SESSION TITLE

Sustainability and Future Cities

ACTIVITY IN A SENTENCE:

An exploration into sustainable living and current and potential future challenges our world faces, how we can come together to tackle these challenges as local communities and a global society.

DISCIPLINES INVOLVED IN ACTIVITIES:

Climate Change, Sustainability, Citizenship, Technology, Science, Equity

RECOMMENDED AGES:

14+

LEARNING ENVIRONMENT (CONTEXT SETTING):

Classroom, informal learning situation

LEARNING OUTCOMES:

Learners will:

- Explore the current and future global challenges our world faces.
- Gain an understanding of the 3 pillars of sustainability.
- Creatively design for a future society that tackles some of the challenges our world faces.

Sustainability is a theme that intersects with almost every UN Sustainable Development Goal. In the face of a climate crisis, sustainable living is a crucial goal for societies around the globe. This activity supports learners to think critically about what it means, and what we can do, to live sustainably.

RECOMMENDED EXPERTISE:

Facilitation experience is recommended.

SDG LINKS:

- **Goal 1:** End poverty in all its forms everywhere
- **Goal 17:** Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

TIME IT TAKES TO COMPLETE:

45 – 60 mins

MATERIALS / RESOURCES NEEDED:

- Presentation slides: *presenttion*

Options for Design Section (Part 3)

- Option 1: Large paper (A2) / Pens, pencils or markers to draw or colour
- Option 2: Large paper (A2), magazines and glue for collage
- Option 3: A computer with internet connection for each group

CONTENT FOR LEARNERS:

- Presentation – *Activity Handbook: Sustainability and Future Cities*

Note: *Copy the presentation into your own folder before editing.*

Activity

Introduction:

Part 1: The Challenges We Face

1.1 Challenges we see in media

Note: This is the hook for the lesson so give plenty of time for learners to talk and become invested in each other's thoughts.

- Ask the group the question presented on the slide "What is your current favourite movie/book/tv show or piece of media?" Allow each member of the group time to say their answer.
- Ask the group if they see any pattern in the answers provided, do they have anything in common. In most of the shows you will see that the main character(s) have faced some type of challenges and throughout the show they try to make it right.
- Discuss what happens in one of their shows, or choose your own favourite show to speak about. If this is uncomfortable for you an example is provided below.

In show writing, the protagonist(s) usually gets agency from some sort of problem, issue or tragedy. The world of the protagonists(s) has fallen into chaos and has been disrupted from the normal balance of things. We live in a world that is in constant need of re-balancing. We need to make smart decisions to keep things from falling into chaos as we move forward. This can be referred to as sustainability.

Most of a protagonist's journey is them searching for a sustainable, less chaotic life. It also shows that love for drama is founded upon an innate curiosity for overcoming challenges. We will investigate some of the challenges in today's class.

Example Provided — Attack On Titan

- The protagonists within this story live within three large ringed sets of walls the smallest of which is 3 feet high. The poorest folk live within the first wall (Maria), the upper class live within the second wall (Rose) and the highest most noble class live within the 3rd (Sinah).

- These walls are constructed to protect from the dangers beyond the wall known as titans. These are giant sized humanoid like creatures whose only goal is to eat people. The protagonists have no choice but to live inside the walls to protect themselves from the titans.
- With a growing population and crumbling walls, tragedy could strike at any minute. This is not a sustainable way to live, so they must find a more sustainable way.

1.2 Challenges of the future

Through open discussion or a whiteboard tool, ask learners to come up with the biggest challenges we face for our future.

- Allow them to examine the answers and see if there are any overlaps or patterns in them? Is there a way that we could group them?
- Optional activity: Pick one of the challenges given (it might be the most frequent) and list the things (sub-topics, sub-challenges) that contribute to this?
    - E.g. Challenge given: Climate Change. Subtopics: Land Use, Education, Paris Agreement, Clean Energy, The Ocean, Fossil Fuels, Biodiversity Loss, Justice and Laws.

1.3 Global risks

There is a group, whose job is to look at what could be the biggest challenges of the future, and to plan strategically for them. They are called The World Economic Forum.

- This is what they think are the highest risks the world faces (show slide 5)
- 'By likelihood' means how likely these things are to happen, therefore it's most likely that the biggest challenge the world will face in the future is extreme weather (eg. extreme flooding and record high temperatures).
- By impact means how much devastation they could cause. Therefore although infectious disease might not be as likely as extreme weather, if it does happen it will be the most devastating and difficult to deal with.
- Discuss how similar or different they are to previously given answers. Now change the slide to the connection map.

As you may have already figured out, these issues/challenges don't just exist by themselves, they are all linked and influenced by one another in some way. You can explore all this on *WEF: Strategic Intelligence Maps*.

Part 2: Living for the future

2.1 The 3 Pillars of Sustainability

Ask the question "Does anybody know what sustainability means?" Allow the class 5 minutes to Think/Pair/Share. Gauge the learners previous knowledge of sustainability.

This will inform how fast or slow to move on the next couple of slides.

2.2 What does sustainability mean?

Discuss the following with your learners.

- When we think about sustainability, we need to think of these 3 things.
  - **Environmental Preservation:** Keeping our environment safe and strong
  - **Social Equity:** Keeping our society fair for all
  - **Economic Viability:** Keeping our economies functioning.
- In 1983 sustainability was defined in the Rutland Report "Sustainable development that meets the needs of the present without compromising the ability of future generations to meet their own needs" – Rutland Report 1983
- A simple way of thinking about this is, do what you need to do without harming anyone else.

2.3 Living Sustainably

Here are some videos to watch. They show different approaches to being sustainable.

- *Living Waste Free*
- *The Great Pacific Garbage Patch*
- *Lobster Plastic*

Once you watch two or three of the videos you can ask the following questions to prompt a class discussion.

- Do you think any of these methods are sustainable? Why/Why not?
- Is there anything that they can do to improve?
- Do you think this is available for everyone?
- What else can we do to live sustainably?

Part 3: Design a Sustainable City for the Future

"The year is 2321, the earth is a very different place. You and your team must design a sustainable city where future generations can live peacefully. Now you are in charge! You all get to make the decisions, and we want you to design a city for the future"

- Use pens and paper, crafts, or presentations with pictures or lego or arkit.
- Your design must balance the 3 pillars of sustainability. Therefore think of the elements that keep your city environmentally friendly (its nature is protected), social (there are things for people to do and enjoy), and economical (brings in money).
- Be creative, think outside the box, don't be afraid to get wild and wacky with your ideas.
  - The class will be split into 5 groups.
  - Depending on the number of learners, you can increase or decrease the group number.
  - Each group will be provided with a scenario/brief below that will inform their build.
  - It is each group's job to read their brief and design their city. They must decide where the city is located, and create amenities, work, travel, resources etc.

— They must have a city name, flag and a motto. Think about what the goals are for your society?

— Optional: After the build, assign each group a pillar (environment, social, economic), they can grade the other groups out of 5.

Sustainable City: Scenarios

1. Environmental Breakdown — Trash Earth

In this reality, the world has done very little to combat the waste crisis which we once faced. The world over produced waste for hundreds of years and now there is trash everywhere. Our major waterways have been contaminated, there are numerous giant landfills around the planet. The earth has gotten warmer and a blue sky is rare due to the pollutants and we have seen a dramatic loss in biodiversity.

How do we live on a planet so contaminated with trash and lacking biodiversity? Can we somehow use this to our advantage or is there a way to start building again? Think about the world you want to see in the future. How will you provide people with housing, energy, resources and amenities?

2. Geopolitical Collapse

In this reality the world has just finished a devastating world war, which resulted in a nuclear fallout. Billions of people still survived, however the earth itself is tarnished. The pollution and radiation is too dangerous for society to live on the surface of the earth anymore.

The only safe havens are underground, the deep open ocean or somewhere off earth.

With no governments in power the people are divided, you must lead them to their new home. How will you bring your societies together and provide them with new resources, entertainment, jobs and housing.

3. Technological Uprising

In this future Artificial Intelligence has grown dramatically. Nobody expected it to have the power it has today. Many people are uncomfortable with its control and do not want to live close to any major cities. To build such a powerful A.I was environmentally and socially damaging to many areas.

Technology has advanced so quickly that cities are all powered off the one computer. The lights, the transport, the operating systems, the shops, the law, the schools, living quarters etc. are all automated near the big cities.

There is a citizen ranking system in place to "assist" people in being the best citizens they can, this is monitored by the A.I – Big Bird.

Technology has an infinite potential, but people want to move away from the big cities and take control back themselves. With your team, build a new city, use as much or as little technology as you wish, the people will be sceptical.

Credits: This activity session was developed by Trinity College Dublin, OSHub Ireland.