

Future of Food - From Food Waste to Food Gain



Research and Development Micro-Module 1: From Food Waste to Food Gain

Lesson 1: What is Circular Design Thinking?

Subjects: Art and Design, Agricultural Science, CPSE, Home Economics, SPHE

Lesson Title and Summary: What is Circular Design Thinking

Circular Design Thinking is an approach that helps us to stop taking, using, and wasting natural resources and materials. Using Circular Design Thinking methods, we can discover and create new ways to reuse, recycle, and regenerate important resources such as food.

This lesson will introduce learners to the key principles of Circular Design Thinking so that they can understand how to use the process in problem solving scenarios.

Vocabulary: Circular, Circularity, Design Thinking, Economy, Framework, Principle, Prototype, Research, Scenario, Sustainability, User

In this lesson, the learner will:

- Understand key circular concepts
- Be introduced to Circular Design Thinking
- Explore creative and strategic problem solving methods
- Work with peers to complete activities and practice collaboration
- Begin to adopt a circular mindset

Materials

- Worksheet: Understanding Circularity
- Worksheet: Introduction to Circular Design Thinking
- Internet access
- Markers, paper



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ACTIVITY INSTRUCTIONS

Activity 1 Understanding 'Circularity' (15 mins)

1. As a class, watch Video: Explaining the Circular Economy and How Society Can Re-Think Progress (3:48 mins).
2. Break into groups of 2 and complete the assigned worksheet: Understanding Circularity (10mins).

Activity 2 Introduction to Circular Design Thinking (35 mins)

1. As a class, review the Circular Design Thinking visualisation and read the definitions for each phase (Part 1). Discuss as a class (15mins). Questions and prompts to ask the learners might include:
 - a. Are there new terms or words that you haven't heard before?
 - b. What do you think a 'framework' is? Why would we use one?
 - c. What do you think design is? Do you have an example?
2. Break into groups of 2 and complete the assigned worksheet: Introduction to Circular Design (20mins)
3. At the last step on the worksheet, ask the groups to put their sheets up on the class wall or board and facilitate a short class discussion. Everyone should have a chance to ask questions or give feedback about the activity.
4. Learners should photograph their worksheets and upload the images to their personal portfolio on One Drive or the shared learning environment the school uses.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks.
- Two things they found most interesting and would like to explore more.
- One – their opinion they have about the tasks.

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EXTENSION / REDUCTION ACTIVITIES:

Reduction: For a shorter lesson, remove step 2 from activity 1. Alternatively, you could remove activity 1 entirely by providing a link to the video in advance so that the learners can watch it in their own time before class.

Extension: For a longer lesson, allow more time for the learners to complete activity 2. Encourage learners to write, draw and discuss as much as possible.

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

Video:

Explaining the Circular Economy and How Society Can Re-Think Progress [3:48min]
<https://youtu.be/zCRKvDyyHmI>

SDG Goals:

SDG goal 12: Ensure sustainable consumption and production patterns
<https://sdgs.un.org/goals/goal12>

SDG goal 13: Take urgent action to combat climate change and its impact
<https://sdgs.un.org/goals/goal13>

SDG goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
<https://sdgs.un.org/goals/goal2>

Circuléire: What is the Circular Economy?
<https://circuleire.ie/the-circular-economy/#what-is-the-ce>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

- Do you know any designers? Can you ask them about their work? Do they practice circular design thinking?
- Can you talk to someone involved in environmental studies or climate policy? How are they implementing 'circular' principles? Do they support a circular economy?



Ellen McArthur Foundation, 2024

In one sentence, explain what “circular” means. Work together to write your own group definition.

Why do you think circularity is important?

List 3 problems where you think a circular approach could make things better?

1. _____
2. _____
3. _____

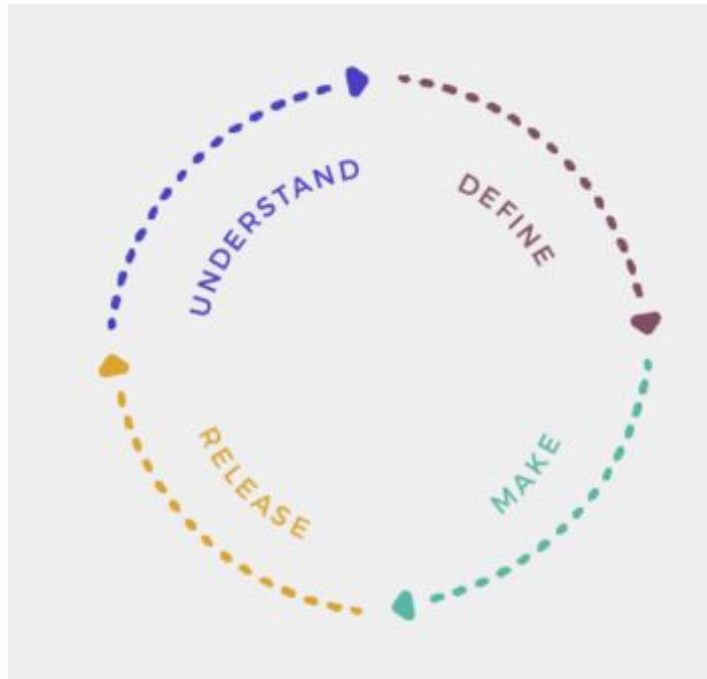


IMAGE SOURCE: Circular Design Guide by Ellen MacArthur Foundation and IDEO

1) Understand:

Learn about the problem or scenario through research. Understand who is involved, how nature is impacted, and what the key challenges are.

2) Define:

Create a point of view that is based on the insights gathered in the understand phase. What are the users' needs or environmental challenges?

3) Make:

Brainstorm lots of concepts in response to the needs and challenges identified. What are your core ideas and how can you show these? Consider drawing or making a simple paper prototype to demonstrate your ideas.

4) Release:

Share your ideas or prototype and get feedback so you can continue to iterate and improve the next version. What worked? What didn't work?

You will use this Circular Design Thinking framework as a guide throughout your project module. Each lesson will give you an opportunity to put each phase into action so you can understand, define, make, and release ideas to help combat food waste issues.

Before the next lesson, let's quickly explore some of the things you might already be thinking about. There is no right answer so don't worry if you don't know too much at this stage!

MM1:L1 WS INTRODUCTION TO CIRCULAR DESIGN THINKING

2 ZERO HUNGER



Understand: List 3 problems that you believe food waste creates:

1. _____
2. _____
3. _____

Define: Working together, choose 1 problem from your list and explain why we need to solve it:

Make: Can you work together to come up with an idea that might solve this problem?
Try sketching out the idea but remember to keep it simple!

Release: Put your sheets up on the class wall or board for everyone to see. Your teacher will facilitate a class discussion so everyone can have a chance to ask questions or give feedback about the activity.

NOTE: Practicing good time management will be very important during this activity.



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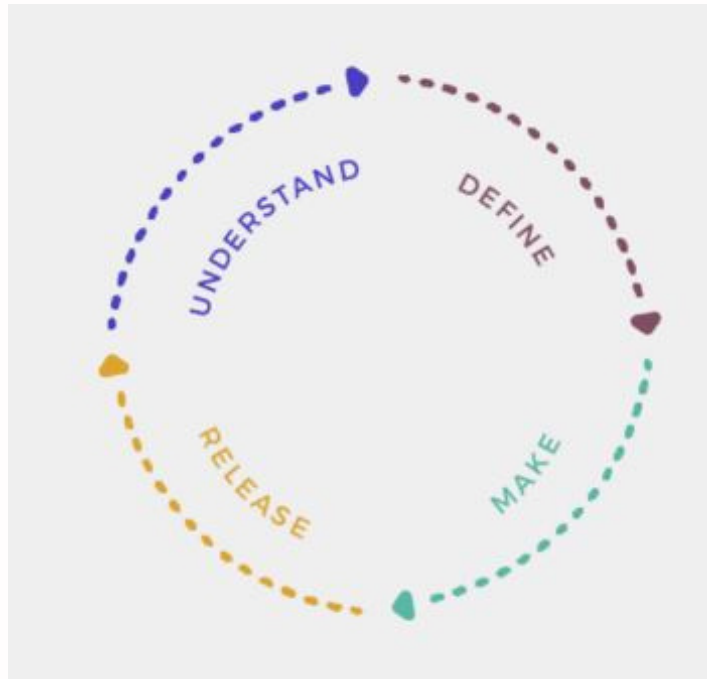


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