Make to Ten

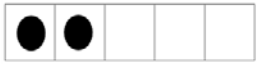
P.2.4

Introduction

Students will recognise and recall collections to 5 and 10 and identify the parts that make the total.

Resources

- Early FISH Kit
- Five frame (blank)
- Double sided counters
- Other counters
- Subitising to 5 - 5 Frames
- Subitising to 5 - 10 Frames
- Paper hands / feet
- Lady Bug Kit
- 2 fly Swats, Large Subitising Cards
- Mini Ten Frame-student kits-(Curriculum Sharing)



Time/Classroom Organisation

This is a small group activity for 6 to 8 students. Allow approximately 15 minutes. When children can confidently name all the combinations to 5 (e.g. 1 and 4; 2 and 3; 1 and 1 and 1 and 2 etc.), introduce the ten frame activities.

Australian Curriculum---Year level Prep

(ACMNA002) Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond
(ACMNA003) Subitise small collections of objects
(ACMNA004) Represent practical situations to model addition and sharing

Proficiency Strand:

Understanding – connecting names, numerals and quantities

Activity Process---Five Frames

1. Show a Subitising to 5 - five frame with 2 dots. Flash the card so that the students cannot count the arrangement. *Ask: How many dots? (2)*

2. Place the five frame with two dots in front of the students. Ask: *How many dots are missing?* (3)

3. *Ask: How can we check? Use counters to fill in the spaces and check the answer. Write the combination: 2 and 3 make 5; or we can write 2+3=5.*

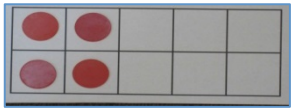
4. *Turn the frame around to show the commutative property of addition (turn-around). 2+3=5 and 3+2=5*

5. Repeat for the other combinations on the five frame.

(Source: E deVries & E Warren)

Activity Process---Ten Frames

1. Show a Subitising to 10 - ten frame with 4 dots. Flash the card so that the students cannot count the arrangement. Ask: *how many dots?* (4)
2. Place the ten frame with four dots in front of the students. Ask: *How many dots are missing?* (6)



3. Ask: How can we check? Use counters to fill in the spaces and check the answer. Write the combination: *4 and 6 make 10*; or we can write *4+6=10.*

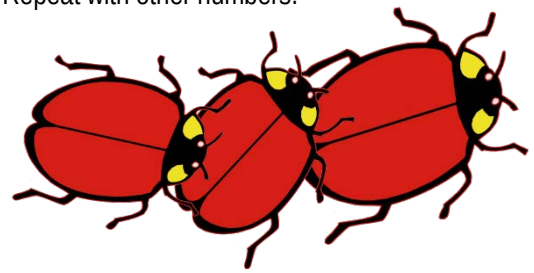
4. Turn the frame around to show the commutative property of addition (turn-around). 4+6=10 and 4+6=10
5. Repeat for the other combinations on the ten frame.

(Source: E deVries & E Warren)

Activity Process---Lady Bug

1. Use the large lady bug as a teaching tool for students to subitise and recognise number combinations to 10.
2. Place the large lady bug on the board. The lady bug has been divided in two by a black line going through the centre. Add to one side a collections of dots e.g. 3.
3. On the other side add another collection of dots. e.g. 3
4. Ask students:
   How many dots are on each side?
   How many dots are altogether?
   How did you work this out?
5. Now rearrange the dots on each side of the ladybug.

6. *Ask students: How many dots are there now? If students have a good conservation of number they will tell you that there are still 6 dots as you did not add any or take any away.*
7. Repeat with other numbers.



Variations & Extensions

1. Class Fly Swat Champion

Have the class sit crossed legged on the floor in two rows facing each other. Place the subitising dot cards in the middle of the two rows. Give the two students at the top of the rows each a fly swat. Call out a number that is on the cards and the student who is first to swat is the winner. The losing student passes their swatter to the person next to them. The winning student plays again. The game continues until everyone in the class has had a turn. Then you will have a class Fly Swat Champion!!

Note: You may wish to paint a fly swat gold and decorate with gems. This is then the special fly swat that the Fly Swat Champion uses in the next game!

Source: E deVries & E Warren, 2011. *Building Mathema/cs in the Early Years.* Oxford University Press: Melbourne

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2. Five frame – blank

- Use the blank five frame. Ask students to make a story to five using counters.

3. Subitise to 5 --- 10 frame

- Use the *Subitise to 5 – 10 frames*. Initially use as a subitising activity – recognising the number without counting.
- When students are confident with this, continue with the activity process as for the five frame.

4. Rabbit ear numbers to 5

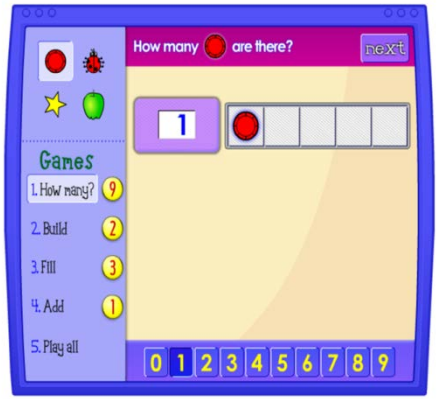
- Ask students to hold up two fingers as "rabbit ears". Say: *Without looking, hold up 3 fingers; show me another way; show me 4 fingers; show me another way.* This is a good way to check that students have an image of what five looks like.

Word Wall: *make to ten, the same as, and, add, how many, altogether, plus*

Thinking Wall:

Digital Resources

http://illuminations.nctm.org/Activity.aspx?id=3564



Contexts for Learning

Play:

Make empty five frames and ten frames, and counters available for students to explore.

Investigation / Real life experience

Focus on a number for the day. During outdoor time, provide containers and ask students to make collections of the number of the day.

Routines and Transitions:

Subitising 5 frame and 10 Frame Flash cards – as students move to another activity ask them to line up and flash them a 5 frame or 10 frame card for them to tell you how many dots they can see.

Assessment

- Threading Cards
- Transition activity – tell me a number story about 5
- First Steps in Mathematics – Diagnostic Task – **How Many** page 92

Source: Steps Professional Development. *First steps in Mathematics – Number Course Book*. ECU: Churchlands, W.A. P92.

Achievement Standard: Make connections between numbers names, numerals and quantities up to 10.

Background Reading

Subitsation is an essential pre---requisite for establishing part---part---total number knowledge for numbers one to five. Students who can subitise do not need to count collections. This understanding supports addition and subtraction as students recognise the parts that make the total e.g. 5 is 2 and 3; or 2 and 2 and 1.

Source: E deVries & E Warren

Group work Checklist

- Be explicit with learners about the quality of group work you want to achieve
- Develop a checklist with learners; display it, large, in the classroom
- Make spot checks, or stop the lesson and ask learners to carry out spot checks, on the quality of group work
- Spend a few minutes before the end of a lesson asking how much group working progress has been made.

Links to Related MAGs

P.1.3 Subitisation

P.3.1 Ten Frames

P.4.4 Addition and Subtraction Stories

1.1.6 Addition and Subtraction Strategies --- 1