

Friends of 20 - Informal

Table of Contents

Teaching Plan Overview and Summary.....	page 2
Friends of 20 - Informal.....	page 3

Differentiate and Assess

Not every student will be ready to investigate this concept at this Level and so we will need to differentiate to ensure every student is learning at their leading edge. Select the Differentiate button on this screen.

Integrate

Every mathematical concept is integrally related to other mathematical concepts. Teaching and learning related concepts simultaneously develops deep relational understanding. Select the Integrate button on this screen.

Intervene

Some students may not yet be ready to investigate this concept at any Level, and so we will need to provide some intervention. Select the Intervention button on this screen.

FRIENDS OF 20 - INFORMAL

EXPLICIT TEACHING PLAN OVERVIEW PAGE

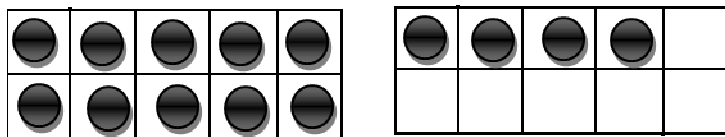
THIS PAGE IS A SUMMARY OF THE EXPLICIT TEACHING PLAN, INCLUDING STRATEGIC QUESTIONS, AND DESCRIBING THE SEQUENCE WHICH WILL OCCUR OVER MULTIPLE LESSONS.

RESOURCES: NUMBER CARDS, 10 FRAMES, COUNTERS, PENCIL, PAPER

WHAT COULD WE DO?

Children:

- place a teen number of counters onto two 10 frames, for example,



- identify the number of counters on each 10 frame
- identify the number of counters altogether
- identify the number of counters needed to make 20

WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?

Children

- ask one another questions about place value of four-digit numbers, for example:
 - ▶ How could we place 14 counters onto two 10 frames?
 - ▶ How many counters on the 10 frame on the left?
 - ▶ How many counters on the 10 frame on the right?
 - ▶ How many counters altogether?
 - ▶ How many more to make 20?

FRIENDS OF 20 - INFORMAL

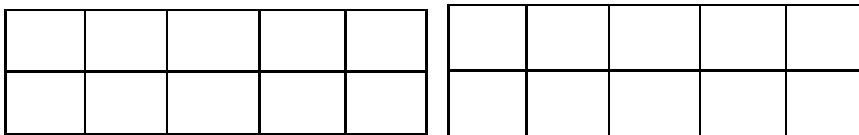
EXPLICIT TEACHING PLAN

FULL EXPLICIT TEACHING PLAN, EMBEDDING DEEP RELATIONAL UNDERSTANDING, METALANGUAGE, AND QUESTIONS THAT MAY BE USED OVER MULTIPLE LESSONS.

WHAT COULD WE DO?

Children think about, talk and listen to a friend about, then have the opportunity to share what they already know.

Display two [10 frames](#) side-by-side, for example,



Children identify that there are 20 spaces on two 10 frames.

WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?

- ▶ Today brings an investigation about friends of 20.
- ▶ What do you know about friends of 20?
- ▶ Talk about friends of 20 with a friend.
- ▶ Is anyone ready to share what they are thinking about friends of 20?

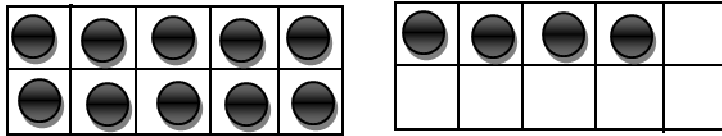
- ▶ Today we're going to use 10 frames to investigate friends of 20.

- ▶ Here we have two 10 frames.
- ▶ How many spaces on two 10 frames?
- ▶ How could we work it out?
- ▶ Could we count the spaces?
- ▶ How many spaces in one 10 frame?
- ▶ Are there 10 spaces in one 10 frame?
- ▶ Is that why it's called a 10 frame?
- ▶ If there are 10 spaces in one 10 frame, how many spaces are there in two 10 frames?
- ▶ Are there 20 spaces in two 10 frames?

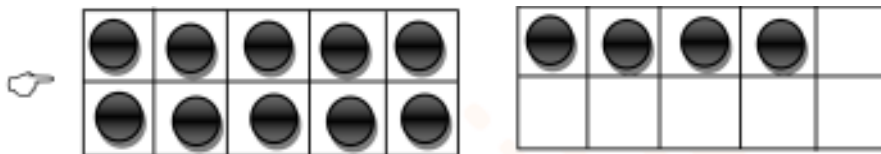
Select a teen number card, [for example](#).

14

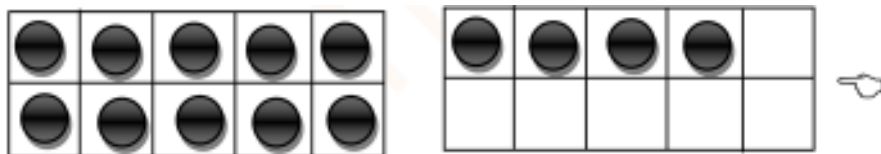
Place 14 counters in the empty 10 frames, for example,



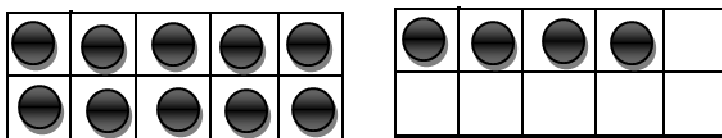
Point to the 10 frame on the left, for example,



Point to the 10 frame on the right, for example,

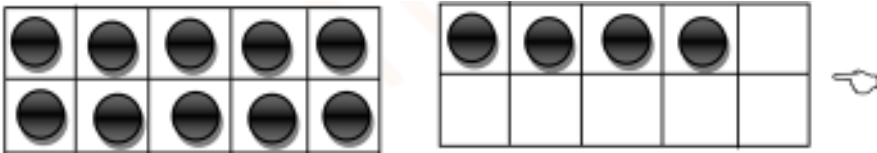


Display the two 10 frames, for example,

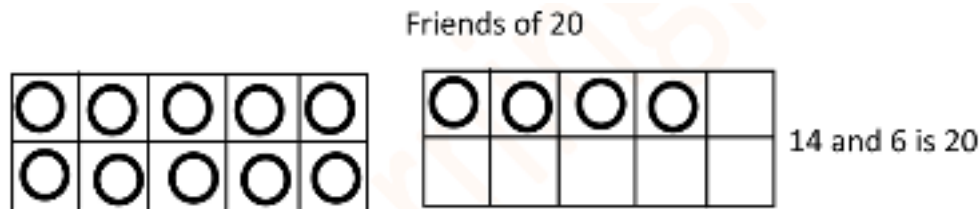


- ▶ Let's select a teen number.
- ▶ Let's place 14 counters into the empty 10 frames.
- ▶ We've investigated teen numbers on two 10 frames.
- ▶ And we found we could ask 3 questions.
- ▶ When we use two 10 frames to investigate friends of 20, we can ask 4 questions.
- ▶ The first 3 questions are the same!
- ▶ The first question is:
 - ▶ How many in the 10 frame on the left?
 - ▶ Are there 10 in the 10 frame on the left?
- ▶ The second question is:
 - ▶ How many in the 10 frame on the right?
 - ▶ Are there 4 in the 10 frame on the right?
- ▶ The third question is:
 - ▶ How many altogether?
 - ▶ Are there 14 altogether?

Point to the empty spaces on the 10 frames, for example,



Record, for example,



Record, for example, 4 and 6 is 10

Record, for example, 14 and 6 is 20

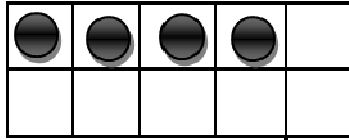
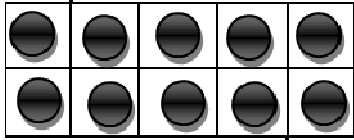
Display the 10 frames, for example,

- ▶ We know there are 20 spaces on two 10 frames.
- ▶ So the 4th question is:
- ▶ How many more to make 20?
- ▶ Are there 6 empty spaces?
- ▶ Do we need 6 more to make 20?

- ▶ So if we have 14, and we need 6 more to make 20, what is 14's friend of 20?
- ▶ Is 14's friend of 20, 6?
- ▶ How could we record this?
- ▶ Could we record our two 10 frames?
- ▶ Could we record the 14 counters in the 10 frames?
- ▶ Could we record our friends of 20 are 14 and 6?

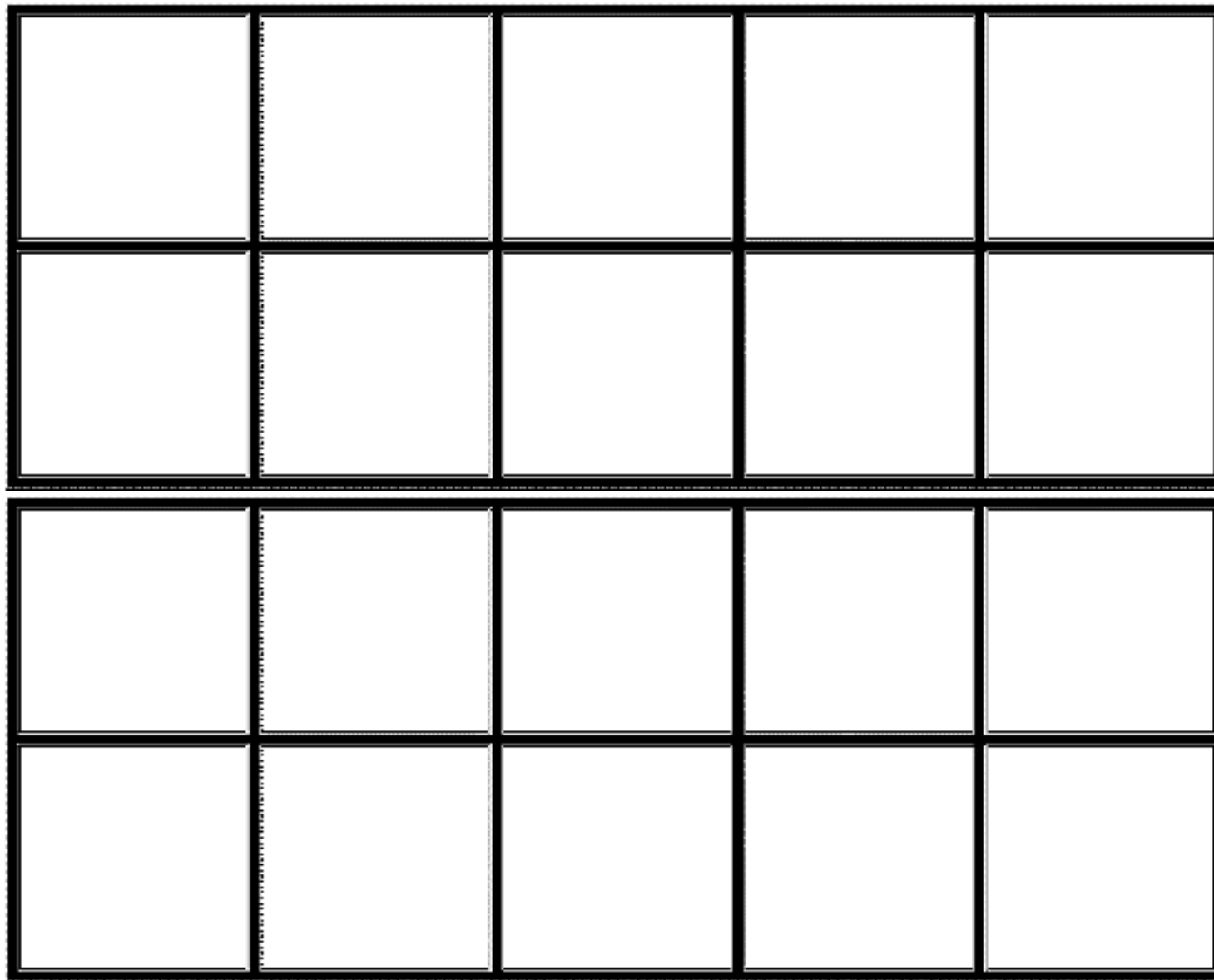
- ▶ Let's look at our friends of 20.
- ▶ Our friends of 20 are 14 and 6.

- ▶ Think about our friends of 10.
- ▶ What is 4's friend of 10?
- ▶ Is 4's friend of 10, 6?
- ▶ And what is 14's friend of 20?
- ▶ Is 14's friend of 20, 6?
- ▶ Let's look at the 10 frame on the right.
- ▶ Are there 4 in the 10 frame on the right?
- ▶ How are friends of 20 like friends of 10?
- ▶ If we have 4, do we need 6 more to make 10?



► If we have 14, do we need 6 more to make 20?

Empty 10 frame (print, cut out and distribute two 10 frames to each child) [back](#)



Numerals 11-19 (print, cut out and distribute to each child)

14	16	17	18
19	15	13	12
11			