

TEACHING PROBLEM SOLVING USING ADDITION AND SUBTRACTION.

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, children select a problem to solve. They follow the problem solving steps to solve the problem. They identify if the problem is too easy or too challenging and differentiated by selecting easier or more challenging numbers. Children engage in the construction of a problem, using the 'part of the problem that asked us to find out'

Reflection: What is problem solving?

In pairs, children select the 3rd level of the problem to solve. They follow the problem solving steps to solve the problem. They identify if the problem is too easy or too challenging and differentiated by selecting easier or more challenging numbers. Children engage in the construction of a problem, using the 'part of the problem that asked us to find out'

Reflection: What is problem solving?

In pairs children create a number sentence using cards. They create and solve problems that may be solved using the number sentence. *Reflection: What is problem solving?*

READ the part of the problem that is asking you to find something out.

April had 12 grapes.
She ate 5 and gave 2 to a friend.
How many grapes does April have left?

UNDERSTAND the information you will need, to find it out.

April had 12 grapes.
She ate 5 and gave 2 to a friend.
How many grapes does April have left?

CHOOSE A STRATEGY

that you could use to find it out.

April had 12 grapes.
She ate 5 and gave 2 to a friend.
How many grapes does April have left?

I could add the numbers of grapes that April ate and gave away, then subtract that sum from the number of grapes April started with.

USE A STRATEGY

to find it out.

April had 12 grapes.
She ate 5 and gave 2 to a friend.
How many grapes does April have left?

$$5 + 2 = 7$$
$$12 - 7 = 5$$

CHECK that you have found it out.

April had 12 grapes.
She ate 5 and gave 2 to a friend.
How many grapes does April have left?

I had to find out how many grapes April had left.
I added the numbers of grapes that April ate and gave away.
Then subtract that sum from the number of grapes April started with.
That told me the number of grapes that April had left.

Teaching Problem Solving using Addition and Subtraction.

Sit with a friend.

Select a problem to solve.

Follow the problem solving steps to solve the problem.

Identify if the problem is too easy or too challenging and differentiated by selecting easier or more challenging numbers.

Construct a problem, using the 'part of the problem that asked us to find out'

Reflection: What is problem solving?

Teaching Problem Solving using Addition and Subtraction.

Select the 3rd level of the problem to solve.

Follow the problem solving steps to solve the problem.

Identify if the problem is too easy or too challenging and differentiated by selecting easier or more challenging numbers.

Construct a problem, using the 'part of the problem that asked us to find out'

Reflection: What is problem solving?

Teaching Problem Solving using Addition and Subtraction.

Create a number sentence using cards.



Create problems that may be solved using the number sentence, for example,

$$34 - 10 =$$

Tom had 34 toys.

He gave 10 to Tina.

How many toys did Tom have left?

Tom had 34 toys.

He gave some to Tina and had 10 toys left.

How many toys did Tom give to Tina?

$$10 + _ = 34$$

Tom had 10 toys.

Tina gave him some toys. Tom now has 34 toys.

How many toys did Tina give him?

Tom had 10 toys.

Tina had 34 toys. How many more toys does Tina have?

How many more toys does Tina have?

Reflection: What is problem solving?