Use this workbook to help you track your thinking through the competition. You should submit this workbook as part of your entry to demonstrate your efforts throughout. This competition is about the iterative process of design thinking so this workbook is about ‘working notes’ rather than recording your final decisions.

### Pre-Competition Reflection:

Companies use a SWOT analysis as part of their strategic planning as it helps them think about long-term planning. You can use this tool for personal development too, as it is a good way to reflect on the present to inform decisions for the future.

The tool gets you to reflect on:

· **S**trengths

· **W**eaknesses

· **O**pportunities

· **T**hreats

This competition is about developing the skills to be a leader in the circular economy:

I will be a leader in the circular economy because:

“Through dedication, perseverance, and continual improvement, I am committed to driving innovation, promoting sustainability, and creating positive change”.

| What are your current strengths in relation to the 6 characteristics? | What are your current weaknesses in relation to the 6 characteristics? |
| --- | --- |
| What opportunities will this project provide for you to develop the 6 characteristics? | What are the threats to you developing these characteristics through the competition? (what will prove challenging for you?) |

Based on the above, write a short reflection (3-4 lines) of where you are at the start of this project. This can be used at the end to demonstrate how you have developed through this competition.

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## 1. The Circular Economy

Your first task is to understand the circular economy. Use the competition website to help you. In the box below, try and create an annotated diagram which helps you outline the key concepts of the circular economy. The purpose of this diagram is to provide a reference point you can use to remind you of the key concepts so you don’t have to re-read Part 1 throughout the competition.

Annotated Diagram of the Circular Economy:

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There are links to additional resources. Look at at least one additional resource and summarise your learning here:

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## 2. Choosing a product

Choose a product that is being used in your school which you will work to improve.In addition to writing down what your product is, start making some notes that will help you think about its use. (Frequency of use; how robust is the item; current thoughts on item’s sustainability; ease of repair / recycling; cost; how many needed around the school etc)

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### 3. Deepening Understanding of Ecological Impact

There are 6 questions to work through on the webpage for assessing the ecological impact

of your product. Select one of these questions and go deeper into your understanding of the ecological impacts.

Things to try and understand:

· What are the specific impacts your product has on the environment? (Go beyond, ‘affects biodiversity’ with specific impacts on species and more depth on the extent this is an issue – are these species already endangered, for example?)

· What is the timescale for impact? (think about whether this product has short- or long-term impacts; do different aspects of the product have different timescales of impact?

· Are different places affected by different levels of impact? For example, are there local, regional or global impacts? Are the impacts most felt in the source region for materials, where they are processed or where finally used, or perhaps in the distribution?

· How reparable / irreparable is this ecological impact?

**Write a few paragraphs to summarise your understanding of the ecological impact of the product**

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### 4. Redesign

Write down three statements that demonstrate how Upcycled Glass addresses ecological problems:

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*

Use the spaces to brainstorm your ideas for how you could redesign your selected product so you can reduce its ecological impact.

Extending Life:

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Multiple Uses:

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Sharing:

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Repair:

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### 5. Disposal

There are five questions that help you think about your product’s end of life, and how you can design to reduce final recycling and waste. Use the space to record your responses to the questions:

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### 6. Additional Benefits

In addition to the prompts provided on the webpage, try and understand how your product can stimulate a multiplier effect. The term ‘multiplier effect’ refers to the idea that one action can have additional, indirect positive impacts. An example might be that when a new factory is located in a town, it not only provides income to those employed in the factory, but their income provides disposable income which they spend in local shops creating further employment opportunities in the town.

The multiplier effect can occur in the economy, society and environment. As you think about the benefits of your product and the impact it will have, you want to think beyond the direct, immediate impacts, and also consider the multiplier effect it will have.

Economic Multiplier Effect:

· What further opportunities for innovation are there? Will your changes lead to other products being able to change too?

· Will the product’s use create additional benefits, for example if the product is easier to share, reuse, repair, remanufacture, what economic benefits will this provide?

Social Multiplier Effect:

· Sharing of a product can have a social multiplier effect, for example in communities where sharing has been encouraged and people are actively sharing and borrowing from each other, further community cohesion has been achieved and crime and antisocial behaviour has decreased.

· Product design in the circular economy also considers the additional benefits to the user. Will your changes lead to health or education benefits for the user? If so, these might create a multiplier effect by increasing the impact on that user’s life.

Environmental Multiplier Effect:

· The circular economy is not just about minimising the ecological impact of economic activity, but also trying to have a net-positive impact. For example, pineapple skins are being used as the core ingredient of handwash which reduces the waste from the pineapple industry and creates a natural soap product. However, the enzymes in the skins also actively breakdown blockages in drainage systems, reducing the need for man-made chemicals and reducing the impact of polluted water flooding which in-turn protects aquatic biodiversity.

Record your thoughts on the multiplier effect created by your product:

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### 7. Communication

Before you create your final communication of your product, use the space below to plan out your content:

Define the problem you set out to solve:

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How can you appeal to the audience’s emotions and make this problem personal?

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Summarise your solution:

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**You can communicate your solution any way you like, but do submit this workbook too as evidence of your work throughout the competition.**

### Reflection on Content and Character Development

To help you reflect on how you have developed through this competition so you can add this component to your final communication of your work, go through the following prompts. There is no need to overthink, put down the initial thoughts in your mind and try to write for 2 minutes on each prompt.

1. Summarise your understanding of the circular economy.

2. Which area of the competition did you find the most challenging? Why do you think this was the most challenging for you?

3. Which area of the competition was most interesting for you, and what did you learn?

4. Look back at the SWOT you did at the start.

a. Did your strengths help you with the competition?

b. Did you develop any of your weaknesses?

c. Do you feel you made the most of the opportunities you identified?

d. How did you overcome any of the threats you identified?

5. For each of the 6 characteristics, write down how you have made progress in these characteristics, and what you think you could work on next (this will help set you up for the Summer Character Development Program)

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**“Through dedication, perseverance, and continual improvement, I am committed to driving innovation, promoting sustainability, and creating positive change”.**

| **Characteristic** | **Progress** | **Next Steps** |
| --- | --- | --- |
| Dedication |   |   |
| Perseverance |   |   |
| Continual Improvement |   |   |
| Innovation |   |   |
| Promoting Sustainability |   |   |
| Creating Positive Change |   |   |