Crazy Animals

NEW August 2025

Year level: 3

Approximate number of lessons: 1

Learning goals

- Engage in chance-based investigations about games and everyday situations to:
  - identify possible outcomes
  - collect and record data
  - create visualisations for frequencies of outcomes (e.g., lists, picture graphs)
  - describe what these data visualisations show
  - answer chance-based investigative questions
  - notice variations in outcomes

Resources

- Y3 Crazy animals teaching notes
- One sheet per ākonga of A4 paper folded into thirds, so that there is a top, a mid section and a lower section.
- Felt pens, scissors
- Watch this video to support your own knowledge of this creative drawing activity. Note the small lines placed across each stage so that the body parts match up.

Activity

Introduction

Crazy animals are drawings divided into three distinct sections: head, body, and tail/legs. Adding imaginative names to these creations makes the lesson even more engaging and fun. This activity can be creative as you would like and serves as the foundation for understanding the mathematical concepts in this lesson. It is also a fabulous wet day activity for playtime fun. The chance based investigation involves exploring the possibilities involved when you might combine the head/body and tail/legs of two crazy animals with three body parts each.

Crazy animals is an investigation adapted from similar activities such as three piece puzzle books, and drawing-thirds activities.

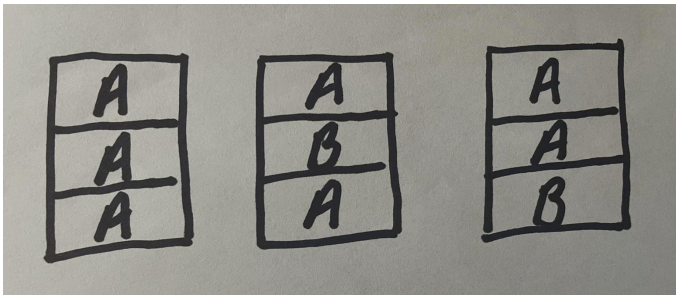
?PROBLEM:

Class Setup

- Kaiako introduce the Crazy Animals activity to ākonga, kaiako may choose to watch the video linked above with ākonga.
- Ākonga are given time to create their own Crazy Animal. For some ākonga they may be more comfortable drawing a regular animal, some ākonga may wish to name their animal. For example an elephant/tiger/fish may be a Ele-ig-ish. Have fun exploring the combinations that ākonga create.
- Ākonga may wish to work with a buddy or to create two Crazy Animals. Label one animal Animal A (on head, body and tail/legs), and the other animal Animal B (on head, body and tail/legs).
- Kaiako support ākonga to cut their two animals into separate thirds and explore further possible combinations by mixing the two lots of three animal parts into different combinations. Each possibility must have a head (choice of two options, either Animal A or B), a body (choice of two options, either Animal A or B), and a tail/legs (choice of two options, either Animal A or B). Animals are not able to have two heads for example.
- Kaiako pose the question ***How many different Crazy Animals is it possible to make using the two sets of three animal parts?***

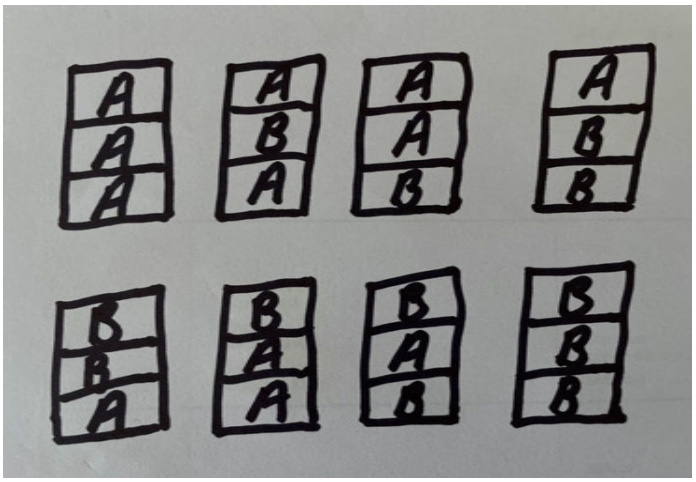
PLAN:

- Kaiako allow ākonga to explore possibilities, watching for ākonga who may develop a logical system to count the possibilities.
- Kaiako encourage and support ākonga to share, discuss and utilise a logical system for counting the possible combinations.
- It may help to show ākonga how to record each possible combination as below.



DATA:

- Ākonga work to find all possible combinations. (There are eight).



- Some ākonga may wish to explore how they might name these combinations.
- Kaiako support ākonga to identify how many combinations created are the original Crazy Animals, and how many combinations are a mixture of the original Crazy Animals?

ANALYSIS:

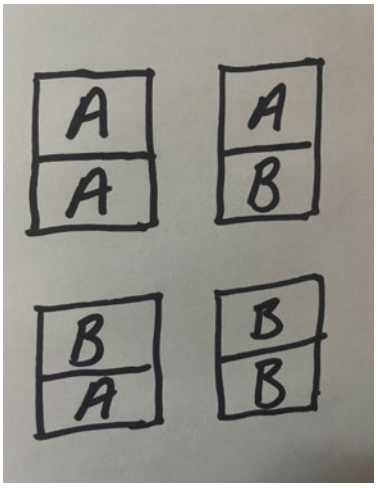
- Kaiako support ākonga to answer the investigative question - ***How many different Crazy Animals is it possible to make using the two sets of three animal parts?***
- Kaiako support ākonga to answer the following questions.
    - The probability of all three parts being from the same original Crazy Animal is _____ out of _____ outcomes.
    - The probability of all three parts being from different Crazy Animals is _____ out of _____ outcomes.

CONCLUSION:

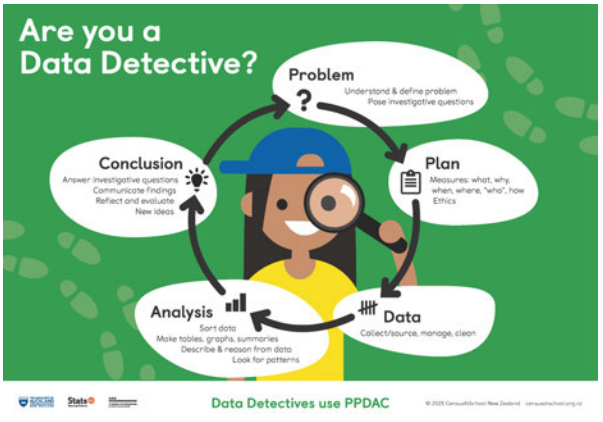
- Patterns, and drawing patterns can help us to understand and record data. Did we all find all eight combinations, *how did we communicate our pattern so that everyone could find all eight combinations?*
- We had two Crazy Animals each with three body parts. There were eight possible combinations. 2 heads x 2 bodies x2 tail/legs = 8 possible combinations. (2x2x2=8)
- If we were to choose a head, a body and a tail/legs, would we be more likely to get a combination where all parts are from the same original animal, or a combination where the body parts were from a mixture of original animals?

Notes for teachers

- Note the possible misconception that 2x3 = 6, so therefore there must be 6 possibilities. There are six body parts altogether but there are more than six possible combinations.
- You may wish to look at a combination involving two animals with two body parts (2x2) to support ākonga to make sense of the matching expression 2x2 = 4 possible combinations.



- To provide an extension you may ask ākonga what would happen if the animals were split into four body parts, you could add hats. (2x2x2x2 = 16 possible combinations)
- You could also look at the possible combinations when three animals with three body parts are combined. (3x3x3 = 27 possible combinations)



[Data Detective Poster - CensusAtSchool New Zealand]