



TOYS FOR TURTLES

EAST ARNHEM LAND

LESSON PLAN



THE UNIVERSITY
of ADELAIDE



Australian Government
Parks Australia



Australian
Marine Parks

PLASTIC POLLUTION SERIES: EAST ARNHEM LAND LESSON PLAN

TARGET AUDIENCE:

Students in the East Arnhem Land area, aimed at high school level, though the materials can be adapted for middle and primary.

OBJECTIVE:

To educate students about plastic pollution, its impacts on marine ecosystems, and inspire actionable solutions for reducing plastic waste.

These resources are designed for flexible use in your class! Feel free to adapt them as needed. You can combine lessons or skip any that don't fit into your curriculum.

The lessons are part of a 6-part series. If you only have time for one lesson, the 'Plastic Pollution Background and Overview' is the best option. This lesson provides a basic introduction to key concepts surrounding marine plastic pollution.

RECYCLING MACHINES:

For those based in or near Nhulunbuy, the machines are located at Nhulunbuy High School. These machines offer a fantastic practical component, demonstrating plastic recycling in action. We may be able to assist in getting the machines to your location. Please reach out to us via the website or email us (nina.wootton@adelaide.edu.au or rhiannon.vaneck@adelaide.edu.au) so we can help facilitate this process.

LESSON ONE

PLASTIC POLLUTION BACKGROUND AND OVERVIEW

LEARNING GOALS

- 🦋 Define plastic pollution and understand its sources.
- 🦋 Gain a historical perspective on the development and use of plastics.
- 🦋 Understand how plastics impact the marine environment.

ACTIVITIES

- 🦋 Interactive presentation
- 🦋 Group discussions
- 🦋 Begin to explore the plastic recycling machines, introduce what they are and how they work

LESSON TWO

TYPES OF PLASTIC AND MICROPLASTICS

LEARNING GOALS

- 🦋 Identify different types of plastic and learn to recognise them.
- 🦋 Understand the concept of microplastics and how they form.

ACTIVITIES

- 🦋 Interactive presentation
- 🦋 Group discussions
- 🦋 Sort plastics that have been collected into type and colour
- 🦋 Begin using the recycling machines

LESSON THREE

SOURCES OF PLASTIC AND ITS LIFE CYCLE

LEARNING GOALS

- 🦋 Understand the various uses and sources of plastic.
- 🦋 Learn how plastic enters and moves through the marine environment.
- 🦋 Explore the life cycle of plastic and its environmental implications.

ACTIVITIES

- 🦋 Interactive presentation
- 🦋 Group discussions
- 🦋 Excursion to a local beach for a beach clean, or continue to sort plastics and use the recycling machines

LESSON FOUR

EFFECTS OF PLASTIC

LEARNING GOALS

- 🦋 Recognise the environmental and ecological impacts of plastic pollution.
- 🦋 Understand how microplastics affect ecosystems and organisms.

ACTIVITIES

- 🦋 Interactive presentation
- 🦋 Group discussion
- 🦋 Art practical: draw/paint "Keep Our Oceans Clean" or create a plastic collage

LESSON FIVE

PLASTIC RECYCLING AND ALTERNATIVES

LEARNING GOALS

- Explore alternatives to plastic and their feasibility.
- Understand the concept of a circular economy.
- Learn about recycling processes, their benefits, and limitations.

ACTIVITIES

- Interactive presentation
- Group discussion
- Design a new recycling facility
- Continue to use the recycling machines

LESSON SIX

SCIENCE AND ACTION

LEARNING GOALS

- Understand the role of science in addressing plastic pollution.
- Learn about governmental policies and actions to reduce plastic use.
- Explore ways for youth to take meaningful action.

ACTIVITIES

- Interactive presentation
- Group discussion
- Fieldtrip to photo-point monitoring site
- Continue to use the recycling machines

HOW DO THESE TEACHING RESOURCES ALIGN WITH THE AUSTRALIAN CURRICULUM?

These modules are designed to engage students with hands-on activities, critical thinking exercises, and real-world case studies, all while aligning with key ACARA curriculum outcomes. We recommend our resources for students in Years 4 to 10, but they can be adapted for younger or older age groups.

Our modules align with both Science and Humanities and Social Sciences (HASS) subjects, catering to various year level curriculums. Additionally, they address the Sustainability cross-curriculum priority, ensuring they are highly relevant to your teaching objectives.

Below we have included an example of some of the learning objectives and specific units where the teaching resources would best fit. If you would like any specific information as where you think the resources will fit best into your teaching, please contact us and we will happily help.

Science

Year 4:

- Earth's surface changes over time as a result of natural processes and human activity (ACSSU075)

Year 5:

- Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083, ACSHE100)

Year 6:

- The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)
- Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083, ACSHE100)

Year 7:

- Interactions between organisms, including the effects of human activities can be represented by food chains and food webs (ACSSU112)
- Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSHE120, ACSHE135)

Year 8:

- Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSHE120, ACSHE135)

Humanities and Social Sciences (HASS): Geography

Year 7:

- Unit 1: Water in the world (ACHGK037, ACHGK039, ACHGK041, ACHGK042)

Year 10:

- Unit 1: Environmental change and management (ACHGK070, ACHGK071, ACHGK072, ACHGK073, ACHGK074, ACHGK075)

Cross-Curriculum Priorities

Sustainability:

- Encourage students to think critically about how they can reduce waste and live more sustainably. These modules provide practical solutions and real-world examples to inspire action in your school and community.