KRONOSAURUS KORNER
RICHMOND OUTBACK QUEENSLAND

Foundation Teacher's Notes

Rationale:
Students will explore how multiple factors influence the way objects move, including the size and shape of objects. Through studying fossils, they will learn how ancient animals from the Cretaceous of Australia moved. This will include how sea-going plesiosaurs and turtles swam with their flippers, flying pterosaurs flew with their wings and terrestrial dinosaurs walked on their legs. They will also observe how some animals could move in two different ways (e.g. pterosaurs could walk and fly), while others could only move in one way (large plesiosaurs could only swim - they were too heavy to move on land). Students will process and communicate information by drawing and role playing different ancient creatures.
Students will be engaged by activities suited for various learning preferences, with new information processed with the use of visual sources (observing fossils at Kronosaurus Korner) and kinaesthetic-based investigations (role-playing the movement of different ancient animals). Students will also enjoy drawing ancient animals and describing how they moved.

Learning Outcomes:
Cognitive:
Students will:-
1. Understand that the way ancient animals moved depended on their size and shape.
2. Learn that ancient sea-going creatures swam, flying animals flew and land animals walked.
3. Realise that some ancient animals could move in different ways (e.g. pterosaurs flying and walking).
4. Comprehend that some ancient animals could only move in one way (e.g. plesiosaurs could only swim but probably couldn't move on land).

Affective:
Students will:-
5. Enjoy role-playing ancient animals.
6. Appreciate communicating with the teacher and other students.
7. Be excited to be on an excursion outside of the classroom.
8. Enjoy drawing different ancient animals.

Procedural/Skill:
Students will:-
9. Improve their observational skills through studying fossils and displays.
10. Refine their communication skills through sharing with the teacher and fellow students.
11. Develop their role-playing skills in mimicking the movement of ancient animals.
12. Advance their drawing skills through drawing ancient animals.

Resources:
Swimming flippers and 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 teacher will ask three students to role-play in front of the class. The students will be asked to lie on the floor and wear flippers on the hands and feet. They will use their flippers to move across the floor without lifting their bodies off the ground. The class will be asked which large animals from the museum also had flippers (answer: turtles, ichthyosaurs and plesiosaurs) and why these animals couldn't move well on land (answer: ichthyosaurs and plesiosaurs couldn't use their flippers to support their heavy bodies). The teacher will also ask which animals in the museum could move on land (answer: dinosaurs like *Kunbarrasaurus* and *Austrosaurus*). The students will then be asked how these animals moved (answer: they walked on four legs).

Lesson steps:

1. The teacher will state that different ancient animals moved in different ways based on their size and shape: large sea-going plesiosaurs, ichthyosaurs and turtles swam with their flippers and land-dwelling dinosaurs walked on their legs.

2. The class will gather around the pterosaur display in Gallery 2. The teacher will tell the students how pterosaurs could walk on their legs but also fly with their wings. Different role-players will be selected to wear flippers on their hands like wings and pretend they're flying like pterosaurs. The class will be asked why the role-players really can't fly (answer: pterosaurs had lighter bodies and larger wings to help them fly). The teacher will reinforce that different ancient animals moved in different ways because of differences in their bodies.

3. The student will then be handed Activity Sheet 1 and asked to start Tasks 1 and 2 on how different ancient animals moved. In completing their tasks, students can walk around Kronosaurus Korner to observe the fossils on display. The teacher and Kronosaurus Korner staff will be present in the galleries to provide assistance for the students.

4. The students will be handed Activity Sheet 2 and asked to start Task 3 by drawing a plesiosaur stranded on a beach because it cannot walk on land.

   Conclusion:

5. The teacher will gather the class together and students will hand in their work. The students will be asked to give examples of how ancient animals moved. The teacher will recap the major points from today's lesson, including how the size and shape of ancient animals influenced how they moved and how some ancient animals moved in several different ways.

Homework:
Students who haven't completed the Activity Sheets can finish any remaining tasks for homework based on information at www.kronosauruskorner.com.

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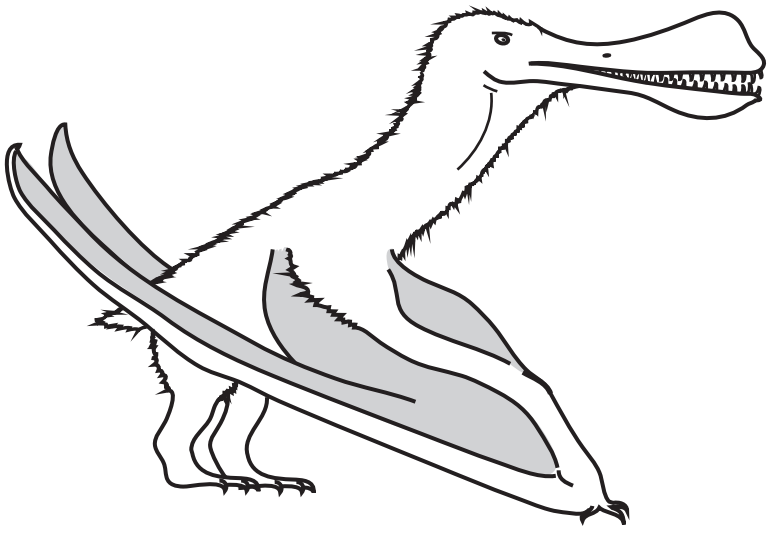
Foundation Activity Sheet 1

Name: _____

Task 1. In the box below, draw an animal that swam and an animal that walked from Kronosaurus Korner. Describe which parts of their body they used to move.

Task 2. Describe how this pterosaur would move in two different ways.



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Foundation Activity Sheet 2

Name: _____

Task 3. The plesiosaurs that lived in the Eromanga Sea were good swimmers. They could not move on land because they had heavy bodies and flippers. Draw a plesiosaur that cannot move because it is stranded on a beach.