How to use the lesson plans:

Each session (except the introductory presentation), has:
- A facilitator plan for you to follow,
- A powerpoint presentation to show the group,
- A list of materials needed for the session.

Some activities recommend handing out materials during the session, so it is advised to spend roughly 5-10 minutes prior to prepare. All materials can be downloaded for free on the prize website: https://longitudeexplorer.challenges.org/

While the sessions are outlined below in order, this is an example schedule. You can pick and choose lesson plans/activities to create your own schedule to meet the needs of your group and your own timeframes. We estimate that the sessions last 30-40 minutes each if delivered as they are, but you can adapt the time spent on activities to make them shorter.

Example lesson plan schedule:
Week 1 - Discovering a problem
Week 2 - Defining the problem
Week 3 - Idea generation
Week 4 - Turning an idea into a reality
Week 5 - Part 1: Security & ethics & Part 2: Application writing time.

Lesson plan 3: Generating ideas

Curriculum links:
● Undertake a creative project which will involve electing, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals.
● Demonstrate creativity and initiative when developing ideas.

Learning objectives:
● Working as a group, and as an individual, to generate ideas to potentially solve social and/or environmental challenges using technology.

Time:
● 30-40 mins

Materials needed:
● Post-it notes/paper or word document/notes
● Pen/pencil
● Technology information sheet - available online via website: https://longitudeexplorer.challenges.org/

Slide 1:
(title slide)

Slide 2:
To begin the session explain that they will do a quick recap of what they discussed last time and that they will need their problem statements for this session.

Explain last time we explored ways of narrowing down on the problems you might want to solve by writing some problem statements. Can anyone remember what a problem statement should include?
Answer: The current situation (the problem) and the desired future (the problem is solved).

Explain that this session is going to be a high energy idea generation session and so to start they will do a quick ice breaker. Ask the group to figure out who should go where in terms of age going from oldest to youngest in the group. Explain they should stay seated but when you say "GO" each member of the group should raise their hand in order of oldest to youngest.

Slide 3:

Explain that they are now going to start to come up with ideas but there are some guiding principles to keep in mind which are on the slide:

- Avoid criticism - at this stage we don't want to be critical of any ideas, so only add encouraging comments or feedback.
- The more the better - this session is about generating lots of ideas rather than fully thought through ones so don't be afraid to say it
- Be inspired by others - build off each others ideas throughout the session, this is a team exercise
- The sky's the limit - at this stage remember to think BIG

Slide 4:

As a reminder here is the challenge again: *"How can you use technology to create an app, product or service that will make the world a better place, enabling people to Live Better, Live Longer, Live Greener and Live Together?"*

As the focus of this session is coming up with ideas to solve the problems you've identified it is also important to start to think about how technology can be used to do this.

To help you start to think about the different types of technology that could be used here is an information sheet which outlines some of the key functions and types of technology at the moment.

Slide 5:

Explain that the first part of coming up with ideas will be done individually. Choose a problem statement that you've been working on to begin with, and using a pen and post notes (or digital alternative) write down as many ideas about how you could use technology to solve it. Everyone will have 5 minutes to do this.

At the end of the 5 minutes ask everyone to stick their ideas on the wall/board.

Ask someone from the group/s to read through the different ideas everyone has come up with and ask the others for feedback on them. Encourage the group/s to build on each other's ideas by asking questions and group similar ones together on the wall to help to do this.

Slide 6:
Explain to the group that for the challenge, teams must be between 2-5 people so at this point it's important to them to start to think about which problems and ideas they might want to work on for an application. This will most likely already have started to happen but encourage them to start thinking about the groups they've been working in as a potential team.

Explain that it is okay if two teams have similar ideas at this stage as it's likely as they develop it further they will start to differ or encourage them to work together.

Explain that in the next session they will start to think about the steps needed to bring their ideas to life - the key steps in product design! To do this they will need to have chosen at least one idea they want to work on further and thought about their team.

Remind the group that they have access to lots of free resources on https://longitudeexplorer.challenges.org/ including helpful case studies of tech for good and more!

Note to the facilitator: For social distancing reasons if necessary keep groups to 5 people only. If the session is being conducted online an easy to use free platform like google jamboard can also be used.

Depending on the time available and energy of the group this exercise can be repeated but with participants starting their individual ideation with a different problem statement. Alternatively a second idea generation session can be held using the same exercises.

References
https://ideadrop.co/top-five-favourite-idea-generation-techniques/
https://www.sessionlab.com/library/idea_generation
https://www.cleverism.com/18-best-idea-generation-techniques/
https://hbr.org/2018/03/better-brainstorming
https://blog.hubspot.com/marketing/creative-exercises-better-than-brainstorming