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)

Product development activity 3: Ethics and security

Learning objective:
This session explores both the ethics and security around developing AI solutions to help them think about the type of impact a solution can have. It has been developed to help young people work through the judging criteria as they develop their idea further.

Time
- 15 mins

Materials needed:
- Product development activity 3 presentation
- AI Ethics worksheet
- Idea generation materials (whiteboard, pens, A3 paper, post-its etc.)

Slide 2:
Explain that this is a session for the teams to develop their ideas further.

Explain that working as a team is just as important as having a great idea and is something that will be in the application form. Explain that there are some strong team working habits that they can practice.

1. Review progress at every meeting: Have a stand up at the start of every meeting - literally the whole team stands up and each team member answers these three questions each but you only have 60 seconds: What did I work on last time? What am I working on today? What am I stuck on?
   You could also have a team to do list which you can review regularly.

2. Start with the End in Mind: Keep the success in mind - think about the judging criteria questions. Have you looked at them? Are you answering them?

3. Listen to others: A strong team is one which listens to everyone's opinion and allows all to speak. It is easy to focus on what we want to say and voice our opinion but that can mean we miss out on great ideas from fellow team members.

4. Collaborate with your team members: A great team is one which is diverse in terms of skills, opinions, backgrounds etc. Recognise that everyone has different strengths and weaknesses. By speaking to and supporting one another this creates a great way of working as you know what everyone is doing and if they need support.

Slide 3:
Explain that this session will focus on exploring both the **ethics and security** of your ideas. Ask participants firstly what they think ethics are using a whiteboard to record their answers

After this, show the group the video.

Slide 4:
Explain that ethics are defined a set of moral principles which govern how people (an individual or a group) behave so a guide or set of rules that help determine the way they should act.

Q. Ask participants why do they think security and ethics are linked.

A. *Explain that thinking about ethics and security is vital for AI because of the potential it has to impact our lives - which is why there will be a question about it in the application form.*

Hand out the **Ethics Worksheet** and explain that they will cover a few examples of AI ethics issues today but that the Worksheet can be used by their team to explore the topic further further.

Slide 5:
Example 1: Pose an example to the group say you were trying to build a system which could predict the next US President and to do this you used all the images of previous US presidents.

Watch the video and then ask them what do you think this data would predict? (the next President would be predicted to be white, male etc.) Ask them why do you think this might be an issue?

Explain that by using data (information) which already has a bias this then **creates a biased AI system**.

Explain that bias is a key issue when building AI systems as the data that we give AI systems to learn from often needs context, so the people developing it have a responsibility to think about it. **What you put in, you get out**.

However, if the people who are developing these systems are all the same type of people then they may not notice that there is a bias at all, which is why it is really important that there is a diverse range of people involved in creating AI solutions.

Slide 6:

Example 2 - Ask participants if they have heard of Faceapp - this is the app which uses AI to create an image of what you might look like when you are older.

They may have also heard that it was in the news recently due to worries about the way it uses the information it collects, and was then criticised over not being transparent with people who were using it - more than 100 million people downloaded the app![3]

Explain that respecting people's privacy and data (information) is extremely important. If you want someone to use your solution then building trust through being as transparent as possible is a great way to start.

Slide 7:

Example 3 - Ask the group if anyone has heard the term 'data breach' or if they know of any companies which have been hacked?

Explain that this has happened to a number of organisations, for example the NHS was hacked in 2018 and Facebook had a data breach in 2014, among many others.

Q. Ask the group why do they think someone would be upset if they heard an organisation they used had a security issue, like a data breach?

A.   *Explain that if you use people's information then by law it is very important to keep it safe - and that customers have put their trust in you to do so.*

Slide 8:
To close the session if there is extra time you could ask teams to work through the Ethics Worksheets questions in their teams using the additional resources for support if they need them

Encourage the group to continue to work on their ideas in between sessions. And either ask a team member to look after the framework for the next session or collect them in.

3. Ryan Grenoble HUFFPOST 2019 [ONLINE]:
https://www.huffingtonpost.co.uk/entry/faceapp-privacy-issues_us_5d2f3ba7e4b02fd71dde0bc2?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS88&guce_referrer_sig=AQAAANyHAbWSiXXcR5TvPEPwouLCcud7PaLjgMgE66JnHn3MyAYlm84c448E3KjFbulx3mCe6EXow18VUnmYm4sNdbAhPGt4WwcuqITEtaD5cgKuhSXGX5VqEC-qtTlePozPM-ZbxDI6YMOmKU7yGVJdGAWxvyajgX4UFynMgAxbeNT0

Slide 9:
To close the session if there is extra time you could ask teams to come together and start to see if they can answer some of the questions in the AI Ethics workbook.

Encourage the group to continue to work on their ideas and use the Worksheet in between sessions. And either ask a team member to look after their handout for the next session or collect them in.

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.