Mirror Mirror

A book about doubling numbers one to five

Aim

Mirror Mirror introduces doubling to add numbers up to double five.

These whole-class activities provide students with the opportunity to:

- listen to a story about doubling
- identify examples of doubles in different contexts
- say and read sentences about addition
- use concrete materials and pictures to represent numbers
- explore near-doubles and turnarounds

Activities

1. Listening to the story
2. Using materials to act out the story
3. Using the teaching tool to act out the story
4. Making a doubles display
5. Halving a total – concrete materials
6. Halving a total – pictures
7. Identifying near doubles
8. Examining turnarounds

I. Listening to the story

Resources

- *Mirror Mirror*

Activity

Show the cover of *Mirror Mirror* and read the title aloud. Encourage volunteers to predict what they think the story might be about. Read the story without discussion. Read the story again and ask, **What is happening in the story? What do you see in each picture?** Encourage students to explain that the mirror shows what the kangaroo is holding up so that in each double-page spread there is double the number of items that the kangaroo is holding up. Read pages 4–5 and say, **There is one hat that the kangaroo is holding. There is one more hat shown in the mirror. Double one is two.** Repeat for each double-page spread of *Mirror Mirror*. Afterward, discuss other doubles that the student can see on each page.

2. Using materials to act out the story

Resources

- *Mirror Mirror*
- 10 counters or cubes for each student
- Support 1 (see attached)

Preparation

Make copies of Support 1 so that every student has a mirror picture.

Activity

Read *Mirror Mirror* and at the conclusion of each double-page spread, ask, **What is the number being doubled? What is the total?** Encourage each student to show the double using their counters and copy of Support 1. Invite a student to say the double, for example, "Double one is two."

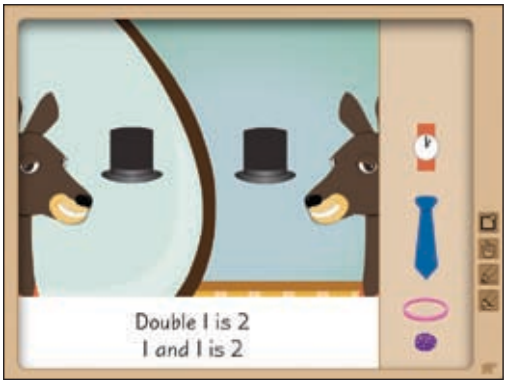
3. Using the teaching tool to act out the story

Resources

- *Mirror Mirror*
- *Teaching Tool*

Activity

Make sure all the students can see the *Teaching Tool*. Read pages 4–5 of *Mirror Mirror*. Ask, **How many hats is the kangaroo holding up? How many hats are shown in the mirror? How many hats can you see in total?** Invite a volunteer to click and drag the appropriate picture onto the work area so that one hat is on the mirror and one is beside the mirror. In the white panel at the bottom of the screen, write, ***Double 1 is 2 and 1 and 1 is 2***, or if you think the students are ready, use the addition and equality symbols in the sentences. Repeat with each double-page spread from the storybook, asking the students to say the double before it is written.



4. Making a doubles display

Resources

- Magazines and store catalogues
- Collection of craft materials
- Large sheet of card or paper
- Scissors and glue

Activity

Discuss the other places where students have seen doubles. Encourage the students to think of doubles for as many numbers as they can. Work with the students to create a wall display of pictures that they draw or find that show doubles. Some examples are:

eyes (double 1)

car wheels or animal legs (double 2)

insect legs (double 3)

spider legs (double 4)

fingers (double 5)

eggs in a carton (double 6)

days in two weeks (double 7)

fingers and toes (double 10)

5. Halving a total – concrete materials

Resources

- 20 counters or cubes for each student

Activity

Distribute the materials then say, **When we double a number it means we have two numbers that are the same. Make a group of eight counters. What number would I double to make eight?** Encourage the students to use the counters to explore their ideas. Bring out the idea that the students need to halve (share into two equal groups) the total. Repeat with other even totals less than 10. To extend the activity, have the students work with even totals up to 20.

6. Halving a total – pictures

Resources

- Groups-of-three cards, domino arrangement cards and odd-and-even arrangement cards for one to five from *The Number Case Year K*

Activity

Distribute one card to each student. The students without a card can be helpers. Explain that the students will hear a number and they have to think of the number that is doubled to make that number. Say, **When I double this number I have eight.** The students should check their cards to see if they have four dots. The first student to raise their hand and show a matching card is the winner. Repeat with other even totals up to 10. Ensure that those students who did not have a card swap roles with someone who did so that everyone has an opportunity to join in the game.

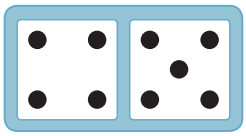
7. Identifying near doubles

Resources

- *Double Nine Dot Dominoes*

Preparation

Select the dominoes that have six or less dots on either end.



Double 9 dot domino

Activity

Distribute the dominoes to the students. Say, **Raise your hand if your domino shows a double.** Ask the students with their hand raised to describe their double and the total. Say, **Everyone else, look at your domino. Does one end of your domino have one extra dot than the other end? Raise your hand if the two numbers on your domino are almost the same like that.** Call on students to describe the numbers on their domino, such as four and five. Confident students may suggest the total and describe how they figured it out.

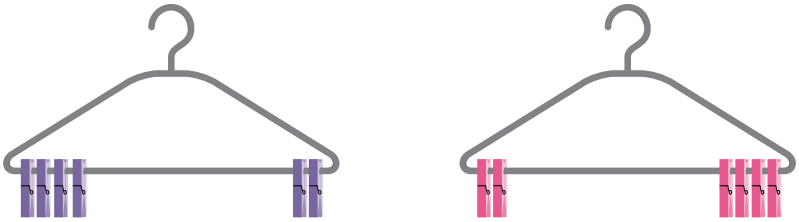
8. Examining turnarounds

Resources

- Coathanger
- Clothes pegs

Activity

Put five clothes pegs on one end of the coathanger and two on the other end. Have the students identify the two numbers that are represented and the total. Write ***5 add 2 makes 7*** on the board. Then turn the coathanger around and ask the students to describe what they see again. Write ***2 add 5 makes 7*** on the board. Say, **Five add two is the same as two add five. We call these turnaround facts.** Repeat with other combinations of pegs that are unequal. Then place two clothes pegs on one end of the coathanger and two on the other. Write ***2 add 2 is the same as 2 add 2*** on the board. Have a student say the fact and the turnaround. Ask, **What do you notice about these turnarounds? What other pairs of numbers will have turnarounds that are the same?** Bring out the fact that all doubles have turnaround facts that are the same.



Mirrors

Support I