

Addtron

A book about using doubles to add






Aim

Addtron introduces the strategy of doubling to add. From this introduction, students use concrete materials and pictorial representations to add doubles and near doubles.

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

- listen to a story about doubling to add
- use materials to act out the story
- use the *Teaching Tool* to act out the story
- use concrete and pictorial materials to make and add doubles
- use the *Teaching Tool* to match double number facts with double displays
- use pictorial materials to sort and add doubles and near doubles

Activities

1. Listening to the story
2. Using materials to act out the story
3. Matching doubles in the story with doubles dominoes
4. Using the teaching tool to act out the story 
5. Making a doubles display
6. Using materials to show doubles
7. Using the teaching tool to make doubles 
8. Using the teaching tool to represent doubles number facts 
9. Sorting doubles
10. Sorting dominoes that show double-plus-1 facts

1. Listening to the story

Resources

- *Addtron*

Activity

Show the cover of *Addtron* to the students and read the title aloud. Encourage volunteers to predict what they think the story might be about. First, read the story in its entirety. Do not stop to discuss the pictures. After reading the story ask, **What happened in the story? What did you see in the pictures?** Encourage students to explain that the robot was adding doubles. Read the story again and at the conclusion of each picture spread have students identify the number that is being doubled. Extend the discussion by asking, **Can you see any other doubles in the picture?** For example on pages 4–5, they could say that the legs or bells on the clocks show double four.

2. Using materials to act out the story

Resources

- *Addtron*
- Connecting cubes

Preparation

Each student will need 20 connecting cubes — ten each of two colours.

Activity

Read *Addtron* and at the conclusion of each double-page spread, ask, **What is the number that is being doubled? What is the total?** After students have identified the number that is being doubled, have them use their cubes to show the double. Then say, for example, **Double five is ten.** Repeat for each double-page spread of *Addtron*.



Double 5 is 10



3. Matching doubles in the story with doubles dominoes

Resources

- *Addtron*
- *Double-Nine Dot Dominoes*

Preparation

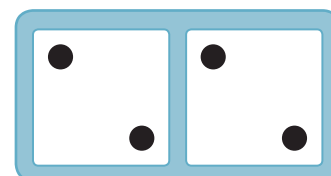
Select the dominoes showing double 1 to double 9 from the set of *Double-Nine Dot Dominoes*.

Activity

Discuss the doubling scenario on pages 4–5 of *Addtron*.

Display the doubles dominoes and have a volunteer find the domino that matches the picture. Hold the domino up and say, **Double two. What is the total? How do you know?**

As students say the total, ensure they explain how they figured it out. Repeat for all the doubles in the story.



Double 2 is 4

4. Using the teaching tool to act out the story



Resources

- *Teaching Tool*
- *Addtron*

Activity

Ensure that all the students can see the *Teaching Tool*. Read pages 4–5 of *Addtron*. Ask, **What double do you see in this picture?** Invite a volunteer to use the *Teaching Tool* to represent the double. For this scenario, the student would drag two characters onto each side of the work area. Say, **Double two. What is the total? How do you know?** Next, select another student to use the writing tool to write the matching number sentence in the white panel at the base of the screen, for example $2 + 2 = 4$. Repeat for all the doubles in the story.



5. Making a doubles display

Resources

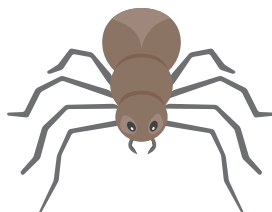
- Art paper
- Crayons
- Permanent markers

Activity

Ask the students to think of objects, places, and animals that show doubles. Examples might include the legs on a spider (double 4), insect legs (double 3), and the legs of a horse (double 2). Encourage them to think about body parts and vehicles too. Ask them to draw a picture of each different doubles representation they know and then write the matching number sentence below each picture. Work with the students to create a classroom doubles display with all the pictures.



$$1 + 1 = 2$$



$$4 + 4 = 8$$



$$5 + 5 = 10$$

6. Using materials to show doubles

Resources

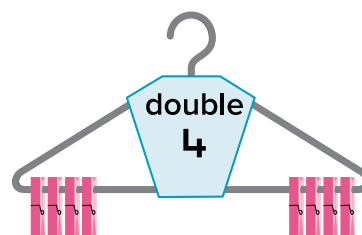
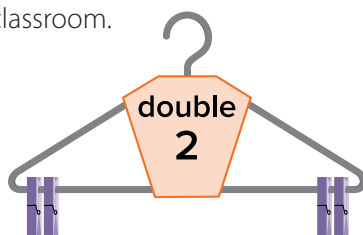
- Support 1 – see attached
- Large permanent marker
- Clothes pegs
- Wire coathangers

Preparation

Print copies of Support 1 and cut out the coathanger collars. Use the large felt marker to label each collar with a double from double 1 to double 9. Each group of students will need two or three labelled coathangers and some clothes pegs.

Activity

Provide each group of students with the doubles coathangers. Ask students to arrange the clothes pegs on the hangers to show each double. The completed doubles can be hung around the classroom.



7. Using the teaching tool to make doubles

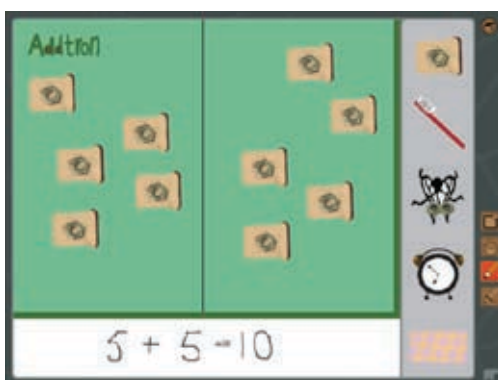


Resources

- *Teaching Tool*

Activity

Ensure that all the students can see the *Teaching Tool*. Invite a volunteer to drag several characters onto one side of the work area. Then have another student drag the matching number of characters onto the other side. Point to each side and ask, for example, **How many pieces of toast on this side? What is the total? How do you know?** Once the double and total have been identified, invite a student to use the writing tool to write the complete the number sentence in the white panel at the base of the screen, for example $5 + 5 = 10$. Repeat for other doubles that the students choose.



8. Using the teaching tool to represent doubles number facts



Resources

- *Teaching Tool*

Activity

Ensure that all the students can see the *Teaching Tool*. Invite a volunteer to use the writing tool to write a double fact in the white panel at the base of the screen, for example $7 + 7 = 14$. Next, ask another student to represent the double fact on the *Teaching Tool*. For this fact, the student would drag seven characters onto each side of the work area. Repeat for other doubles facts that the students write. Extend the activity by writing only the total of the double in the white panel, for example $___ + ___ = 10$. Challenge the students to use the *Teaching Tool* to show the double and complete the number sentence.



9. Sorting doubles

Resources

- *Double-Nine Dot Dominoes*
- Blank cards
- Permanent markers
- Blu-Tack

Preparation

Separate the dominoes so that each group of students has a similar quantity that includes at least one double domino. Each group of students will also need some blank cards and a felt marker.

Activity

Ask the students to find any doubles among their dominoes. Next, for each double domino, have the students write the matching number sentence on a blank card. Then ask, **Who has the domino that shows double zero?** Have a student from that group use Blu-Tack to attach the domino and the number sentence card (side by side) to the board. Continue until all the doubles are attached to the board. Then discuss the results. Ask questions such as, **What patterns do you see? What double would come next? What would that number sentence look like?**

10. Sorting dominoes that show double-plus-1 facts

Resources

- *Double-Nine Dot Dominoes*
- Blu-Tack

Preparation

Separate the dominoes so that each group of students has a similar quantity that includes at least one domino showing a doubles fact and one domino showing a double-plus-1 fact.

Activity

Ask the students to find any doubles among their dominoes. Talk about the doubles and encourage students to say that each end of the domino has the same number of dots. Next, select a double domino, for example $2 + 2$, and attach it to the board. Challenge the students to find a domino that has one more or one less dot, for example $2 + 3$ or $2 + 1$. As each domino is found, have a student attach it to the board to the left or right of the double domino. Point to each domino in the sequence and ask, **What number sentence can we write to match this domino?** Repeat for the remaining doubles and double-plus-1 facts.



Coathanger Collar

