

FRIENDS OF 100.

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 pairs, each child selects a 10s number and places the corresponding number of counters onto an empty 10 frame. They record their 10 frame, their counters and their friends of 100 in an addition number sentence. They explain commutativity by swapping the places of the numbers, for example 40 and 60, 60 and 40. They record their friends of 100 through subtraction, for example, $100 - 60 = 40$, $100 - 40 = 60$. *Reflection: How can we work out friends of 100 through addition and subtraction?*
- In pairs, each child has a calculator. They enter the number 100. They subtract a tens number, predicting what number they think will result explaining using friends of 100. For example, a child enters 100, then subtracts 40. Before pressing '=', they predict that the answer will be 60 because 40 and 60 are friends of 100, and if we have 100 and subtract 40, we will have 60 left. *Reflection: What are friends of 100?*
- In pairs, children have a pack of cards. Children place 6 cards face up in a row. Children take turns to select 2 cards as tens numbers that are friends of 100. The 2 cards taken are replaced and the game continues until all the cards have been taken. If no friends of 100 are in the row, cards are added to the row until there are friends of 100. *Reflection: What are friends of 100?*

As they develop their understanding of Friends of 100, children will apply their understanding to add and subtract tens and two-digit numbers.

Friends of 100

Select a card to make a tens number.

Place the corresponding number of counters as tens onto a 10 frame giving each counter the value of 10.

Record your 10 frame.

Record your friends of 100 using addition.

Can your friends of 100 swap places?

Record your friends of 100 using subtraction.

Explain your friends of 100 to a friend.

Reflection: How can we work out friends of 100 through addition and subtraction?

Friends of 100

Sit with a friend.

Each person has a calculator.

Enter the number 100.

Subtract a tens number and predict the answer.

Explain your friends of 100 using subtraction to a friend.

Reflection: What are friends of 100?

Friends of 100

Have a pack of cards.

Place 6 cards face up in a row.

Take turns to select 2 cards as tens numbers that are friends of 100.

Replace the 2 cards taken and continue the game until all the cards have been taken.

If no friends of 100 are in the row, add cards to the row until there are friends of 100.

Reflection: What are friends of 100?