

Junior Primary Poster Kit Activities

What you need to know

1. To obtain your free set of posters email info@ausmepa.org.au
2. Go to the website www.ausmepa.org.au/poster to download information sheets to be used with the posters
3. The titles of the posters are:
 - a. Anemonefish
 - b. Cuttlefish
 - c. Dangers
 - d. Hermit crab
 - e. Fairy penguin
 - f. Seahorses and seadragons
 - g. Sharks and Rays
 - h. Turtle
4. These activity sheets cover the Australian Curriculum for Foundations Year to Year 4
5. In the future we hope to also provide some smartboard activities which will be available on the AUSMEPA website.

Year 4

Australian Curriculum	Content description
Science	Living things have life cycles (ACSSU072) Living things, including plants and animals, depend on each other and the environment to survive (ACSSU073) Earth's surface changes over time as a result of natural processes and human activity (ACSSU075) Science knowledge helps people to understand the effect of their actions (ACSHE062)
Geography	The importance of environments to animals and people, and different views on how they can be protected (ACHGK022) The natural resources provided by the environment , and different views on how they could be used sustainably (ACHGK024)
English	Create literary texts that explore students' own experiences and imagining (ACELT1607) Interpret ideas and information in spoken texts and listen for key points in order to carry out tasks and use information to share and extend ideas and information (ACELY1687) Plan, rehearse and deliver presentations incorporating learned content and taking into account the particular purposes and audiences (ACELY1689) Plan, draft and publish imaginative, informative and persuasive texts containing key information and supporting details for a widening range of audiences, demonstrating increasing control over text structures and language features (ACELY1694) Use a range of software including word processing programs to construct, edit and publish written text , and select, edit and place visual, print and audio elements (ACELY1697)

Teacher planning

If you are considering a beach excursion as part of a marine unit, much of the detailed preparation in the AUSMEPA rockpool section www.ausmepa.org.au/rockpools is very relevant. This section provides ideas for student directed research. Teachers can work with students to plan their investigations at the beach and collect field observations and data.

Teacher and classroom preparation:

- Download and skim through the poster factsheets before the lesson. Have the factsheets handy if you want to refer to them during the lesson.
- If you are going to use the worksheets, you will need to make copies.
- A touch table of material commonly washed onto the beach would be valuable.
- Equipment to show powerpoint presentations.
- Computers or tablet with access to the internet.

Prior learning – Where might the live and breed

- Go through the seven posters with animals (leave out the danger poster)

- As students where the animals live and breed. They have some prior knowledge but will deduce that those animals that don't leave the sea will breed in the sea.
- Explain to students they will find out more as they do their research.
- Address any misconceptions that students may hold.

Lesson 1 – Life is a cycle

- Copy the fact sheets for the animals. Decide if this will include the blue-ringed octopus and the blue bottle.
- The class will be divided into groups.
- Each group will need the poster, factsheet, activity sheet 'Life is a cycle' and access to the internet.
- Explain the activity sheet and how much time students have. The sharks and rays have the greatest variety of life cycles so give this poster to a group that can handle more complex concepts or just investigate large sharks as large sharks have live young. Only research the seahorse for the seahorse and seadragon poster.
- Once students have exhausted the factsheet, they can go onto the internet.
 - Give students a fixed amount of time to research on the web.
 - Students should record the search engine used.
 - Student should record the words they used for searching.
 - They need to take notes about what they found out.
- Students are to make a simple diagram showing how their animal starts life, grows up and reproduces.
- Each group presents the following findings to the class:
 - How their animal breeds and what happens to the young.
 - What the most useful words were to find information on the web.
 - What the most useful website was to find information.
 - If it is practical students could display their most useful website using a digital projector or smartboard.

Lesson 2 – Life in a rockpool

- Students will design and label their own rockpool
- They can use art paper and pencils, use a computer application or produce items on a computer and print them out and glue them to paper.
- The rockpool needs to have a balanced range of animals and plants. This will mean at least two plants and one animal that eats dead and decaying food such as a crab. For their research they can use the rockpool section of the AUSMEPA website www.ausmepa.org.au/rockpools. There are seven sections on animals and plants so they can choose one or two from each section so they have a minimum of 10 living things.
- If time is limited small groups could do one animal or plant and contribute it to a large mural.
- Students write one sentence describing how the animal fits into the small world of a rockpool.
- When the research is complete students discuss and make a list of the key points:
 - What are the main features of a rockpool?
 - How do some of the living things help other living things?
 - Who eats who?
 - What happens to things that die?

Lesson 3 – Yummy yummy in my tummy

- Provide students with the activity sheet 'Yummy yummy in my tummy'
- Students use the fact sheets to answer questions about how five marine animals protect themselves from being eaten and what they eat.
- As a class go over what the students have found out.

- Focus on the sea turtle. The turtle in the poster is a green turtle. Their main source of food is seagrass. Seagrass is called a producer because it produces food using energy from the sun. The turtle is called a consumer because it must eat to get its food.
 - Talk about plants eg seaweed, seagrass, trees being able to produce food, they don't need to eat.
 - Talk about all the other living things that must eat.
- Students write a short paragraph about sea life that includes the word consumer and producer in context. The paragraph can be factual or imaginary.
- Hermit crabs assist with recycling dead material in the sea. Bacteria start the decaying process. Discuss with students what happens when things die. Introduce the concept of decay, decomposition and decomposer.
- Students add an extra sentence to their paragraph using the word decomposer in context.

Lesson 4 – Our battered coast

- You will be introducing students to the concept of erosion.
- Erosion is a form of weathering by wind, waves and rain. We increase erosion when we destroy coastal vegetation.
- Take students through the powepoint 'Our battered Coast'
 - Read the text.
 - Examine each image provided. What does the image demonstrate about weather, erosion or conservation?
 - Discuss the difference between natural erosion and erosion caused by people.
- Take students into the school ground to find examples of erosion or where erosion might occur.
 - Look for places where people have walked and as a result the plants have died.
 - Look at steep slopes where unprotected soil can wash away.
 - Inspect a school car park. How has the car park been surfaced to prevent erosion?
 - Examine an open drain. How has the drain been constructed to prevent erosion? What would the drain be like if it were not constructed?
- Does your school have a sandpit?
 - Design experiments that show how water, wind and cars might move sand around. Compare this with an area that is not sandy.
 - Before doing the experiment ask students to predict how sand would compare with an area that is not sandy.
 - Ask students how they will record their findings eg notes describing what happened, measurement showing how much material was moved or using an ipad to video the difference.
 - Conduct the experiment and discuss the findings.

Lesson 5 – Sustainable food from the sea

- Download and present the powerpoint 'Food from the sea' (There is a second section on the powerpoint about feeding bird students will do later in this lesson)
 - Use the powerpoint to investigate the kinds of animals that are sold as seafood.
- Students use an internet search engine and type in 'Fish market' and their closest coastal city.
- Students look at the kind of information they want to tell you.
 - Students look for information about trading hours, what they sell and location.
 - Does the website provide any information about looking after the environment or about sustainable fishing?
 - Look up this link from the Sydney Fish Market
<http://www.sydneyfishmarket.com.au/OurCompany/Sustainability/tabid/183/Default.aspx> Give students about three minutes to attempt reading the first five paragraphs. How

much (if anything) can students understand? Is the information important? What would help in making the information more understandable?

- Play the video on the webpage <http://www.sustainableseafood.org.au> If you have an apple table or phone download the app. Or on the menu above click on 'listings'
 - Discuss what the three colours might mean. What does green stand for? What does red stand for? How do we use the colour orange with street lights?
 - In small groups students choose three or more items of seafood, at least one will need to be from each of the colour categories.
- Next students go to this link on the ABC website <http://www.abc.net.au/science/features/fish/table.htm>
 - Ask students to discuss how the information about the two websites is different?
 - Which is easier to understand?
 - Is the extra information important?
 - Do a class survey asking which website students would prefer to use.
- As a class list the criteria they agree on that about what makes a particular type of seafood sustainable? Examples of prompt questions:
 - Does sustainable fishing affect the numbers of fish?
 - Does sustainable fishing damage other animals in the sea?
 - Is sustainable fishing wasteful?
 - Does sustainable fish farming pollute the sea?
 - What might sustainable fish farming feed its fish?
- Should we feed the birds? At the end of the 'Food from the sea' powerpoint are some more slides about feeding birds.
 - Ask students if the fishers should feed the birds fish heads and fish guts.
 - Who thinks it is all right?
 - Who thinks it is a problem?
 - What extra information do they need to make a decision?
- While there are many good reasons not to feed gulls human food around outdoor restaurants and where people gather, feeding fish waste could have some good points as well as some bad points. It is more difficult to say that it's bad to feed the birds the waste from fish.

Lesson 6 – Protecting our marine environment

Stormwater pollution

- Students will look at stormwater pollution of the sea and then design signs to protect the sea.
- Students go to the webpage using the link <http://www.ausmepa.org.au/marine-stormwater-pollution/>
- Divide the class into five or ten groups. Each group will look at one part of the information on the website and report back to the class. The sections are:
 - What is the marine problem?
 - How does it happen?
 - Who's done it?
 - What can we do?
 - What governments are doing?
- Students need to have an overview of the pages and do a very short presentation to the class. This can be done most easily by students showing the pages they have looked at and describing the photo.

Stormwater drains in our school grounds

- Take students outside.
- Look for openings in the school's stormwater drains.
- Can they find litter, leaves or other things that can get washed into the drains?
- Use an ipad to take photos of the litter and the entrances into the stormwater system.

Creating a sign

- In small groups students view the powerpoint 'Protecting our marine environment.'
- Explain to students they will be interpreting a range of sign photographed around the Australia coast.
- They should look at each sign and answer questions such as:
 - What is the problem?
 - What needs to be done to solve the problem?
 - How has this been communicated using writing and images?
 - In their opinion is the sign easy to understand?
- Teachers may want students to do their final design using a computer and asking students to import photos. The photos in the AUSMEPA photo library are available for students to download and use in any way they wish. <http://www.ausmepa.org.au/photos.asp>
- Use the activity sheet 'Designing a sign.' Students use the sheet to help them organise their ideas to design their sign.
 - The problem - What is the problem your sign will look at?
 - The solution - What needs to be done to solve the problem?
 - Communication - What ideas need to be communicated?
 - The image - What images are needed to communicate the solution?
 - The text - What text is needed to communicate the solution?
- They then produce and hand written draft at the bottom of the activity sheet.
- Their final sign will use a media eg computer that has been agreed to.
- Students share their signs and ask other students to interpret them. Students respond to other student signs by explaining which aspects of the signs work well.

Lesson 7 – Favourite holiday places

Class survey

- The class will do a survey about three questions concerning holiday or day trip they would like to go on.
 - By doing a survey about what they would like to do there shouldn't be any discrimination for students who never have the opportunity to go away.
- Students will organise the data and try and solve the problems involved in presenting the data.
- **Question one** – Where would you like to go on holidays
 - To organise the data students will need to categorise it depending what holidays people want to go on eg overseas travel, overseas resort, Australia beach, Australia theme parks etc.
- **Question two** – What beach would students like to visit on a day trip (would need to drive or catch public transport)
 - The data can be organised into the kinds of beaches people like to go to eg close to the city, lots of sand, big waves, remote locations etc.
- **Question three** – What do students like to do while at the beach?

The perfect beach

- Students use a computer to describe their version of the perfect beach. They describe the features of the beach they would enjoy and any facilities that would add to their experience. The location can be of their choosing. They may prefer a different marine environment which they could choose or want their beach environment to have natural features such as rockpools or coral reefs. As part of their story, they are to choose up to four people who they think would also enjoy their perfect beach.

Lesson 8 – preparation for a beach excursion

- For year 4 the Rockpool website curriculum materials can be easily adapted to take your students on a rockpool excursion.

- Download the PDF on this webpage
<http://www.ausmepa.org.au/rockpools/default.asp?pageid=64&nav=64>
- Go down to page 14. You will find
 - 10. Finding out – field work planning
 - 11. Finding out – gathering data in the field
 - 12. Finding out – analysing data
 - 13. Drawing conclusions, finding solutions.