Welcome to Minecraft City Challenges. The purpose of these resources is to provide an immersive and engaging design experience for your students that links directly to the requirements of the Design and Technologies learning area, as well as providing everything you need to facilitate a student-centred approach.

Through these resources, your students can engage - individually or collaboratively - in tackling some of the biggest issues of our time: food and energy security, sustainability and health & wellbeing. These all link to the current United Nations: Sustainable Development Goals and also introduce the concept of *Solarpunk*, which can help to facilitate their approaches to designing and building preferred futures for the city of Melbourne.

Each of the following stages, strategies and prompts can be applied to all of the Minecraft City Challenges and also to other design projects that your students undertake in Design and Technologies. The following advice follows the stages in the digital portfolios. However, it is important to remember that each stage of the design process can be undertaken at any time, or at the same time. The act of designing can be messy and should be iterative, not linear. So, encourage your student to revisit different stages and to complete several cycles of the whole process to get the most innovative and creative ideas for their Melbourne Minecraft City Challenge.

Teachers can follow these steps to set up Minecraft: Melbourne City Challenges

1. **Access, download/share student Digital Portfolios and Teacher Guide**
2. **Facilitate student's design process through each stage using guidance for each stage below.**
3. **Download <u>Minecraft: Education Edition</u> on student devices**
4. **Download <u>Mini Melbourne</u>**
5. **Open Minecraft: Education Edition and login using your school email address**
6. **Import and open the Mini Melbourne world, start building your final design!**

Design Brief
• Read the design brief with the class and encourage them to note down any key information in the pace provided.
• The design brief will outline the problem, not indicate specific solutions. Students will discover constraints and opportunities as they begin to investigate the issues themselves.
• The embedded **help video** will assist students in understanding time management, training requirements and planning for failure. (This is a generic help video for all design projects)

Design Process
• Although presented in the document as linear, the design process is best when cyclical and iterative. The more time students apply themselves to each stage, the more creative and innovative their solutions will be.
• The embedded **help video** will assist students in understanding the overall design process before beginning. This should help to delay them from jumping to quick and easy solutions and encourage then to understand the problem and generate a range of possibilities that they may implement in their Minecraft build. (This is a generic help video for all design projects)

Investigate

- Students can use the links provided to begin their research into the problems and potential solutions. The UN website has helpful and accessible infographics for each SDG.
- Encourage students to find more sources of information based on what they learn from initial research.
- Students should follow the issues that interest them the most so hopefully there are a range issues understood by the whole class that they can share with each other.
- Students can use supplied keywords to find different examples of each issue.
- Students should attempt to find images that reflect different aspects and approaches and paste them into the space provided.
- The embedded **help video** will assist students in understanding areas that are useful to look at when researching any design problem. (This is a generic help video for all design projects)

Investigate: Solarpunk

- *Solarpunk* is a very visual genre and movement that can help students to unpack ideas for their preferred futures. The trailer for the movie 2040 is an inspirational way to look at the global problems and solutions that we can implement together.
- Students should look up *Solarpunk* images and identify different elements that may be useful for the challenges that they are focusing on.
- Student should annotate each image with short notes and keywords that indicate what they have learned or like in each image.

Generate

- Students should be encouraged to use their research images and new knowledge of the problems to generate lots of sketches of possible solutions.
- There are prompts on each page to help guide their thinking.
- Students should add annotations to each sketch to indicate function, features, materials and components, etc.
- The embedded **help video** will assist students in understanding the purpose and value of concept sketching and generating lots of ideas before selecting and refining their best concepts. (This is a generic help video for all design projects)

Produce

- Students should consider their best concept and where it might be best placed in the city.
- They should be encouraged to considered drastically changing the existing structures and layouts.
- The embedded **help video** will assist students with what to consider when producing a final design. (This is a generic help video for all design projects)

Evaluate

- Students should evaluate and give each other feedback throughout the design process.
- There are final evaluation prompts in each digital portfolio.
- Students are asked to consider what worked and what some of the potential negatives should be of their solutions, which is always important to consider before real world implementation.
- The embedded **help video** will help your students to understand the value and some strategies for self and peer evaluation. (This is a generic help video for all design projects)