plastic is everywhere. Useful and convenient, it's also a massive pollution problem, especially in our oceans. Turtles and seabirds become ensnared in discarded plastics, and tiny microplastics are eaten by pretty much everything.*²
- *Climate change - climate change is the long-term change in climate and is usually used in the context of man-made climate change. If there were no greenhouse gases the Earth would be a frozen, lifeless ball in space, but too many gases and the planet warms up causing dangerous climate change.*³

1. Public Health England 2018 [ONLINE]: <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution>

2. Greenpeace UK 2019 [ONLINE]: <https://www.greenpeace.org.uk/challenges/plastic-pollution/>

3. City of Bradford Metropolitan District Council 2019 [ONLINE]: <https://www.bradford.gov.uk/environment/climate-change/what-is-climate-change-and-how-will-it-affect-the-uk/>



Using a clear wall or whiteboard ask groups to share their ideas one group at a time by sticking them up at the front - grouping similar ideas together to start to create themes.

Once this has been completed summarise the key ideas which the groups came up with and hand out the **Living Greener information sheet**.

Slide 3:

Explain that the challenge for this theme is: How can we use A.I to make our buildings, homes and communities more environmentally friendly?

Ask the group if they need a reminder of what AI is. If yes, show the what is AI video using the link.



Slide 4:

Take participants through the two examples of how AI is being used already to answer some of the challenges they have identified around living greener.

Example 1: Cleaner Power

Example 2: Recycling Plastic

Explain that these are only examples and that participants should focus on answering a challenge at this stage over thinking how it will all work - all ideas are welcome!

Slide 5:

Hand out the templates within this session plan to the groups and ask them to use it by starting with a problem or challenge e.g. older people needing to keep up to date with new skills in the workplace, that was identified in the first exercise.

They can then work through the different questions using the case studies and other resources to help them think about ideas.

Encourage groups to use the case studies as examples but not to feel limited to these - all ideas are welcome no matter how different!

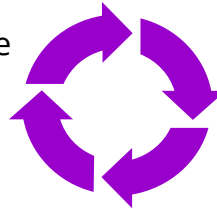


Slide 6:

To close the session ask one of the group members to take home their templates and any notes they made about their ideas.

Explain that over the next few sessions they will get the opportunity to continue to develop their ideas further so make sure they bring them with them next time.

Step 1: Observation (What issues are there to be solved?)



Step 2: What's the story? (How do you feel about those issues?)

Step 4: Planning (How you can turn your idea into reality?)

Step 3: Generating Ideas (Work as a team to submit the best idea!)

Remind them that there are lots of fun and useful resources available to them through the prize at <https://longitudeexplorer.challenges.org/> which can help them develop their ideas further.

What is the challenge/problem? <i>E.g. Older people need extra help with day to day activities.</i>	What is needed to solve the challenge/problem? <i>E.g. Someone or something to help older people with day to day activities.</i>	How can AI help? <i>E.g. Machine learning: AI can learn to do specific task without human instructions.</i> <i>E.g. Natural language processing: AI can be used to help a computer understand human language (speaking or writing)</i> <i>E.g. Image recognition: AI can be used by a computer to see what is happening in images/videos</i>	What are the risks? <i>E.g. If a computer takes over some of the caring tasks for older people, who is still responsible for the care of these individuals (doctors/nurses? family?)?</i>	Your idea!