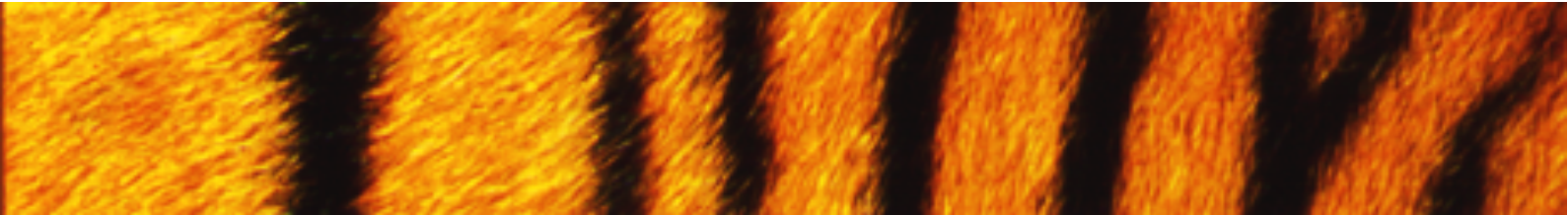## TIGER TAIL I.D – COMPUTATIONAL THINKING

Zookeepers are incredible problem solvers and many of the tasks they do every day are real world examples of scientific skills and creative thinking.

Sumatran Tigers are critically endangered big cats and while they are the smallest of the Tiger species, they are still incredibly powerful animals. Animal welfare and zookeeper safety are some of the most important factors when working with animals in Taronga's care. Being able to safely and reliably identify individuals within groups is a fundamental skill that zookeepers need to develop. All animals have an identifying microchip, just like your dogs and cats at home, but with our Sumatran Tigers, the Carnivore Division need to be able to work out who is who in a much safer way.

A Sumatran Tiger's stunning stripes are like it's own unique fingerprint. These markings can be key to identifying individuals. Some places Taronga's expert carnivore keepers look to identify them are the distinct markings on their neck and the pattern at the base of their tail. It is almost like scanning a barcode!

Being able to identify individuals in a group or population is important, as all animals are closely monitored to ensure they are happy and healthy. Closely observing the behaviour of each animal can show a lot about how well an animal is eating, if there are any illnesses or injuries, and to understand social interactions and different personalities.

Now it is your turn to work just like a Taronga Carnivore Keeper and create a system that helps to use tail markings to tell Sumatran Tigers apart!

Flip the page and use the photographs of the tails of 3 Sumatran Tiger cubs that were born at Taronga Zoo to help tell the difference between each.

Taronga's zookeepers use logical thinking to solve problems like this, as well as effective ways to communicate how these identification systems work so that all of the zookeeping team can reliably and safely tell who is who in the Zoo!

TIGER TAIL I.D

EASIER	HARDER
Create a chart to help clearly identify the unique markings of each individual Sumatran Tiger cub. Look for key features of each individual tail pattern. A great way to test your descriptions is to set up a Barrier Game with a partner!	Create a dichotomous branching key that could be used by the Carnivore Division to accurately identify the markings of each individual. Visual dichotomous keys are common, but is there a way to use technology in your system?

TIGER CUB	NAME	TAIL PATTERN
1	MAWAR	
2	TENGAH MALAM	
3	PEMANAH	