

Rationale:

Students will explore how living things from the Eromanga Sea depended on each other and their environment for survival. By discovering how palaeontologists collect evidence from fossils, students will investigate the roles of different living things (e.g. producers and consumers) within the Eromanga Sea. They will identify and describe predator-prey relationships, which animals competed for the same food resources and suggest what would happen to feeding relationships if specific living things disappeared from their environments. Information will be communicated by answering questions and drawing diagrams of predator-prey relationships from the Eromanga Sea.

Students will be engaged by activities suited for various learning preferences, with new information processed with the use of visual stimuli (observing fossils and displays) and auditory stimuli (discussing tasks within groups). Students will enjoy sketching ancient animals in predator-prey relationships from the Eromanga Sea.

Learning Outcomes:

Cognitive:

Students will:-

1. Realise that different living things had distinct roles in the Eromanga Sea, such as producers and consumers.
2. Learn about evidence for predator-prey relationships in the Eromanga Sea based on fossils.
3. Recognise the impact on feeding relationships when living things die or are removed.
4. Understand that interactions between living things may be mutually beneficial or competitive.

Affective:

Students will:-

5. Enjoy exploring the dynamic relationships of ancient living things from the Eromanga Sea.
6. Appreciate working in small groups with other students.
7. Be excited to be on an excursion outside of the classroom.
8. Enjoy drawing ancient animals from the Eromanga Sea.

Procedural/Skill:

Students will:-

9. Improve their observational skills through studying fossils and displays.
10. Refine their communication skills through discussions with their teacher and fellow students.
11. Advance their drawing skills through sketching ancient animals.

Resources:

Activity Sheets 1 and 2.

Note:

This lesson is intended to follow a guided tour of Kronosaurus Korner. Tours should highlight themes relating to the learning outcomes within these notes. Teachers wanting to run this lesson without a visit to Kronosaurus Korner can find information on creatures from the Eromanga Sea from:

www.kronosauruskorner.com

Clode, D. (2009). Prehistoric Life of Australia's Inland Sea. Melbourne: Museum Victoria Publishing.

For related teachers' notes and activity sheets, please go to www.kronosauruskorner.com.

Procedure:

Engagement:

Following a tour of Kronosaurus Korner, the students will gather around the display featuring the skull of *Eromangasaurus*. The teacher will explain the following: the Eromanga Sea was full of living things that depended on each other for food. The skull of *Eromangasaurus* is covered in bite marks from a large animal. The size of the bite marks matches the teeth of the predator *Kronosaurus*. The teacher will ask the students why there are bite marks on the skull of *Eromangasaurus* from *Kronosaurus* (answer: *Kronosaurus* consumed *Eromangasaurus* for food - they were in a predator-prey relationship). The teacher will state that predators and animals from the Eromanga Sea that ate other living things are known as consumers. Elasmosaurids like *Eromangasaurus* were consumers which ate clams. Ancient clams were also consumers which ate plankton. The students will be asked to give examples on consumers which are alive today.

Lesson steps:

1. The teacher will explain that not all living things from the Eromanga Sea were consumers, such as some types of plankton which produced their own energy from the sun. They will state that such living things are known as producers. The teacher will ask the students if they are producers or consumers (answer: they are consumers) and whether they can list any other producers (e.g. plants).
2. The students will be given Activity Sheet 1 and asked to start Task 1 by working together in pairs or small groups. Through shared discussions, they will identify, draw and label pictures of predators from the Eromanga Sea that ate particular types of prey. They must base their work on fossil evidence they observe in Kronosaurus Korner (e.g. fossils with bite marks from other animals or stomach contents containing other animals). Teachers and Kronosaurus Korner staff will walk through the galleries to provide assistance for students.
3. The pairs or groups will return to the teacher to receive Activity Sheet 2. Before starting on the remaining tasks, the teacher will ask the students for examples of living things that compete with each other for the same type of food (e.g. lions and hyenas fighting over a zebra carcass). The students will be asked what would happen if these food sources disappeared (answer: living things would eat other food sources or die of starvation). The teacher will explain that similar interactions occurred between living things from the Eromanga Sea. The students will then start Activity Sheet 2.

Conclusion:

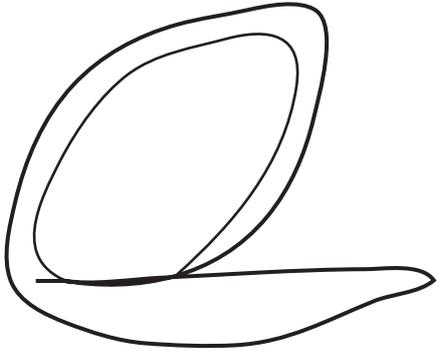
4. The students will be asked to hand in their work if they're finished. They will be asked to name examples of predator-prey relationships from the Eromanga Sea (e.g. *Kronosaurus* and *Eromangasaurus*). The teacher will recap the major points from today's lesson, including how living things rely on each other for survival, the roles of producers and consumers, predator-prey relationships and competition.

Homework:

Students who haven't completed Activity Sheets 1 and 2 can finish any remaining tasks for homework based on information at www.kronosauruskorner.com.

Name: _____

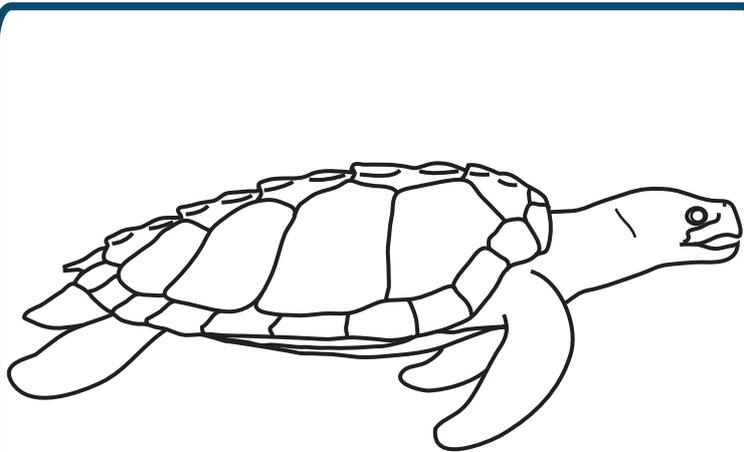
Task 1. The boxes on the left contain animals from the Eromanga Sea. Draw their predators in the boxes on the right with their names labelled underneath. Predator-prey relationships must be based on fossil evidence.



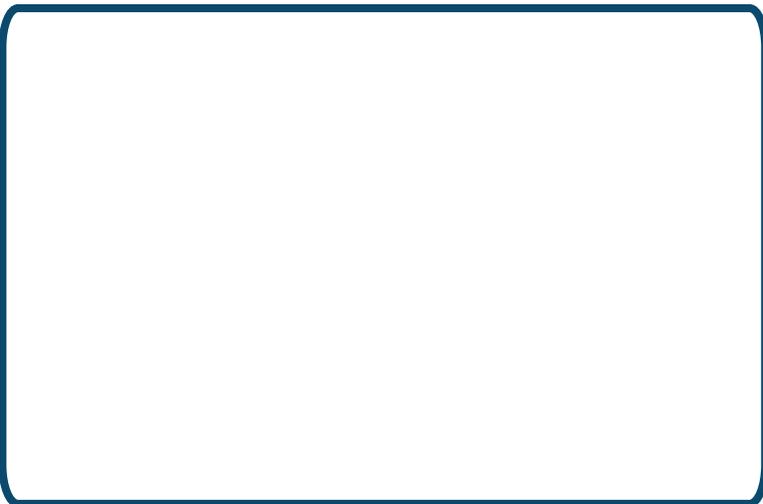
Prey: *Inoceramus*



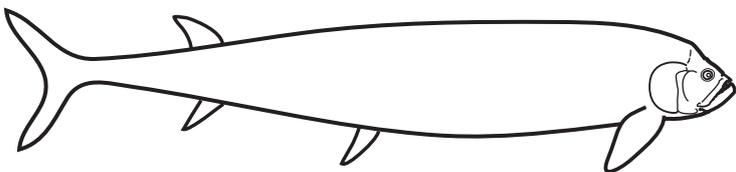
Predator: _____



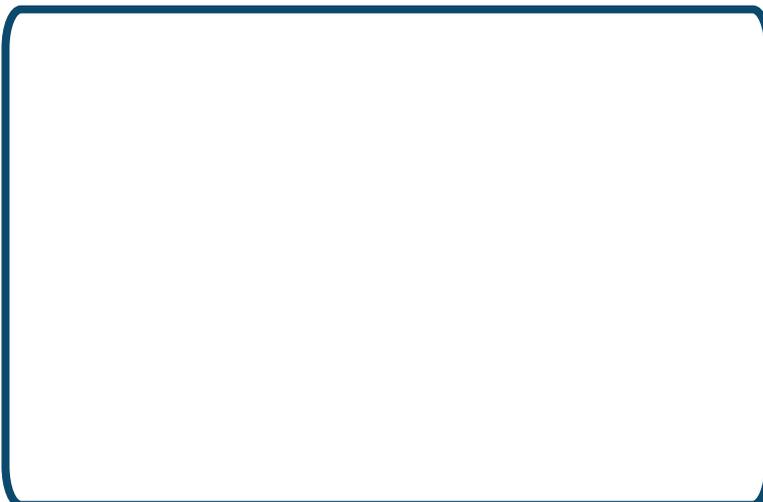
Prey: *Notochelone*



Predator: _____



Prey: *Cooyoo*



Predator: _____

Name: _____

Task 2. Describe a predator-prey relationship from the Eromanga Sea based on fossil evidence:

Task 3. Describe two animals from the Eromanga Sea that consumed the same food. Were these two animals competing with each other for food or helping each other?

Task 4. Consider what would happen if the clam *Inoceramus* disappeared from the Eromanga Sea. What impact would this have on the feeding relationships of other creatures?

Task 5. Describe the feeding relationship in this picture:

