Scaredy Cats

A book about combinations of ten

Aim

Scaredy Cats introduces pairs of numbers that have a total of ten.

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

- listen to a story about combinations that make ten
- use concrete materials and pictures to represent numbers
- say and read sentences about addition
- explore totals greater than ten

Activities

1. Listening to the story
2. Using materials to act out the story
3. Matching the story to materials
4. Using the teaching tool to act out the story
5. Identifying combinations for other totals
6. Showing addition in a balance context
7. Identifying odd and even numbers
8. Using multiple addends to make a total
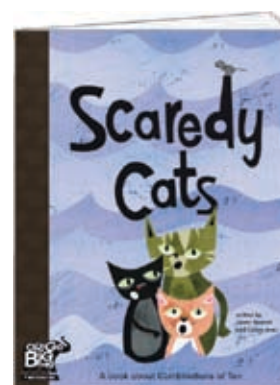
I. Listening to the story

Resources
- *Scaredy Cats*

Activity
Show the cover of *Scaredy Cats* 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 when the ten boxes are in unequal amounts at either end of the boat then the boat tips because it is not balanced. Read pages 8–9 of the story and have the students identify the amounts that are in each pile. Say, **There is a pile of nine boxes and a single box by itself. Nine and one make ten. We can say it another way too. One and nine make ten.** Repeat for each double-page spread of *Scaredy Cats,* leaving pages 6–7 until the end of the discussion. Point out that there are ten boxes at one end of the boat and no boxes at the other end. Say, **Ten and zero make ten.**

2. Using materials to act out the story

Resources
- *Scaredy Cats*
- 20 small boxes

Activity
Place the boxes in a pile. Select two students to sit at either end of a "boat" (e.g. a rug) on the floor. Read pages 6–7 of *Scaredy Cats.* Call on another student to choose ten boxes from the pile. They should give the boxes to one of the students in the boat. Ask, **How many boxes are in this end of the boat? How many are in the other end? Ten and zero make ten.** Have a student remove the boxes from the boat and repeat the process with each double-page spread of *Scaredy Cats.*

3. Matching the story to materials

Resources

- *Scaredy Cats*
- Connecting cubes, 20 cubes in two different colours for each pair of students

Activity

Move the students into pairs and distribute the materials. Read pages 12–13 of *Scaredy Cats*. Have each student connect the cubes to make the two amounts shown on the pages, using one colour for one quantity and the other colour for the other quantity. Have them join the two amounts together and check their partner's work. Repeat with each double-page spread of *Scaredy Cats*.
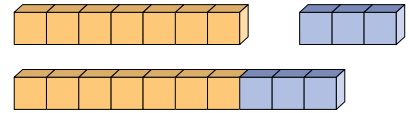
# 4. Using the teaching tool to act out the story

Resources

- *Scaredy Cats*
- *Teaching Tool*

Activity

Make sure all the students can see the *Teaching Tool*. Read pages 12–13 of *Scaredy Cats*. Ask, **How many boxes are in each pile? How many boxes are in the other pile?** Invite a student to click and drag boxes onto the jetty in the work area to make two piles (one near each cat) that match the quantities shown on the pages. Write **7 and 3 makes 10** and **3 and 7 makes 10** in the white panel at the bottom of the screen. Repeat with each double-page spread of *Scaredy Cats*. For each example, erase the numerals in the sentence as appropriate and ask the students to say and write the correct numerals. If the students are ready, use the addition and equality symbols in the sentences.
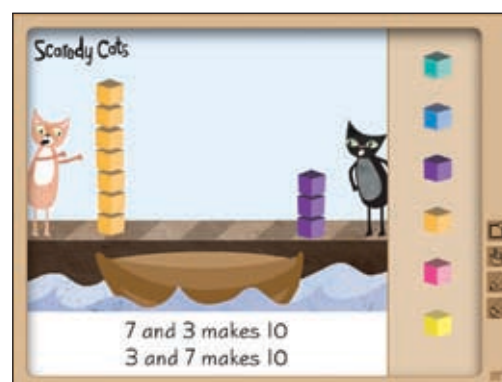
5. Identifying combinations for other totals

Resources
- *Teaching Tool*
- 30 connecting cubes in two different colours for each pair of students

Activity
Make sure all the students can see the *Teaching Tool*. Move the students into pairs and distribute the materials. Say, **Use your cubes to make two numbers that make a total of nine. Make sure you use one colour for one number and the other colour for the other number.** Afterwards, call on students to identify the pair of numbers that they have found. They can use the *Teaching Tool* to demonstrate their thinking. Write the combinations in the white panel at the bottom of the screen. Invite the students to point out any pairs that are turnarounds. Repeat with other totals between five and fifteen.

6. Showing addition in a balance context

Resources
- *Flare Pan Balance* or a pan balance with weights

Activity
Create a *Flare* file with one pan balance and weights as shown below. Go to the Setup menu and change Simulation to Stylized – this will make it easier for the students to see when the pan balance is uneven.

The weights can be described as bags or suitcases. Say, **In each bag there are some small boxes. The number on the outside of the bag tells how many boxes are inside. The green bag has ten boxes inside.** Place the "7" weight on the other pan and ask, **What other bag can we put next to 7 so that the pans become level?** Invite a student to demonstrate their thinking. Repeat with other weights but keep a total of ten. Create another "5" weight once the students identify it is needed. Use the pencil tool to write words which indicate the balance aspect, e.g. "same as" or "balances." If the students are ready, use the addition and equality symbols in the sentences. To extend the activity, use totals between five and fifteen, or place the green weight on the left side of the pan balance.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
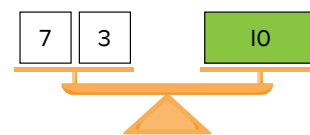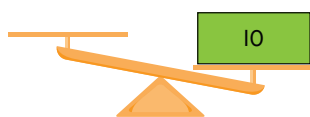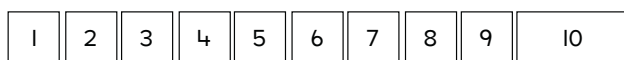
7 and 3 is the same as 10

7. Identifying odd and even numbers

Resources
- Ten-frames from *The Number Case Year K*
- 20 counters or cubes in two different colours for each pair of students

Activity
Ensure every pair of students has a ten-frame. One student in each pair should place four counters of one colour on the ten-frame, starting from the bottom as shown below left. Their partner can then place more counters of another colour to fill the ten-frame. Both students should say the number fact that the ten-frame shows: Four and six makes ten. Say, **Look at the four counters. Each counter in one column has a partner in the other column. Look at the six counters. Does every counter have a partner there too? When every counter has a partner we say the number is an even number. So four is an even number and six is an even number.**

Ask the students to remove the counters. Have them arrange seven and three counters on the ten-frame as shown below right and then say the matching number fact. Say, **Look at the seven counters. Does every counter have a partner the same colour? There is one counter that does not have a partner the same colour. Look at the three counters. There is one counter that does not have a partner the same colour. When there is one counter with no partner we say the number is an odd number. So seven is an odd number and three is an odd number too.** Repeat the discussion with other combinations and have the students identify the odd and even numbers. Discuss how an odd number has to "team up" with another odd number to make ten, and even numbers have to "team up" with other even numbers to make ten. Challenge the students to try combining an odd and an even number together to make ten. Invite individuals to share and explain their findings.
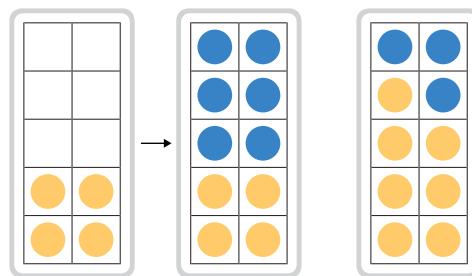
8. Using multiple addends to make a total

Resources
- 20 counters or cubes for each student
- *Teaching Tool*

Activity
Make sure all the students can see the *Teaching Tool*. Have the students make a group of ten counters. Direct them to split the ten counters into two groups and call on individuals to identify the amounts they have made. Say, **Make a group of ten counters again. Now split the ten counters into three groups.** Encourage individual students to use the *Teaching Tool* to demonstrate their combinations. Write matching sentences in the white panel at the bottom of the screen. Point out that one combination can be written a few different ways. For example, *5 and 3 and 2* is the same as *3 and 2 and 5.* To extend the activity, have students explore other totals between five and fifteen. They could also split totals into four parts.