

# REFINE QUESTIONS, COMPARE GRAPHS.

## INVESTIGATIONS OVERVIEW PAGE

THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING. INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

- In small groups, children construct a question to ask to gather data that may easily be displayed in categories, for example, 'What is your favourite Australian animal from the following list: kangaroo, koala, echidna, wombat, emu?' Each group surveys a different group / class of children, recording the data using tally marks in a table. They then record their data in a column graph. The column graphs are then compared for similarities and differences. They identify that all of the graphs have the same features – titles, vertical and horizontal axes, categories on the horizontal axis, numbers on the vertical axis. [Reflection: How can we refine questions to collect data that may be recorded in categories? What features do column graphs have?](#)

Different representations of the same data

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Tally marks 

List with numbers

Favourite Fruit

Mango 7

Orange 2

Nectarine 5

Strawberry 8

List with Tally Marks

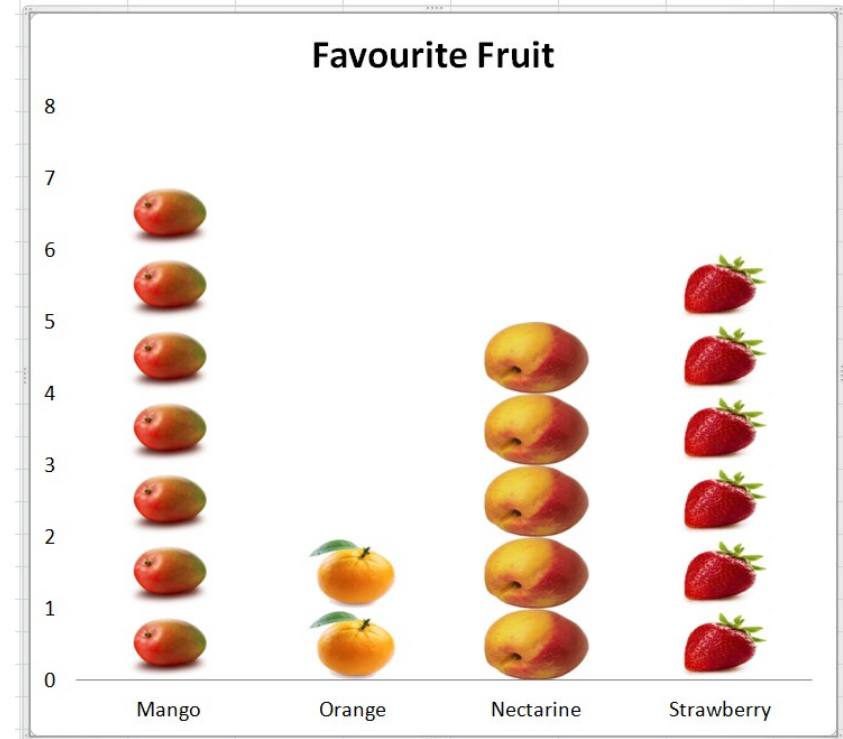
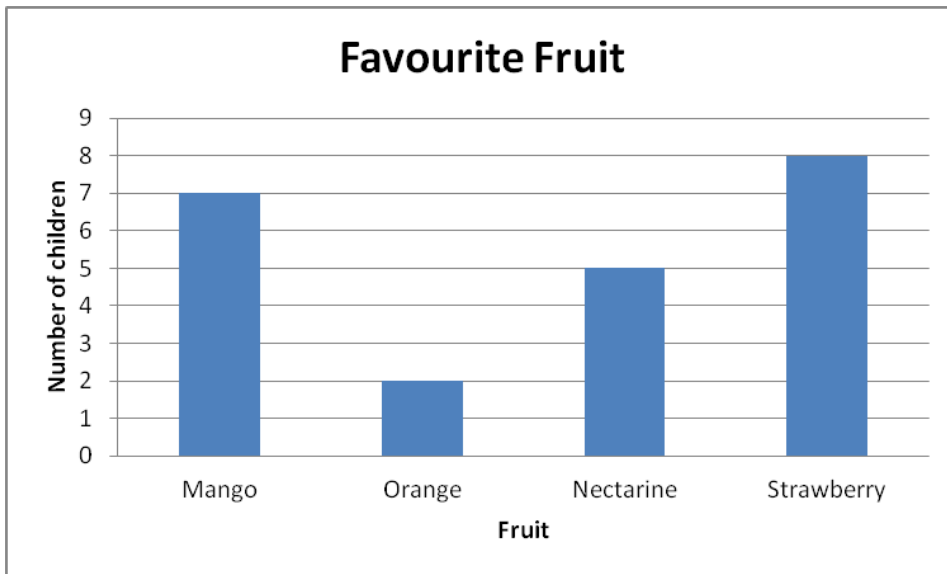
Favourite Fruit

Mango 

Orange 

Nectarine 

Strawberry 



Mango	7
Orange	2
Nectarine	5
Strawberry	6

# Collect Data, Record in Picture and Column Graphs

Sit in a small group

Construct a question to ask to gather data that may easily be displayed in categories, for example, 'What is your favourite Australian animal from the following list: kangaroo, koala, echidna, wombat, emu?'

Each group

- surveys a different group / class of children
- records the data using tally marks in a table
- records their data in a column graph.

Place your column graph with the column graphs constructed by other groups.

Compare the column graphs for similarities and differences.

Do all of the graphs have the same features – titles, vertical and horizontal axes, categories on the horizontal axis, numbers on the vertical axis?

**Reflection:** How can we refine questions to collect data that may be recorded in categories?