



X-RAY KIT

Animal

This pack of six x-ray images, links environmental studies and art, while enriching both areas. This work is a new and exciting project linking Healesville Sanctuary and Zart Art. Six Australian animal skeleton x-ray images have been provided from Healesville Sanctuary and show **The Children's Python**, **Gould's Wattled Bat**, the **Eastern Long-Necked Turtle**, the **Platypus**, the **Kowari** and the **Giant**

Tree Frog. Each skeleton shows the intricate bone structure that makes movement unique for each animal and each makes a most amazing pattern work in it's own right. Art activities have been developed focussing on pattern and providing a range of 2D and 3D outcomes. Activities include sketching and drawing 'How each creature looks on the outside' as well as a range of 2D and 3D activities for 'How each

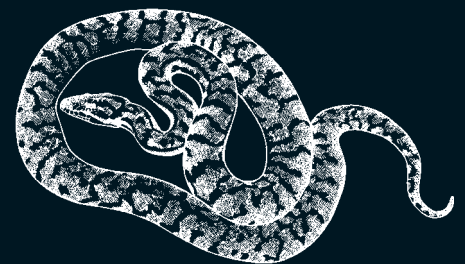
creature looks on the inside'. These include a 3D linear sculpture for the snake; a 3D paper construction with a removable shell for the turtle; a fine wire construction with fragile shimmer paper wings for the bat; a textile sewn collage for the rat; jewellery for the frog; a black and white collage and rubbing for the platypus. *Here we feature just a selection of the Children's Python as an example of the activities in this kit.*



Children's Python (*Liasis childreni*)

Pythons are old-world snakes and feature in the mythologies of many cultures - the serpent in the Adam and Eve story, the serpent in Greek mythology, killed by the god Apollo, the Dreaming serpent of the Indigenous People of Australia. The python we have here is the Children's python, named by John George Children. It is the second smallest python in the world and lives in the northern part of Australia, usually sheltering in caves and rock crevices. It is placid, non-venomous and lives for about fifteen to twenty years. It feeds on small mammals, small birds and other reptiles. The snake

(Mindi) is a very important symbol for the Indigenous People of Australia. As the Rainbow Serpent, it features extensively in Dreaming stories, as a supernatural being and creator ancestor. The dynamic curve of the body represents the course of rivers. Witiitj the water python of central Arnhem Land, when angered, sucked in water, reared and then spat it out to form rain clouds for the first monsoon season. Over the centuries, the serpent has been painted on rock walls and on bark, drawn in the sand, carved into pieces of wood, and painted on canvas.



How the Children's Python looks on the inside.

1. SKETCHING THE SNAKE SKELETON

(i) There are numerous bones in the Children's python. A pattern of bones, links to form the backbone, which begins at the head and ends at the tail. Each bone has two curved ribs attached to it, which reach almost right around the body to hold the snake together. All these bones are the same, but are quite small at the head, get larger as they move up the body, and get smaller again as they reach toward the tail. Provide each student with a

photocopy of the x-rayed snake for reference, and discuss the details that can be seen. The x-ray shows a new perspective of the snake. It shows how a snake is able to twist and turn, as all the bones are interlinked to mesh together. With the strong muscles that surround the bones the whole action of movement begins- a twisting, sliding, turning sssssssss effect.

(ii) Look at the pattern in an individual backbone with its attached rib bones. Make some sketches of how it looks or how it might look. Keep the shape simple, as it has to be repeated many times in the next drawing.

(iii) On a piece of paper, sketch one curving snake line. This will be the line on which the backbone is drawn. Begin at one end and draw in the backbone using the shape from above. Begin making the shapes very small and slowly enlarge them until the centre is reached, then decrease them in size to the other end of the snake. The shapes will form a pattern of bones. Close observation of the skull of the x-rayed snake will be essential to add the shapes necessary for the head.



2. MODEL OF CHILDREN'S PYTHON'S SKELETON

(i) Use Zart Paper Magiclay to model a snake backbone and ribs. Use the photocopied image for reference, but do not aim at total realism. Simple shapes will work best in this activity. Begin by rolling a ball of Magiclay, flatten it into a cube and pull out the rib shapes from one side. Practise until a good shape has been made.

(ii) Make a number of bones as above, ranging from small to large. Make a skeleton head for

the snake. When the skeleton and head are complete, they can be left white or painted for a special effect. Allow them to dry. Use thin Armature Wire to thread through the bones to join them together. The wire can be bent easily so the snake can appear to be moving off the ground for a 3D effect.

NB: This 3D Children's python can be made by each student on a small scale, or one large one might be constructed using many bones made by all the students, and then arranged into one large 3D snake.



X-RAY KIT-AUSTRALIAN ANIMAL/REPTILE

NEW!

A set of X-Rays on 6 different animals. Kit comes with extensive teacher notes & activities written by Kate Hart. Background information on each animal supplied by Healesville Sanctuary.

Available for release February 2006

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