



# Preventing Plastic Pollution

Clean Up Australia 2020

LESSON PLAN



**Lesson:** Preventing Plastic Pollution  
Clean Up Australia Day 2020

**Duration:** 90 minutes (or 2 x 45  
minute lessons)

**Overview:** Students apply Design Thinking to investigate the issue of plastic pollution and identify a positive action that can be taken in their school or community. Students create an interactive digital resource to encourage uptake of their chosen action.

## Curriculum Connections

### Year 3/4

Science: Science knowledge helps people to understand the effect of their actions

Design and Technologies: Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques

Digital Technologies: Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input

### Year 5/6

Science: Scientific knowledge, is used to solve problems and inform personal and community decisions

Design and Technologies: Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques

Digital Technologies: Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input

## Outcomes

- Students begin to understand the impact that plastics have on the environment
- Students brainstorm positive actions that can be taken to combat this issue
- Students create a CoSpace to teach others about the issue and to encourage the chosen action

## Resources

- Google Expeditions Kit
- CoSpaces teacher and student accounts

## Preparation

- [Register](#) your school to get involved in School Clean Up Day on Friday 28 February!
- Download the chosen Google Expeditions onto your devices
- Set up your CoSpaces account and create a collaborative CoSpaces assignment for your students
- Check out our CoSpace example 'Clean Up Australia Day mini game': <https://cospac.es/RegX>

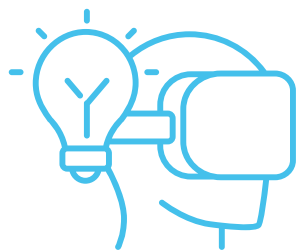
## Activity Sequence

### Empathise

- Use a Google Expeditions Kit to lead your students on a Virtual Reality Expedition focused on recycling and waste clean up.
- Students use the mobile devices from their VR headsets to investigate the Clean Up Australia [fact sheets](#) relating to plastic.
- Use [‘The 5 Whys’](#) to dig deeper into the issue. Two questions to ask are:
  - Why is plastic a problem?
  - Why do people litter?

### Define

As a class create a ‘User Need Insight’ statement to provide focus. Next use ‘How Might We’ questions to guide ideation. As a class, choose one ‘How Might We’ statement to focus on. Try to choose something that is relevant in your school or wider community.



### Ideate

- Students work in teams to brainstorm or mind map a range of ways they can address the chosen ‘How Might We’ statement.
- If splitting this activity across two single lessons, here is a good place for a break

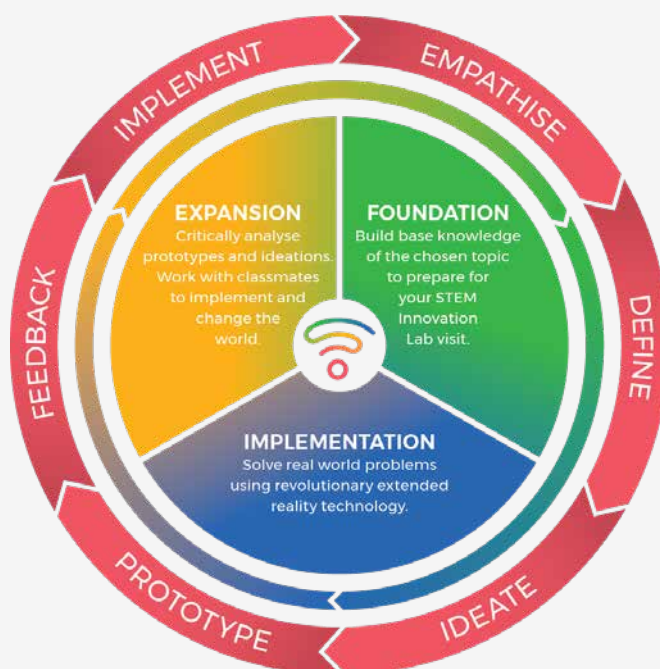
## Resources/Notes

Suggested Google Expeditions:

- Recycling
- What Happens to Your Trash and Recyclables?
- Global Environmental Issues

Examples:

- Students need to bring their lunch to school in a safe and hygienic way. How might we help them bring lunch safely using reusable materials?
- Students throw their rubbish on the ground because it takes too long to find a bin. How might we encourage them to dispose of litter properly? How might we make it easier to dispose of litter?



## Prototype

- Use the Google Expeditions Kit to visit the CoSpaces Gallery and view some related work produced by other students.
- If your students haven't used CoSpaces before, provide a brief introduction showing them how to set up their environment, add and modify 3D models, and demonstrate basic use of CoBlocks, as appropriate.
- Students work in teams to develop their CoSpaces. Their CoSpaces should include at least two scenes, one demonstrating the problem and another demonstrating the solution.

## Feedback

- Students share their CoSpaces with each other (either using short presentations or 'expo' style) and use TAG technique to provide helpful feedback.
- If time allows, give students the opportunity to implement the feedback provided.

## Wrap up

Summarise with a brief discussion of the key concepts from the lesson and congratulate students on their hard work.

## Assessment / Reflection

### Formative

Assess student teamwork, brainstorm and mind map output and design planning.

### Summative

Assess student CoSpaces to ensure they clearly explain the chosen issue, demonstrate their identified positive action, and use appropriate technical skills in doing so.

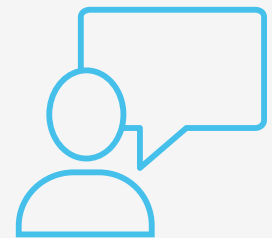
Suggested CoSpaces:

- [Why is plastic a problem?](#)
- [Microplastics](#)
- [World Environment Day](#)
- [Clean Up Australia Day Mini Game](#)

Great resources for tutorials and other assistance are the [CoSpaces forum](#) and [YouTube channel](#).

## TAG Feedback

- Tell them something you like
- Ask a question
- Give a suggestion



## Additional Resources

The **Clean Up Australia Day** website provides lots of lesson plans at both [primary](#) and [secondary](#) level, [fact sheets](#) and [Live Greener](#) information guides.

The **Interaction Design Foundation** is a great resource to learn more about [Design Thinking](#) and what techniques can be used at each stage of the cycle.