

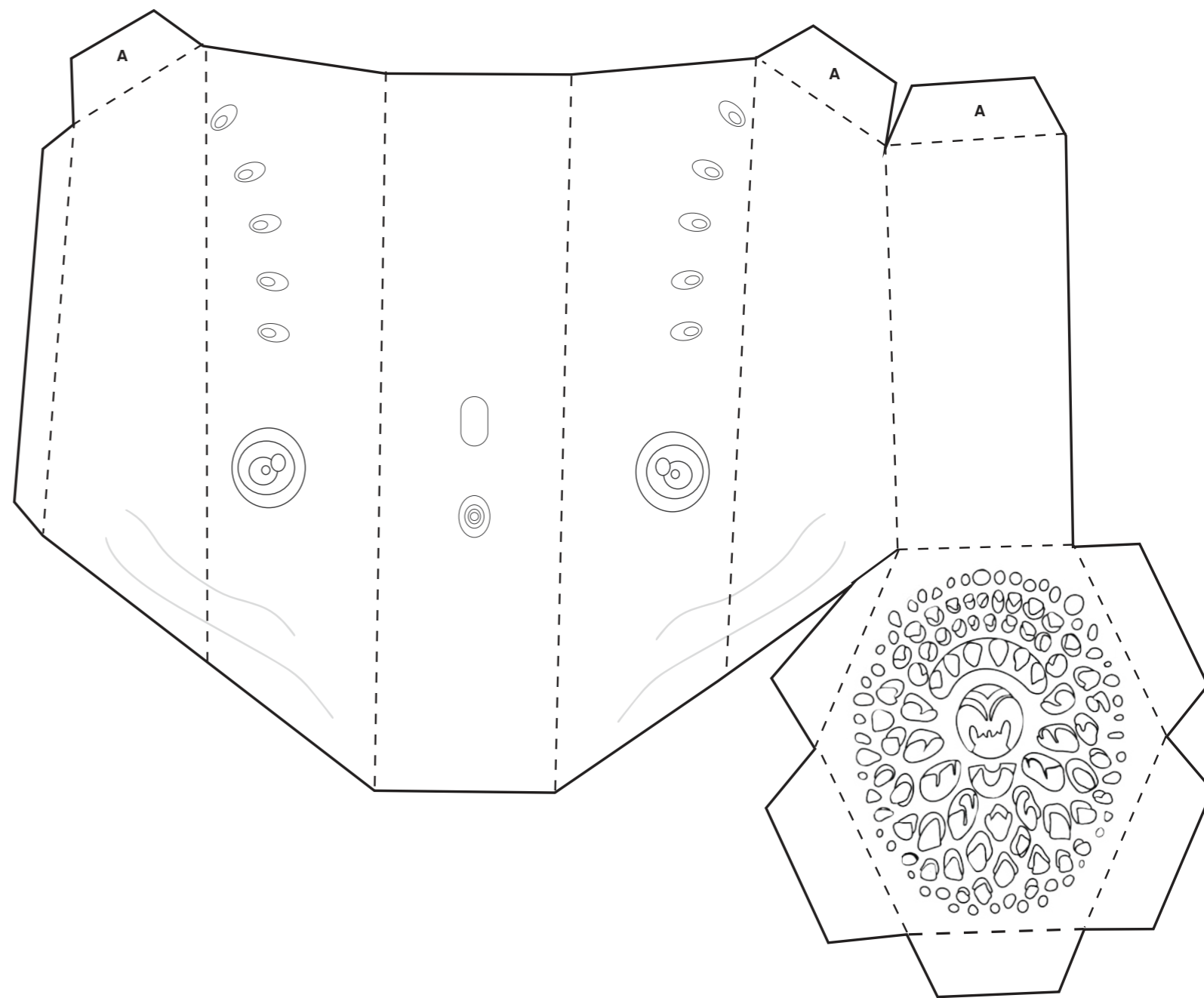
Kanakana Papercraft Project

Build a 3D model of a kanakana

See page 3 for instructions

Did you know?

- ★ Kanakana are also known as Piharau, Pouched Lamprey or *Geotria australis*. Other names include pia, pipiharau, pihapiharau, puhikorokoro, korokoro, nganangana, nainai, ute and waituere.
- ★ Kanakana are listed as a Threatened Species and classified as Nationally Vulnerable.
- ★ Kanakana are a Taonga and important customary fisheries.
- ★ Kanakana are the only lamprey species found in Aotearoa New Zealand.
- ★ The ancestors of kanakana appear in the fossil record 450 million years ago, 250 million years before Tuatara!
- ★ Kanakana have only one nostril on no bones! Their skeleton is made entirely of cartilage. They have a round sucking mouth with tooth-like structures arranged in circular rows.
- ★ Kanakana have an amazing life cycle, inhabiting both freshwater and the ocean. They start life as filter feeders, and then when juvenile Kanakana go to sea (for 3-5 years), they use their sucker-like mouth to latch onto big fish and potentially whales and eat their flesh and juices!
- ★ When young adult Kanakana return to freshwater, they stop eating. They don't eat for a year and a half!
- ★ Kanakana only make their river journey to the ocean and back once in a lifetime. From the time they head to sea and then re-enter the rivers, they are a vivid blue colour. As they spend time in the awa, they become brown. As Kanakana get older, they grow shorter and lose weight. Just before they die, they spawn, producing the next generation of Kanakana, completing their remarkable life cycle. Fully mature male Kanakana grow pouches – this distinctive feature is recognised in their name.
- ★ Kanakana need to survive and thrive on their long journey from freshwater to the ocean, and back up the awa to where they spawn. Their ability to make this journey depends on an environment that supports them and allows them to get up and down the awa.
- ★ Lampreys, along with hagfish, are the only surviving members of the most primitive vertebrates, the jawless fish or Agnathans.



This papercraft design is from Taaja Tucker-Silva's portfolio of work.

You can find the original, as well as other papercraft designs and colouring sheets, here: <https://taajatucker.com/coloringsheets/>

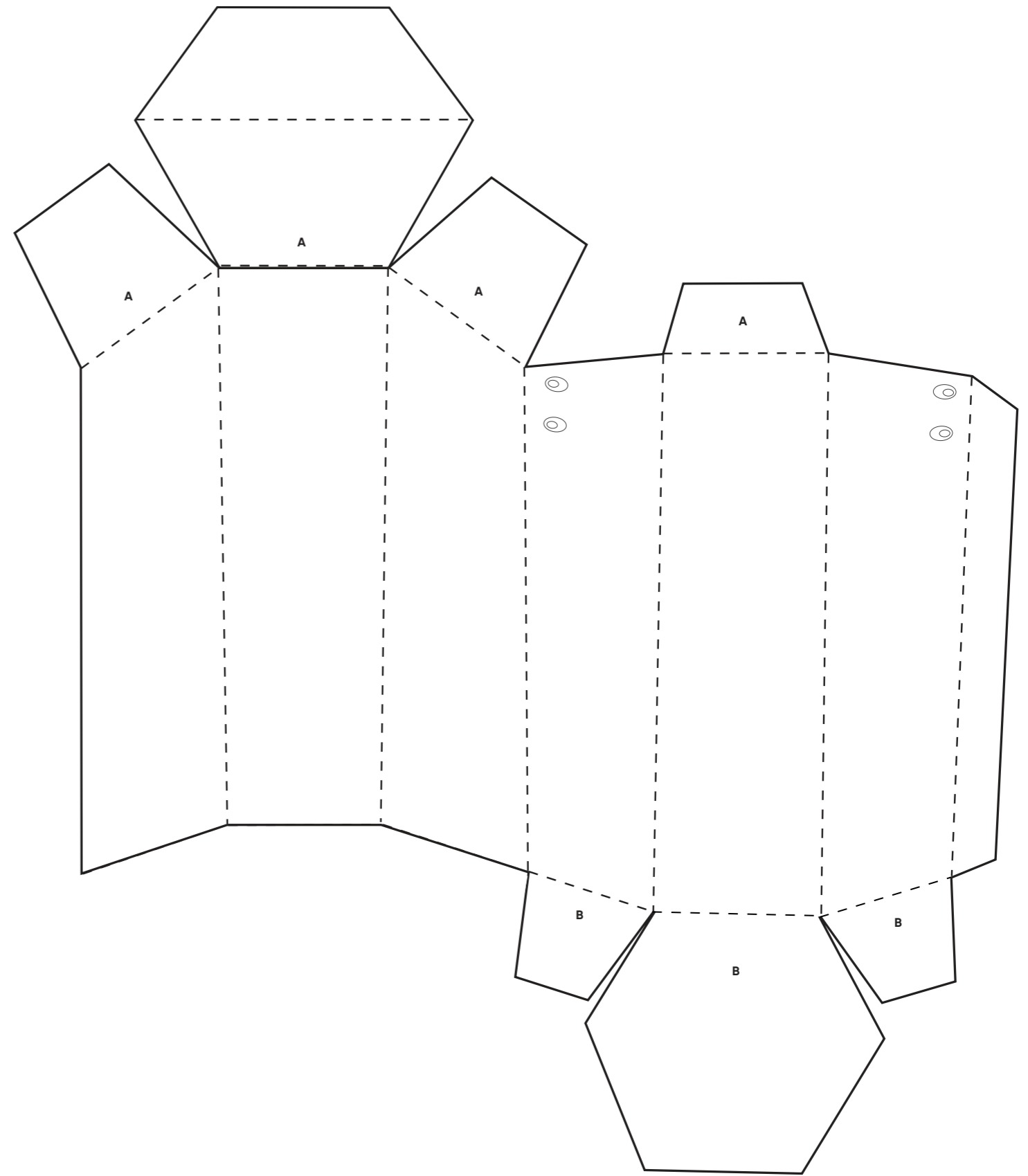
NEW ZEALAND'S
BIOLOGICAL
HERITAGE

Ngā Koiora
Tuku Iho

National
SCIENCE
Challenges

Life cycle facts:

- ★ Kanakana begin their life as blind, burrowing filter-feeders. They are **brown-grey in colour** and measure less than 8-10 cm.
- ★ Larval Kanakana are also called Ammocoetes. They burrow into mud or sand, to a depth of no more than 30 cm, in areas with shallow water and overhead shade.
- ★ Larval Kanakana hide in burrows during the day and are thought to venture out at night.
- ★ The larval stage lasts about 3-5 years.
- ★ A juvenile Kanakana is called a Macrophthalmia. Their colour has changed to a **brilliant silver-blue** and their eyes are starting to develop. They are about 12 cm long and have begun their journey downstream to the ocean.
- ★ As a juvenile Kanakana grows, its fins get larger and its distinctive circular rows of 'teeth' develop.
- ★ When Kanakana reach the ocean, they find much larger fish and possibly even whales to latch on to with their sucker-like mouths. They feed as parasites, eating the flesh and juices of their host fish. Kanakana live like this for 3-5 years, growing to a length of 45-75 cm.
- ★ Adult Kanakana return to freshwaters from winter to spring. They move upstream at night and hide during the day. At this stage, they no longer eat! But they are not quite ready to reproduce. They are called Velasia.
- ★ Adult Kanakana change colour back to **brown**. Males grow a distinctive pouch behind the mouth. They lose weight and get shorter as they get older. They live off their reserves of fat until they are ready to spawn. This life stage takes 12-16 months.
- ★ Both male and female Kanakana protect their eggs. They breed only once in their lifetime and die afterwards.



This papercraft design is from Taaja Tucker-Silva's portfolio of work.

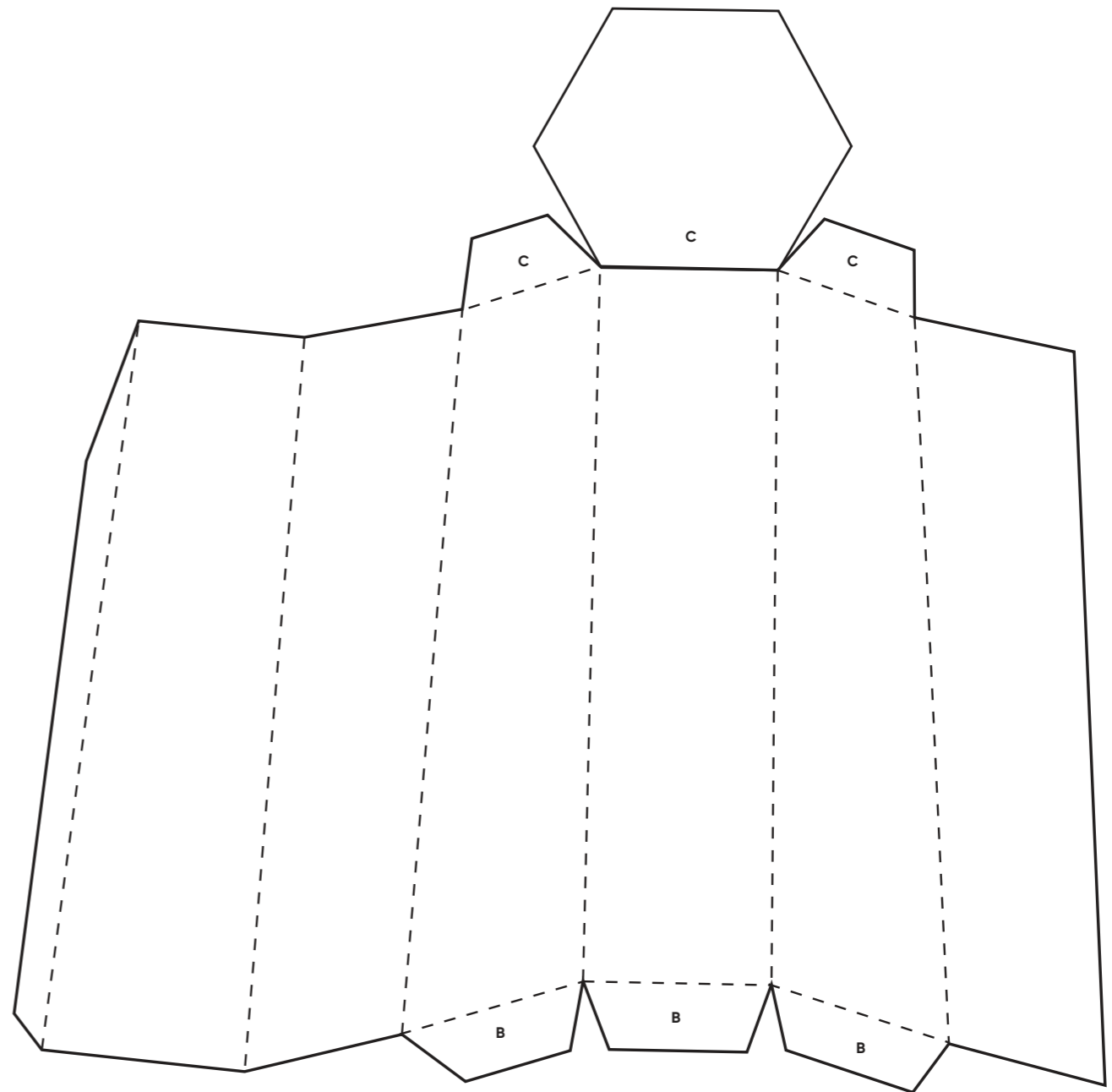
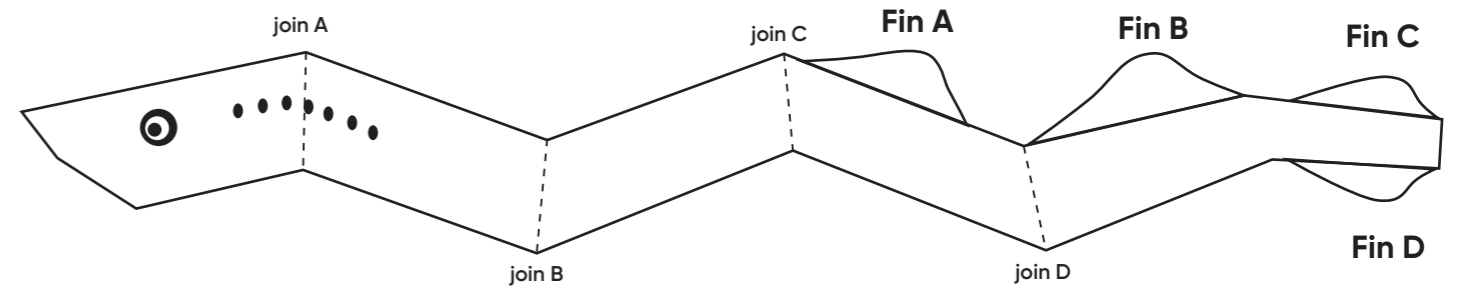
You can find the original, as well as other papercraft designs and colouring sheets, here: <https://taajatucker.com/coloringsheets/>

Instructions

Materials needed: Crayons or coloured pencils to colour your Kanakana. Scissors and craft glue

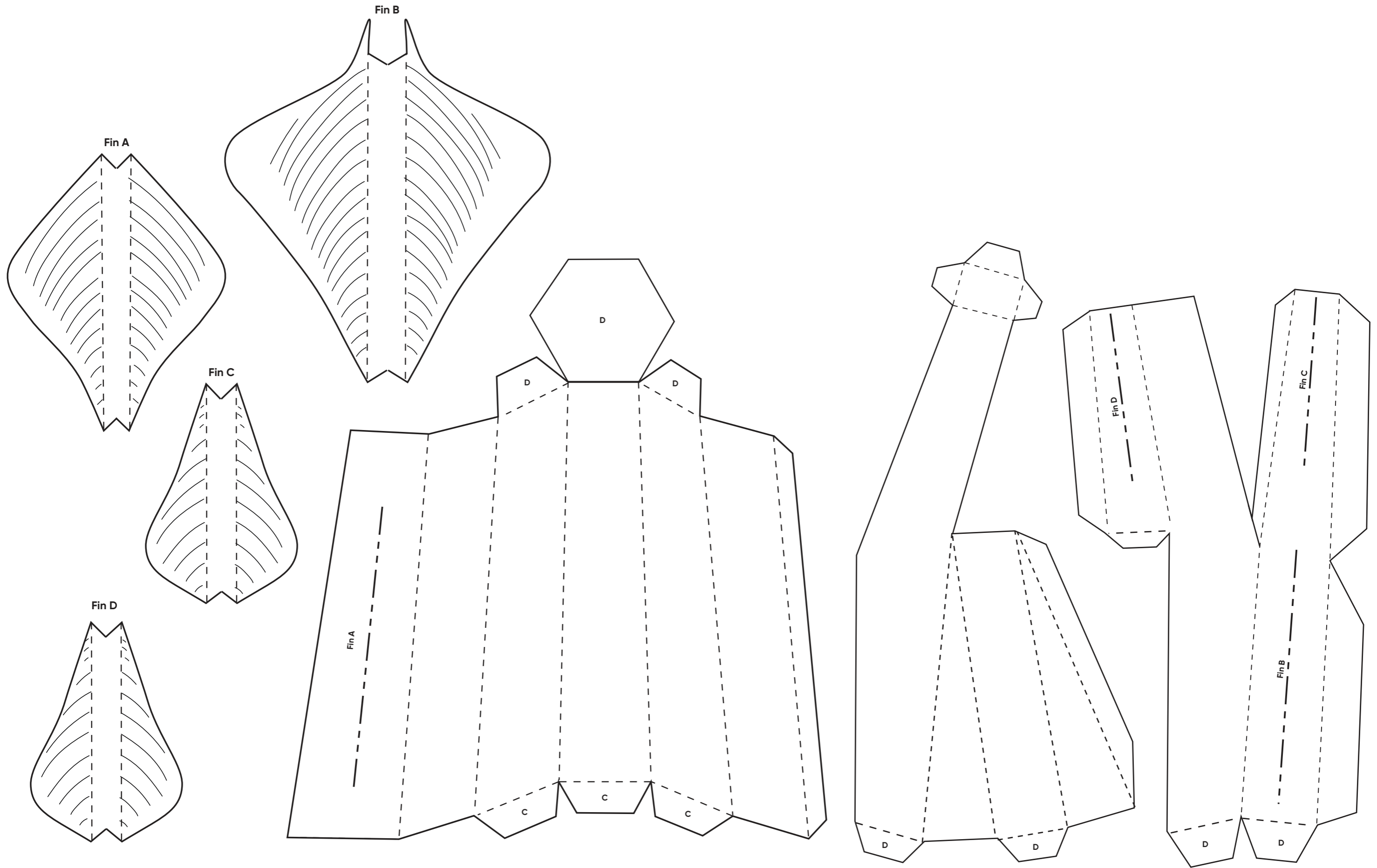
1. Decide what life stage you want to colour your Kanakana: refer to *Life Cycle Facts* on page 2 and look for images of Kanakana at different stages.
2. Colour your Kanakana. Be sure to keep the instructions on these pieces visible!
3. Cut out all pieces along solid black lines.
4. Refer to the drawing of the assembled kanakana on this page to see how the sections fit together. There are four sections made of one cut-out piece each. The fifth section of your Kanakana is made from two cut-out pieces. One of these pieces makes the top of the tail section and the other makes the bottom of the tail section.
5. Fold all dotted lines.
6. Assemble each section individually by gluing and joining the long edge. For the tail section, glue both pieces together.
7. For each section, glue and join the glue tabs with the end cap to stabilise the structure.
8. Construct the body by matching the letters on the tabs with the corresponding glue tabs and end caps.
9. Fold fins along the dotted line and glue the underside to join the base onto the Kanakana where indicated by the fin attach line.

- Cut line
- - - - - Fold line
- · - · - Fin attach line



This papercraft design is from Taaja Tucker-Silva's portfolio of work.

You can find the original, as well as other papercraft designs and colouring sheets, here: <https://taajatucker.com/coloringsheets/>



This papercraft design is from Taaja Tucker-Silva's portfolio of work. You can find the original, as well as other papercraft designs and colouring sheets, here: <https://taajatucker.com/coloringsheets/>