

Bond Blocks Support Book: Tier Two & Three Intervention Implementation

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- General Implementation Instructions
- Tier Two and Three Intervention Implementation
- Tier Two and Three Intervention Implementation Planner

Introduction

Response to Intervention

The Bond Blocks System has been designed to be implemented at a whole school level. Implementation occurs at three different levels in line with a Response to Intervention process of instruction.

Tier One

Firstly, Bond Blocks Core KS is implemented at a tier one whole class level as part of a whole school approach to teaching addition and subtraction including word problems and related operations. Working in Years 1 to 3.

- Bond Blocks typically requires three, 8 minute sessions per week as part of the mental maths and warm up program. There are a small number of Core Lessons that require three, forty minute sessions per week.
- For whole class implementation classrooms need one set of wooden bond blocks per pair of students.

Tier Two and Three

Secondly, the Bond Blocks Core KS is implemented at tier two and three as an intervention program for students at Years 1 to 3 who have specific difficulties with foundational addition and subtraction. For example, students who count to add or subtract.

- Intervention using the Bond Blocks Core KS requires four, 10 minute sessions per week.
- Tier Two intervention is run in small groups of four students.
- Tier Three intervention is run in an individual intervention program with either one or two students.
- In an intervention setting, students need one set of blocks each to practise time on task.

Prevention is better than a cure

Using the Bond Blocks system as a whole school approach from years 1 to 3 ensures basic addition and subtraction facts along with word questions are taught in a systematic manner. This will help reduce the number of students requiring tier two and tier three intervention.

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General Implementation Instructions

Activity Boards

Every Bond Blocks Core Activity is completed on one or more boards.

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Tier Two and Three Intervention Implementation

Tier Two and Three Intervention Implementation

- The Tier Two and Three Implementation Planner has been written for Intervention Implementation in Year 1 to 3.
- The planner is a guide. Please use teacher judgement to adapt the implementation to suit students.
- For tier two intervention groups of four students are used.
- For tier three intervention students work individually with a teacher/teacher assistant or their partner. Occasionally, two students can work as a pair, overseen by the teacher/teacher assistant. It is appropriate for students to work as a pair if they are a similar age, achievement level and work effectively together.

Please note that for consistency when reading the term 'teacher' has been used. This includes education assistants who are implementing intervention.

Tier Two and Three Intervention Routine

Intervention with Bond Blocks requires four, ten-minute sessions a week. This is the high impact teaching strategy of multiple exposures.

During these four weekly sessions:

- Sessions 1 and 3 are on the activity that is the focus of the week.
- Session 4 is a review of a previously completed activity.

The first three sessions of the week, on the focal activity, follow this structure:

- Session 1:** Students watch the video with their teacher. The teacher addresses one key message from the video. For example, specific language. The students complete the activity once.
- Session 2:** The teacher starts the session by restating the one key message they will be looking for while the students are working. Students repeat the activity to develop fluency.
- Session 3:** The teacher states the mathematical focus for the activity (stated on the web page). For example, 'In this activity we are thinking about the ten-pair bonds of 8'. Students repeat the activity again.

During these sessions, variations or changes to the activity are kept to a minimum. This helps students develop fluency. After students are fluent repeating an activity then changes are introduced to help generalisation.

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Tier 2 & 3 Intervention Implementation Planner

Chapter 1	Counting to 10 and 20	Activities 1 to 6
Chapter 2	Bonds of 5	Activities 7 to 10
Chapter 3	Doubling and Halving to 10	Activities 11 to 20
Chapter 4	Five Plus Bonds	Activities 21 to 25
Chapter 5	Bonds of 10	Activities 26 to 30
Chapter 6	Bonds of 4 and 7	Activities 31 to 40
Chapter 7	Ten Plus Bonds (8 and 2)	Activities 41 to 49
Chapter 8	Bonds of 8 and 9	Activities 50 to 60
Chapter 9	Ten Plus Bonds (9 and 1)	Activities 61 to 68
Chapter 10	Doubling and Halving to 20	Activities 69 to 81
Chapter 11	Bonds of 11 to 20	Activities 82 to 91

Differentiating Activities

The Tier 2 & 3 Intervention Implementation Planner does not contain seek numbers, but as a guide, each row is equivalent to one week. Students requiring intervention may take longer than one week to complete an activity. Please refer to the Tier Two and Three Intervention Implementation Instructions under the heading of 'Intervention is Differentiated'.

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Bond Blocks Support Book – Tier Two and Three Intervention Implementation

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Thank you for purchasing Bond Blocks.

We hope they help build

Curiosity,
Connections and
Confidence with maths.

- Narelle and Paul.

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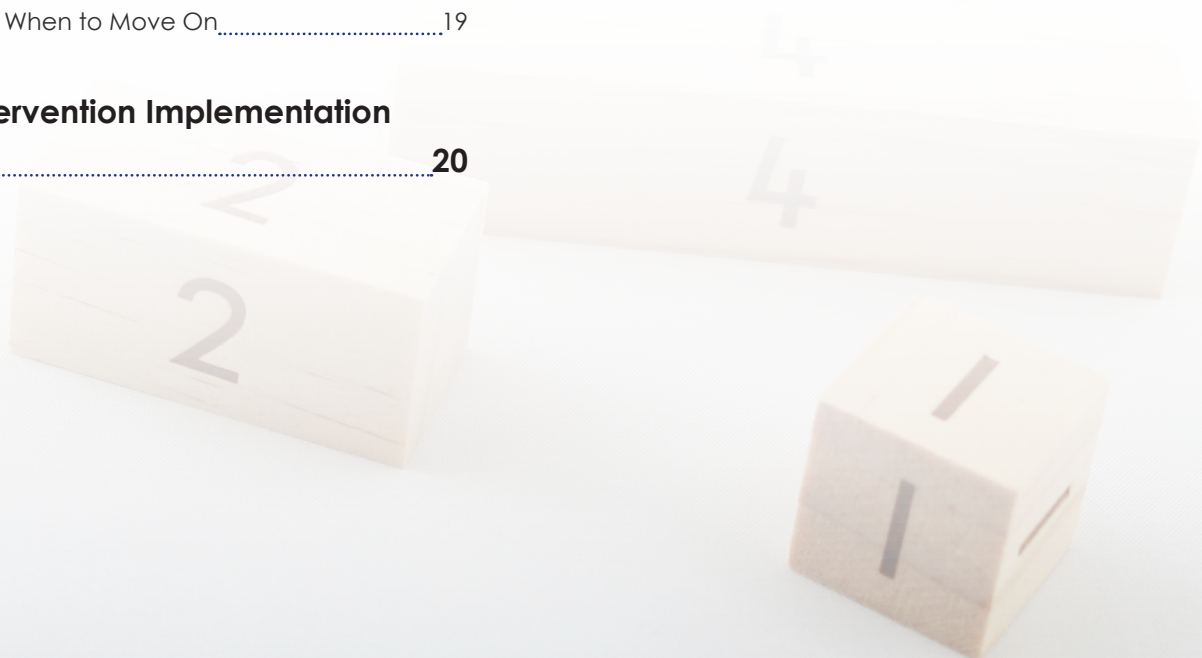
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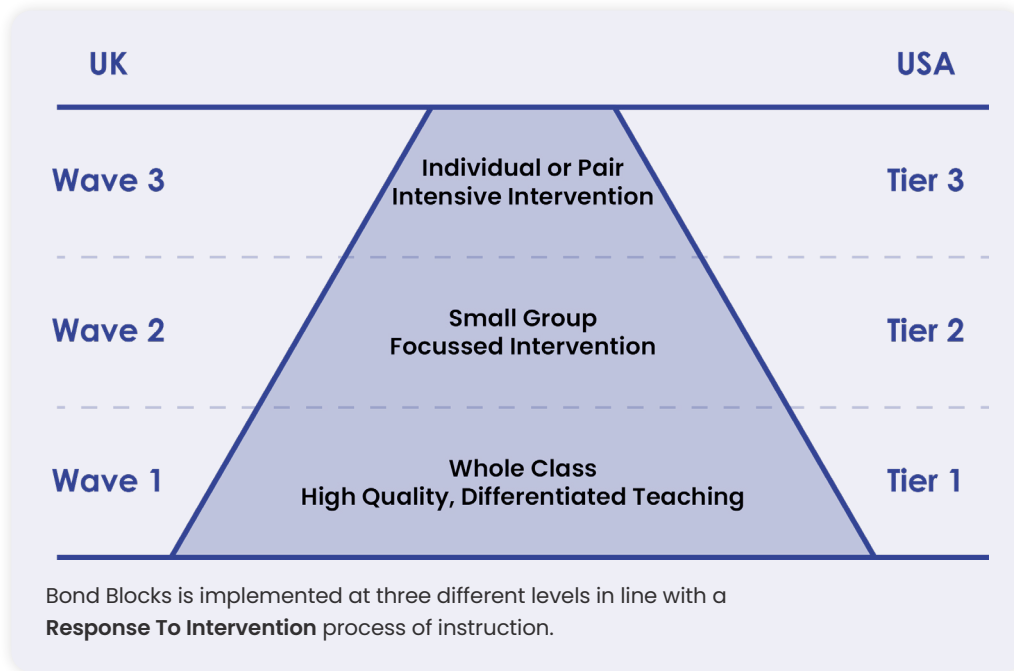
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Response to Intervention

The Bond Blocks System has been designed to be implemented at a whole school level. Implementation occurs at three different levels in line with a Response To Intervention process of instruction.



Tier One

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- Bond Blocks typically **requires three, 8 minute sessions per week** as part of the mental maths and warm up program. There are a small number of Core Lessons that **require three, forty minute sessions** per week.
- For whole class implementation classrooms need one set of wooden Bond Blocks per pair of students.

Tier Two and Three

Secondly, the Bond Blocks Core Kit is implemented at **tier two and three** as an **intervention program** for students in Years 1 to 6 who have specific difficulties with foundational addition and subtraction. For example, students who count to add or subtract.

- Intervention using the Bond Blocks Core Kit requires **four, 10 minute sessions per week**.
- Tier Two Intervention is run in small groups of four students.
- Tier Three Intervention is run as an individualised intervention program with either one or two students.
- In an intervention setting students need one set of blocks each to maximise time on task.

Prevention is better than a cure

Using the Bond Blocks system as a whole school approach from years 1 to 3 ensures basic addition and subtraction facts along with word questions are taught in a systematic manner. This will in turn reduce the number of students requiring tier two and tier three intervention.

Tier Two and Three Intervention Implementation

This is an Implementation Guide for using Bond Blocks at tier two and three.

There is a separate Implementation Guide for using Bond Blocks at tier one.

Chapter 1

Counting to 10 and 20

Activities 1 to 5

Chapter 2

Bonds of 5

Activities 6 to 10

Chapter 3

Doubling and Halving to 10

Activities 16 to 20

Chapter 4

Five Plus Bonds

Activities 21 to 25

Chapter 5

Bonds of 10

Activities 26 to 33

Chapter 6

Bonds of 6, 7, 8, 9

Activities 34 to 40

Chapter 7

Ten Plus Bonds

Activities 41 to 56

Chapter 8

Doubling and Halving to 20

Activities 57 to 63

Chapter 9

Bonds of 11 to 20

Activities 64 to 71



Activity Boards

Every Bond Block Core Activity is completed on one or more boards.

a. Activity number points to **6**

b. Chapter title points to **Bonds of 5 Building a Wall**

c. Mathematics points to **Bonds**

d. Activity type points to **Section One**

e. Differentiation points to **Core**

f. Write and Wipe points to **1 Player**

g. Number of players points to **1 Player**

h. Teacher instructions points to the **Aim** and **Materials** sections.

i. Mathematical language points to the **Section Three: Instructions** section.

The activity board includes:

- Section One:** A grid for building a wall of 5.
- Section Two:** A grid for identifying rows that contain the same blocks.
- Section Three:** A 'Part-Part-Whole' diagram for the number 5, showing different combinations of blocks that sum to 5.
- Aim:** To identify all of the two-part bonds of 5. To use the commutative property of addition to identify equivalent bonds of 5.
- Materials:** An activity for individuals. Each student needs: Two of each Bond Block from 1 to 5 placed in a jumbled pile within reach of the student. One dry erase marker and write and wipe sleeve.
- Section One: Instructions:**
 - Build a Wall of Five:** Place the 5 block, the whole, horizontally in front of the student, on the top row of frame on the activity board. Use every block to build a wall of 5. Each row must be:
 - The same length as the five.
 - Made of either one single block or two blocks bonded (joined) together.
 - Different, if made of two blocks.
 - Order the Wall of Five:** Rearrange the rows of the bond wall into counting order. Discuss: "How do you know you have found all the two-part bonds of five?"
 - Verbalise the Two-Part Bonds of Five:** Verbalise the two-part bonds of five whilst pointing to the related blocks. For example, "Zero and five is five". "One and four is five".
- Section Two: Instructions:**
 - Commutative Property of Addition:** Identify rows that contain the same blocks, but are arranged in a different order. Separate the wall into two smaller walls to do this. Move the rows from the separated wall to the frame, next to the rows from the original wall, which contain the same blocks but arranged in a different order. Define the commutative property of addition, changing the order of the parts (blocks within a row) does not change the size of the whole. Swap the order of the blocks in each row to make them the same. Verbalise the commutative property of the two-part bonds of five whilst pointing to the related blocks in each row. For example, "two and three is equal to three and two".
- Section Three: Instructions:**
 - Part-Part-Whole:** Define the top row of the frame as the whole.
 - Place one row of blocks from Section Two in the part section, bottom row, of the frame.
 - Fill in the part-part-whole diagram to represent this build.
 - Rearrange the order of the parts and fill in the other part-part-whole diagram.
 - Repeat this for each row of blocks in Section Two.
 - Explain that knowing the commutative property of addition halves the number of bonds to be remembered. Cross out one part-part-whole diagram in each pair.

a. Activity Number

Activity boards are numbered from 1 to 71.
However, some activity numbers are repeated where sections span multiple boards.

b. Chapter Title

The Chapter Title for this activity board identifies the set of bonds being focussed on.

c. Mathematics

This part of the activity board title indicates the mathematics involved. The mathematics is elaborated on the activity's web page. These can be used to create specific learning intentions.

d. Activity Type

Bond Blocks chapters feature a similar progression of activities. These are identified here.

e. Differentiation

The activity boards are differentiated.



- **Core** Activity boards have the rotated square coloured in black.
- The icon is for '**a little easier**' board has the left arrow in black. Not all students will use this board.
- The icon is for '**a little harder**' board has the right arrow in black. Not all students will use this board.

f. Write and Wipe

The 'Write and Wipe' symbol indicates that a dry erase marker and write and wipe sleeve are needed for this activity board to complete the written component.

g. Number of Players

Approximately one-quarter of the activities are individual. One Player activities are often split into sections.

Approximately three-quarters of the activities are paired activities. Two Player activities are usually very quick and can be completed in 3 minutes. Students will be able to play multiple rounds in the eight minute session.

h. Teacher Instructions

The lightly shaded part of the board, with very small font, is for the teacher. This section contains the Activity:

- Aim
- Materials
- Instructions

i. Mathematical Language

The mathematical language to be used is specified on every board in ***italics bold*** in the Instructions written on the board. It is also listed on the web-page of each activity.



Activity Web Pages

Each activity has its own web page that contains:

- A **video** modelling the activity. These have been made to show to the students so that they receive consistent teaching from year to year.
- **Activity notes** specifying the **mathematical concepts** and **mathematical language**.
- **Differentiation** suggestions to make the activity either a little easier or a little harder.
- Links to relevant pages of **Teacher Notes** for more in depth information about the mathematical concept. These are useful for ongoing professional learning.

Scroll down below the video on each activity web page to find these resources.

6) Bonds

Bonds of 5: Building a Wall

SECTION 1A

SECTION 1B

SECTION 1C

SECTION 2

SECTION 3

PREVIOUS 5) Identifying Numbers 6 to 10

NEXT 7) Fluency

Mathematics

Develop the concept of:

- The whole of 5 being equal to two parts joined together.

whole

part part

two-part bond

The two parts bond (join) together to become equal to the length of the whole.

Two-Part Bonds of Five

5	"0 and 5 is 5"
1 4	"1 and 4 is 5"
2 3	"2 and 3 is 5"
3 2	"3 and 2 is 5"
4 1	"4 and 1 is 5"
5	"5 and 0 is 5"

- The Commutative Property of Addition: swapping the order of the parts does not alter the size of the whole. For example, changing the order of the parts of 3 and 2 to 2 and 3 does not alter the size of the whole.

Swap to make 2 and 3

Swap to make 3 and 2

- Mathematics as the science of pattern.

Language

- "(Part) and (part) is (whole)", eg "4 and 1 is 5"
- addition as "and" when joining parts
- equals as "is", "is equal to"
- bond
- too long, too big, too short, too small
- commutative property
- row (horizontal)

Core Activity Support Materials

6 Bonds of 5: Bonds Building a Wall

Section One

Section Three

6) Bonds

Bonds of 5: Building a Wall

Differentiation

Click to open answers in a new tab.

A little easier

Scaffold finding the Bonds of 5 in counting order

- Place the 5 block horizontally in front of the student.
- Then place the 1 block below the 5. Ask the student, "Which number joins with 1 to make it the same length as 5?" Model saying the bond, whilst touching the related blocks, "Yes, 1 and 4 is 5".
- Repeat this process with each block from 2 to 5 until the whole wall is formed.

Scaffold discussing the commutative property of addition

- Focus on one two-part bond at a time. Use the 5 block as the whole.
- Begin with the bond of 1 and 4. Place both rows of related two-part bonds beneath the whole. Then rearrange the parts within each row to make their order the same.

Swap to make 1 and 4

Swap to make 4 and 1

- Repeat for the bond of 2 and 3.

Swap to make 2 and 3

Swap to make 3 and 2

A little harder

Develop fluency recalling two-part bonds of five

- The student builds a wall of five that is not in consecutive order.
- One block from each row is removed whilst the student closes their eyes.
- The student identifies the missing block in each row.

Three-part bonds of five

whole

part part part

three-part bond

- Build each row with three blocks.
- Identify which two-part bonds are similar to related three-part bonds. For example, 2 and 3 can be partitioned to become 1+1+3.
- Rearrange the three-part bonds to reinforce the commutative property. For example 1+1+3 is equal to 1+3+1 and 3+1+1

related bonds

rearrange three-part bonds

Take Out the Specified Blocks Only

Every Bond Block Core Activity Board can be completed with one set of wooden Bond Blocks. On each activity board there is a “Materials” heading that lists the specific blocks needed for that board. Students should begin by taking out the blocks listed on the activity board under the heading Materials and ONLY these blocks. After this students should shut the lid on the case so they cannot access the other blocks. Some students find storing the box of blocks on the floor under their chair whilst they are completing the activity helps to reduce visual distraction.

If students do not follow this routine they can become distracted and build towers with the blocks instead of focusing on the activity. Also, many of the activities require the students to use every block listed under the Materials heading on the board. If students have access to the whole box of blocks the activity won't work.

27 Bonds of 10 Filling a Wall
Fluency
2 Player

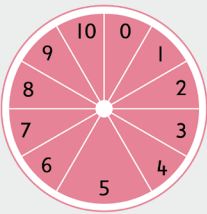
Player 1

Player 2

Aim
To build the most bonds of ten in 3 minutes, making the largest number.

Materials
A game for pairs. Each pair needs:
• Two of each bond block from 1 to 10 and both blank 5 blocks placed in a jumbled pile within reach of both players.
• One dry erase marker.

Instructions
Player One:
• Flick the spinner and uses this number to make a bond of ten.
• Say the bond.
For example: “6 and 4 is 10”. Note, “6 is 10” is also correct.
• Collect both bond blocks and place them on their frame. It does not matter if the blocks are placed as 4 and 6 or 6 and 4 because of the commutative property of addition.
Player Two has their turn.
If a player spins a number and there are no blocks left to collect, they say the bond but do not collect any blocks.
Players can collect the same bond more than once.
The game ends after 3 minutes or when there are no blocks left to collect.



At the end of the game the players:
• Tell their partner how many tens they have.
For example, “I have 4 tens”.
• Circle their score on the number grid and read the number.
For example, “I have 40”.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

“A game for pairs. Each pair needs:

- Two of each Bond Block from 1 to 10 and both blank 5 blocks placed in a jumbled pile within reach of both players.”

The materials list will often specify placing the specified blocks required for the activity in a “jumbled pile”. Following this instruction is essential. If the specified blocks are taken out of the box and placed on the desk ready for play, in the same order as they were in the box, the students will not have to do any thinking. The blocks will already be organised in the two-part bonds for them!

Packing Away

It is important that the students are taught to pack away the blocks at the end of the activity. The template inside the box was included to help make sure every block is returned to the box at the end of the activity.

Initially students will need help but eventually they will grow in independence and be able to do this by themselves. Students will need to be taught to do the clips up on the box after packing away, otherwise all the blocks will end up on the floor when they pick up the block case. They quickly learn to listen for the ‘click’ noise of the clips securing shut.

Packing away the blocks helps students develop consideration for others who will use the blocks after them and for their environment.



The template inside the box includes numbers and lines to help students place the blocks away in the correct places.



Printing Activity Boards

Print the A3 Activity Boards for student use from the PDF file located on the **wooden thumbdrive**.

Please save this onto your school drive. When printing please:

- Use **colour**. The system is colour coded. Do not print in black and white.
- Ensure your printer is set to **'actual size'** or **'100% scale'**. If it is set to the default 'shrink to fit' the boards will look right until you put the blocks on. Then you will realise they don't fit.
- Print 1x number of students for **Individual Activity Boards**. For example, 24 of each.
- Print half x number of students for **Pair Activity Boards**. For example, 12 of each.

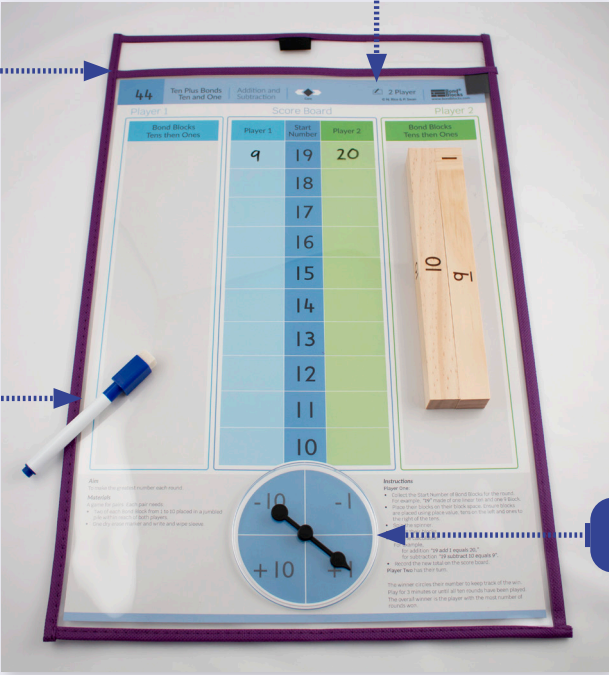
Write and Wipe Sleeves

Place the printed copies of the activity boards that students use inside a write and wipe sleeve.

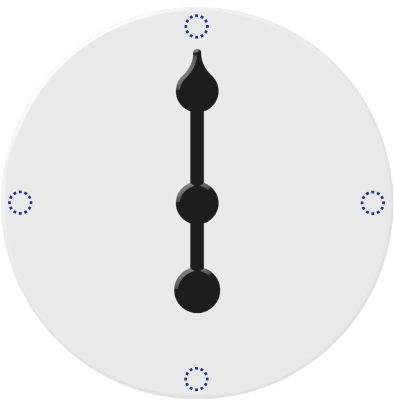
The 'Write and Wipe' symbol indicates that a **dry erase marker and write and wipe sleeve** are needed for this activity board as it contains a written component or makes use of the pen in some way.

Write and Wipe Sleeve

Write and Wipe Pen



Plastic Transparent Spinner



Spinners

Included with each spinner are four silicone feet. Place these at 12, 3, 6 and 9 o'clock positions. These feet 'stick' to the plastic on the write and wipe sleeve and stop the spinner from sliding around when it is flicked.

Tier Two and Three Intervention Implementation

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- **The planner is a guide.** Please use teacher judgement to adapt the implementation to suit students.
- For tier two intervention groups of four students are ideal.
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Tier Two and Three Intervention Implementation Planner

Please note that for consistency when reading the term “teacher” has been used. This includes education assistants who are implementing intervention.

Tier Two and Three Intervention Routine

Intervention with Bond Blocks requires **four, ten-minute sessions a week**. This is the high impact teaching strategy of multiple exposures.

During these four weekly sessions:

- **Sessions 1, 2 and 3** are on the activity that is the focus of the week.
- **Session 4** is a review of a previously completed activity.

The first three sessions of the week, on the focus activity, follow this structure:

- Session 1:** Students watch the video with their teacher. The teacher reinforces one key message from the video. For example, specific language. The students complete the activity once.
- Session 2:** The teacher starts the session by restating the one key message they will be looking for while the students are working. Students repeat the activity to develop fluency.
- Session 3:** The teacher states the mathematical focus for the activity (stated on the web page). For example, “In this activity we are thinking about the two-part bonds of 6”. Students repeat the activity again.

During these sessions transitions or changes in the activity are kept to a minimum. This helps students develop fluency. After students are fluent repeating an activity then changes are introduced to help generalisation.



Session Four

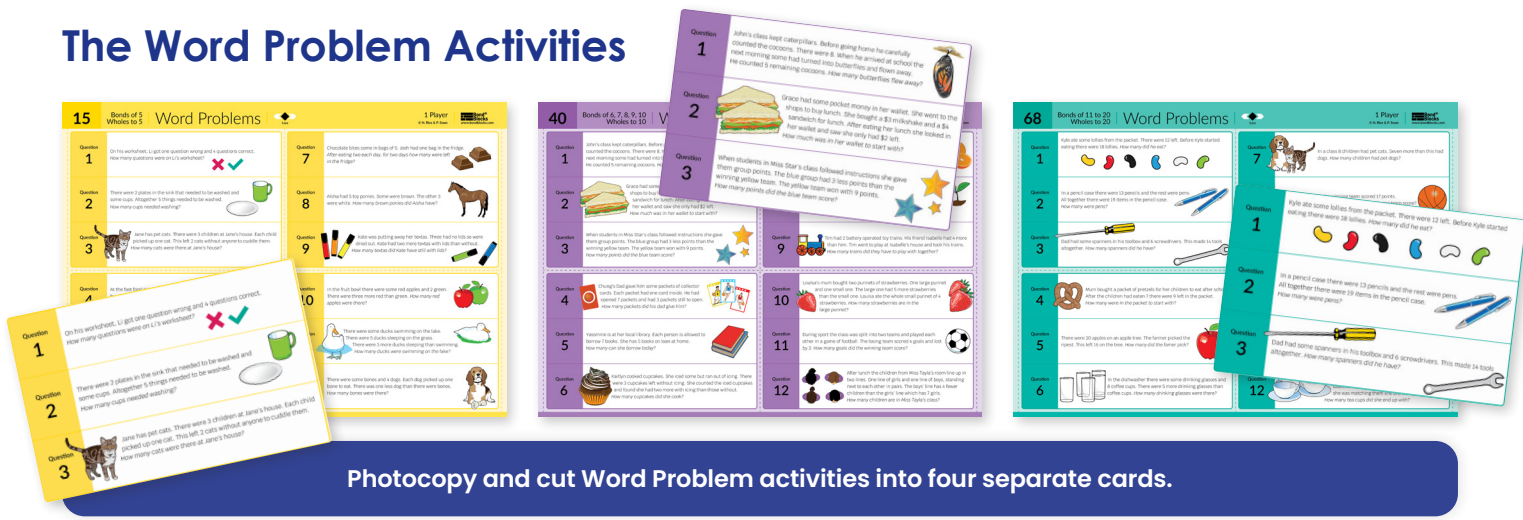
Students who require intervention often have difficulty retaining knowledge. This fourth session is essential to help them maintain fluency with concepts they have already mastered.

The activities chosen for the fourth session are up to the discretion of the teacher. They could be from the same chapter, a different chapter, a similar type of activity or a different type of activity.

Some reasons informing the choice of this fourth activity could be:

- **Variety.** If the focus activity of the week is a little dry, such as Equation Building, an exciting activity such as Fluency Racing game is a great choice.
- **Pre-loading.** If the activity next week is Building a Bond Wall for Bonds of 6, then reviewing the previously completed activity Building a Bond Wall for Bonds of 10 will prepare students for what to do in next week's focus activity.
- **Reviewing.** To maintain fluency recalling bonds, especially when applied to subtraction, students need ongoing practice. For example, if students were working in a Doubling and Halving chapter, which tends to be quite 'light', reviewing a previous subtraction activity from a prior bond chapter would help to maintain fluency.
- **Consolidating.** Some concepts, such as Missing Number Equations and Word Problems, are much more difficult than others because they involve higher-order thinking concepts. After these have been completed in the week as a focus activity, students who require intervention will most likely still not be able to complete these without support. After one week of focus students will most likely need a break. Coming back to these activities in the future will help students develop understanding of these difficult concepts.

The Word Problem Activities



The Word Problem Activity Card must be cut into four separate cards. The questions increase in difficulty.

For Intervention complete the first one or two cards (questions 1 to 6) when the activity is first introduced. This will be the first three sessions of that week. Use the other cards later, during the fourth session of activities from other chapters.



1 Player Activity Boards

Approximately one-quarter of the activities are individual. One Player activities are often split into Sections. Usually, each section has its activity board. For example, activity 16.

One Player activities are often split into sections. In an Intervention Setting students complete **one section each week**.

16

Doubling and Halving to 10
Building a Wall

Bonds

1 Player
© N. Rice & P. Swan

Section One: Linear Representation

Aim

- Oversee the concept of doubling and related halving for the wholes 2, 4, 8, & 10.

Materials

- One activity for individuals. Each student needs:
- Two of each Bond Blocks 1, 2, 3, 4, 5.

Instructions

1a: Teacher

- Point to the 2, 4, 8, & 10 Bond Block on the top row of each empty ten frame and describe its size.
- The parts are placed below the whole.

1b: Student

- Repeat each double with fingers while laying the two-part bond.
- For example, "Two and Two" for 4.
- Build each double using two identical blocks, representing the parts, below the whole.

- Use each two-part bond pointing to the corresponding blocks for example, "Two and a Two".
- Use each bond as a double, pointing to both corresponding blocks.
- Use and identify each half of a whole, pointing up one part only for example, "One half of a 4".
- Discuss patterns including:
 - (i) Each part increasing/doubling by one.
 - (ii) Each whole increasing/doubling by two. Place the two blocks repeatedly next to each whole to illustrate this.

16

Doubling and Halving to 10
Building a Wall

Bonds

1 Player
© N. Rice & P. Swan

Section Two: Ten Frame Representation

Aim

- Oversee the concept of doubling and related halving for the wholes 2, 4, 8, & 10.

Materials

- One activity for individuals. Each student needs:
- Two of each Bond Blocks 1, 2, 3, 4, 5.
- Ten frames.

Instructions

2a: Counter Ten Frame

- Use counters to fill the counter ten frame.
- Point to the counter using the two-part bond. For example, "Two and a Two".

2b: Bond Block Ten Frame

- Use blocks to fill the bond block ten frame. Point to the blocks using the two-part bond. For example, "Double 2".

Complete Activity 16, section 1, one week.

Complete Activity 16, section 2, the following week.

The only activities where each section does NOT have its own board are the 'Bonds: Building a Wall' activities. These boards were designed like this because students have to use the wall of blocks made in Section One, to complete Section Two. In an Intervention Setting students complete one section per week. These boards will take three weeks to complete.

'Building a Wall' activities have multiple sections on one board which will need to be completed over a number of weeks.

6

Bonds of 5
Building a Wall

Bonds

1 Player
© N. Rice & P. Swan

Section One

Section Two

Section Three

Section One: Instructions

1a: Build the Wall

- Place the blocks, one whole, horizontally in front of the student, on the top row of frame on the activity board.
- Use every block to build a wall of 5. Each row must be the same length as the first.
- Number either one single block or two blocks bonded. Spread together.
- Use different sized Bond Blocks.

1b: Order the Wall of Five

- Rearrange the case of the bond wall into counting order.
- Discuss: How do you know you have found all the two-part bonds of five?

1c: Verticalise the Two-Part Bonds of Five

- Verticalise the two-part bonds of five while pointing to the related blocks.
- For example, "Two and Two is Five".
- "One and Four is Five".

Section Two: Instructions

2a: Commutative Property of Addition

- Identify each pair of blocks in the wall. But are arranged in a different order. Separate the wall into two smaller walls to show this.
- Use the blocks, but arranged in a different order.
- Define the commutative property of addition: changing the order of the parts (blocks) within a whole doesn't change the size of the whole. Show the order of the blocks in each row to illustrate this.
- Verticalise the commutative property of the two-part bonds of five while pointing to the related blocks in each row. For example, "Two and three is equal to five and two".

Section Three: Instructions

3a: Part-Part-Whole

- Colour the top of the frame as for activity 16.
- Place one row of blocks from Section Two in the part section, bottom row of the frame.
- Fill in the part-part-whole diagram to represent this wall.
- Rearrange the order of the parts and fill in the other part-part-whole diagram.
- Repeat this for each row of blocks in Section Two.
- Discuss: What do you know about the commutative property of addition based on the number of bonds in the row? Remember: Cross out one part-part-whole diagram in each row.

26

Bonds of 10
Building a Wall

Bonds

1 Player
© N. Rice & P. Swan

Section One

Section Two

Section One: Instructions

1a: Build a Wall of Ten

- Place the blocks, one whole, horizontally in front of the student, on the top row of the frame on the activity board.
- Use every block to build a wall of 10. Each row must be the same length as the first.
- Number either one single block or two blocks bonded or arranged in a different order.
- Define the commutative property of addition: changing the order of the parts (blocks) within a whole doesn't change the size of the whole. Show the order of the blocks in each row to illustrate this.
- Discuss: How do you know you have found all of the two-part bonds of ten?

1b: Verticalise the Two-Part Bonds of Ten

- Verticalise the two-part bonds of ten while pointing to the related blocks.
- For example, "Two and Eight is Ten".
- "One and Nine is Ten".

Section Two: Instructions

2a: Commutative Property of Addition

- Identify each pair of blocks in the wall, but arranged in a different order. Separate the wall into two smaller walls to show this.
- Use the blocks from the original wall, which contain the same blocks and arranged in a different order.
- Define the commutative property of addition: changing the order of the parts (blocks) within a whole doesn't change the size of the whole. Show the order of the blocks in each row to illustrate this.
- Verticalise the commutative property of the two-part bonds of ten while pointing to the related blocks in each row. For example, "Two and eight is equal to one and nine".
- "One and nine is equal to one and nine".



When completing 'Bonds: Building a Wall' activities complete one section per week. This activity will take three weeks to complete.

Section One

- **Session 1:** Watch the videos to build the wall, order the wall and say the bonds once.
- **Session 2:** Repeat Section One. When building the wall for a second time students often ask if they can build it in in counting order straight away. When they do this celebrate and reply, "Yes you can because maths is the science of pattern!"
- **Session 3:** Repeat Section One again. This will be the third time students build the wall and say the bonds.

Section Two

Section Two: Complete this the following week. Repeat it over three sessions.

Section Three

Section Three: Complete this the following week. Repeat it over three sessions.

Please be guided by the students. If they are getting bored after two sessions on one Section, and you think they have understood the activity, then move on. The bonds will be repeated in the fluency games that follow this. Keeping a positive disposition during sessions is important.

2 Player Activity Boards

Approximately three-quarters of the activities are paired activities. Two Player activities are usually very quick and can be completed in 3 minutes. Students will be able to play multiple rounds in the one 10 minute session.

As a guide 2 player activity boards can be completed in one week:

- **Session 1:** Students watch the video with their teacher. Then complete the activity once.
- **Session 2:** Students repeat the activity to develop fluency.
- **Session 3:** Students repeat the activity again.

43 Ten Plus Bonds Place Value Partitioning **Bonds** 2 Player 6 to 8, 9 & 10 Year

Player 1		Score Board		Player 2	
Tens	Ones	Player 1	Player 2	Tens	Ones

Tens

Ones

Aim: To make the greatest number.

Materials: 4 game 10 parts, 240 per needs.

Instructions: Player One: Pick the spinner, then the ones spinner. Check the resulting bond blocks using the board as an addition. For example, 'One ten and seven is 17'. Record the bond on the score board. Repeat this number on the score board. Player Two: Repeat.

The spinner circles from number to keep track of the aim. The small number is the player who has the most number of bonds won.

61 Doubling and Halving to 20 Racing Snowboards Fluency Halves 2 Player 6 to 8, 9 & 10 Year

Aim: To race first player to the finish.

Materials: 4 game 10 parts, 240 per needs.

Instructions: Player One: Start at the start and move to the first and then half of the number again. If the player moves to the greater they move back 2. The player who reaches the end first wins. Player Two: Repeat.

65 Bonds of 11 to 20 Difference Subtraction 2 Player 6 to 8, 9 & 10 Year

Player 1 Difference	Player 1 Number Spun	Target Number	Player 2 Difference	Player 2 Number Spun
		26		
		17		
		14		
		8		
		19		
		21		
		11		

Tens

Ones

Solve Using Adding On: $18 + \underline{\quad} = 26$

Check Using Subtraction: $26 - 18 = \underline{\quad}$

Known Whole

Part + Part = Whole

Instructions: Player One: Pick the tens spinner, then the ones spinner. Record the number on the number spin column. Player Two: Repeat. Player One: Pick the difference on the difference spinner and the target number. Player Two: Repeat. Player One: Repeat using addition as a strategy, writing: Whole - Known Part = Difference.

The spinner circles from number to keep track of the aim. The small number is the player who has the most number of bonds won.

Using Bond Blocks Test Results

Students in Years 1 to 6 who are experiencing difficulty in mathematics sit the Bond Blocks Test:

- The test questions are colour coded and match to the Core Kit Activities.
- Students in **Years One and Two** who have been identified as requiring Intervention will work through the whole Core Kit, completing every activity. The results will indicate the starting chapter. Students will then progress through all the chapters in the order shown in the '**Tier Two and Three Intervention Implementation Planner**'. This is because the Core Kit Activities are year level curriculum.
- Students in **Year Three and onwards** who have been identified as requiring intervention only complete the chapters indicated by their test results. Their results will determine their starting point in the Core Kit and identify specific gaps in learning. Please note:
 - Test questions 9 and 10 relate to Chapter 6: Activities 34 – 40 for Bonds of **6 and 7**.
 - Test questions 11 and 12 relate to Chapter 6: Activities 34 – 40 for Bonds of **8 and 9**.
 - Test questions 13 and 14 relate to Chapter 7: Activities 41 – 49 for Ten Plus Bonds (Bonds to 20).
 - Test question 15 relates to Chapter 7: Activities 50 – 56 for Ten Plus Bonds (Bridging Ten).



Intervention is Differentiated

Differentiating Activities

The **Tier 2 & 3 Intervention Implementation Planner** does not contain week numbers, but as a guide, **each row is equivalent to one week**. Students requiring intervention may take longer than one week to complete an activity.

Please read the '**a little easier**' suggestions on the website for the specified activity. Completing these prior to the Core Activity will double the amount of time it takes to complete an activity.

Some students will be able to complete the '**core**' activities after completing the '**a little easier**'. Students might continue onto '**a little harder**' activities. Other students might only be able to complete '**core**' or '**a little harder**' activities with assistance.

How long students take to complete this intervention will depend on their individual needs. For example, some tier

two, Year 6 students fill gaps in their learning in one year. Whereas for other tier three, students the Core Kit will form a significant part of their Individualised Education Plan from Years 1 to 6. The Core Kit provides these students with consistent teaching. There are different Recording Sheets to assist monitoring progress at tier one and tier two levels.

Tier Three

Students working at a tier three level may take up to six years of primary school to cover the three years of curriculum. This is okay. It is better to work at the rate of the student if they are on an individualised education plan. Leaving primary school with a solid grasp on functional addition and subtraction is often an appropriate goal for tier three students.

Using the Core Kit over these students schooling will provide them with a consistent approach to teaching and learning.



Reducing Transitions

Some students, such as those with executive functioning difficulties, will find transitioning between activities and mathematical concepts more difficult than others. When completing an activity such as Equation Building these students will find it easier to complete it in this order:

- **Session 1:** fill in part-part-whole diagrams
- **Session 2:** write all the addition equations
- **Session 3:** write all the subtraction equations.

12 Bonds of 5 Building Equation

1 Player

Aim
To identify the two-part bonds of 5, then rearrange those using the part-part-whole relationship to create related addition and subtraction equations.

Materials
An activity for individual students.
Each student needs:
• Bond Blocks 1, 2, 3, 4, 5.
• Dry erase marker and write and wipe sleeve.

Instructions

(I) Build a Wall

- Use the blocks to make a wall of 5.
- Each row must be 5 long.
- It will be 3 rows high.
- Use Bond Blocks 1, 2, 3, 4, 5.
- Place the blocks on the diagram.

(II) Building Equations

- Use the bond wall to fill in the part-part-whole diagrams.
- Write related addition and subtraction equations.

Whole		Addition	Subtraction
Part	Part	Part + Part = Whole	Whole - Part = Part
1	4	$1 + 4 = 5$	$5 - 1 = 4$
2	3	$4 + 1 = 5$	$5 - 4 = 1$
2	3	$2 + 3 = 5$	$5 - 2 = 3$
0	5	$3 + 2 = 5$	$5 - 3 = 2$
0	5	$0 + 5 = 5$	$5 - 0 = 5$
0	5	$5 + 0 = 5$	$5 - 5 = 0$

Working vertically helps students understand the difference between addition and subtraction. It also helps to develop fluency in writing each operation.

12 Bonds of 5 Building Equation

1 Player

Aim
To identify the two-part bonds of 5, then rearrange those using the part-part-whole relationship to create related addition and subtraction equations.

Materials
An activity for individual students.
Each student needs:
• Bond Blocks 1, 2, 3, 4, 5.
• Dry erase marker and write and wipe sleeve.

Instructions

(I) Build a Wall

- Use the blocks to make a wall of 5.
- Each row must be 5 long.
- It will be 3 rows high.
- Use Bond Blocks 1, 2, 3, 4, 5.
- Place the blocks on the diagram.

(II) Building Equations

- Use the bond wall to fill in the part-part-whole diagrams.
- Write related addition and subtraction equations.

Whole		Addition	Subtraction
Part	Part	Part + Part = Whole	Whole - Part = Part
1	4	$1 + 4 = 5$	$5 - 1 = 4$
2	3	$4 + 1 = 5$	$5 - 4 = 1$
2	3	$2 + 3 = 5$	$5 - 2 = 3$
0	5	$3 + 2 = 5$	$5 - 3 = 2$
0	5	$0 + 5 = 5$	$5 - 0 = 5$
0	5	$5 + 0 = 5$	$5 - 5 = 0$

Once students are fluent with they can work horizontally across the board. Doing this will help them make connections between addition and subtraction. It will also help them generalise these skills.

Adjusting Play

10

Bonds of 5
Building a Wall

Addition

Core

2 Player
© N. Rice & P. Swan

www.bondblocks.com

Player 1

Player 2

Aim
To be the first player to fill their mat with **EVERY** two-part bond of 5, that is, 0 and 5, 1 and 4, 2 and 3.

Materials
A game for pairs. Each pair needs:
• Two of each Bond Blocks 1, 2, 3, 4, 5 in a jumbled pile within reach of both players.

Instructions
Player One:

- Flick the spinner and **collect the block that joins** with the number spun to make 5. For example, spin 2, collect the 3 block.
- Place the block on the frame saying the bond as an addition equation. For example, **"2 add 3 equals 5"**.
- When placing additional blocks in the frame place them to build 5.
- Place 2 and 3 in the same row, 1 and 4 in another, and 0 and 5 in another row.
- If a player spins a number they have already spun, they say the equation, but do not collect any blocks.

Player Two has their turn.

Note: Teach the commutative property by identifying different ways players build their bonds. For example, the bond of 2 add 3 is equal to 3 add 2. It doesn't matter in which order the blocks that represent parts are placed.

The Commutative Property of Addition: *swapping the position of the parts does not alter the size of the whole.*

Whole	
Part	Part

Part + Part = Whole

In the activity above the winner is the first player to fill their wall with two-part bonds of five. This takes around 3 minutes. Towards the end of these types of games many students enjoy spinning, trying to get that final piece to fill their wall and be the winner. However, other students get excessively frustrated at this point. Whilst the end part of the game is an excellent opportunity to develop grit and understand how chance can play out, it can also be too much for some students. When this is the case give these students a 2-minute timer and change the aim of the game to be the player who places the most number of blocks in 2 minutes.

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Bonds of 6, 7, 8, 9
Racing Monster Trucks

Fluency

Core

2 Player
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Aim
To be the first player to reach the finish.

Materials
A game for pairs. Each pair needs:
• Two different coloured transparent counters. One for each player.

Instructions

- **Player One** starts on **START**.
- **Player One** spins to flick the spinner and move to the next space **where** the number spins to.
- If the player moves to a winning space they move back 2 spaces.
- If the player who identifies the error moves forward 3 spaces.

- The player who **NOT** move the number of spaces spun.
- Move then one player can be on the same space.

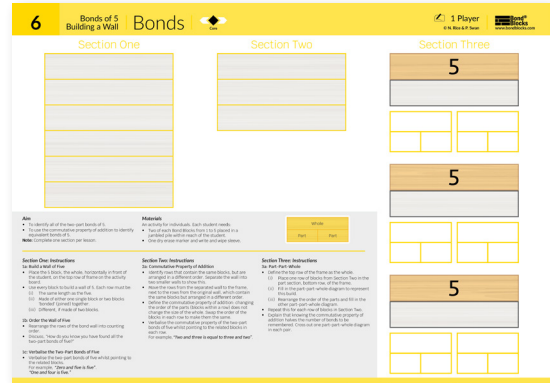
TIP: Some two player games have an accountability rule built in such as *"If the player moves to the wrong place they move back 2 spaces. The player who identifies the error moves forward 3 spaces."* Please use this with discretion. There are many students for whom using this rule would be counter-productive.



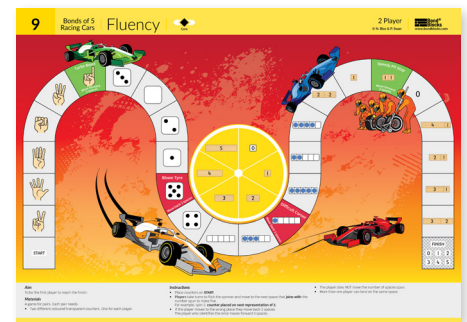
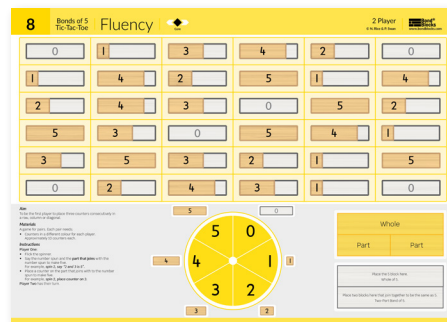
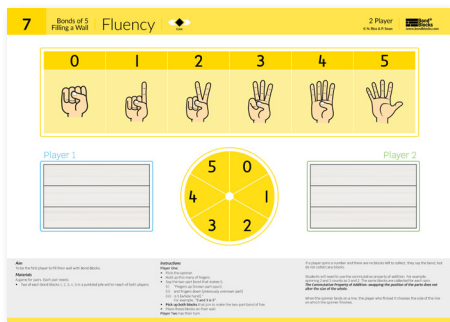
Activities: When to Move On

If students don't master an activity within the week or fortnight it is okay to move onto the next activity. The system builds gradually and is cyclical. Students are constantly re-exposed to activities.

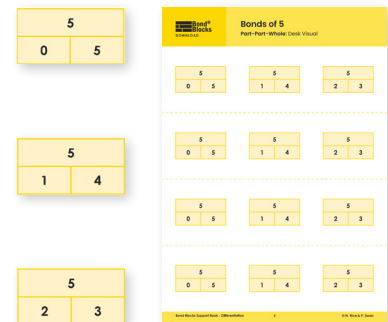
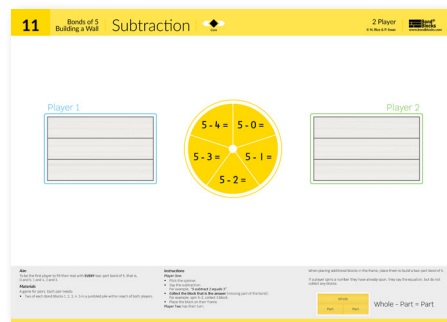
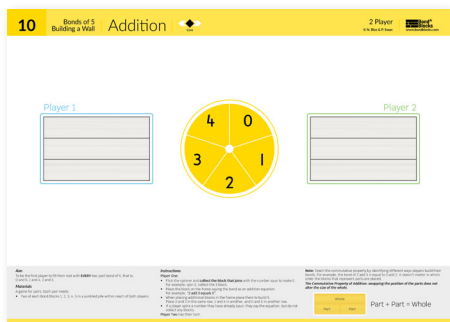
For example, most students requiring intervention will not be able to recall bonds of five after completing Activity 6.



Students spend the next three activities (at least three weeks) just practising the two-part bonds.



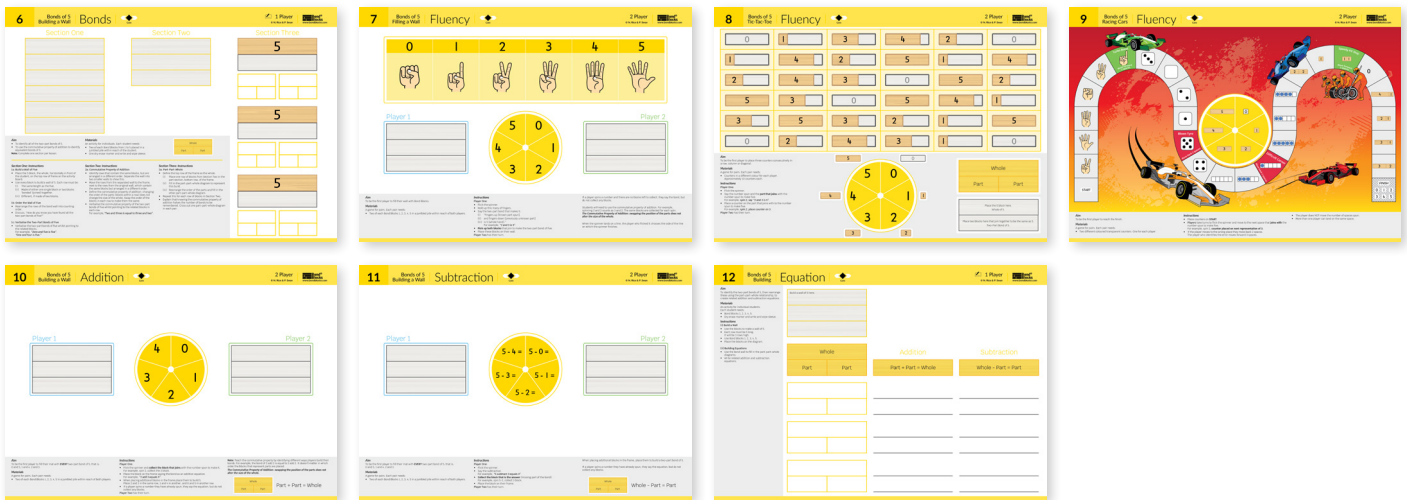
After this they apply the bonds to addition, then subtraction. Students who still have difficulty recalling the three, two-part bonds of five would benefit from using a desk visual.



Bonds of 5: Part-Part-Whole Desk Visual.

Chapters: When to Move On

There are different levels of difficulty within each Bond Blocks chapter. Understanding, Fluency, Addition and Subtraction activities are easier, **lower-order cognitive skills**. The application of these to Missing Number Equations and solving Word Questions activities is more difficult because they are **higher-order cognitive skills**.



Core activity boards 6, 7, 8, 9, 10, 11 and 12 are examples of lower-order cognitive skills.

Students working at tier three can complete the more difficult higher order activities with adult prompting. This is appropriate. During these sessions students are exposed to higher level thinking and given the opportunity to develop this. If they don't master higher-order activities it is okay. They should still progress to the next chapter of activities.



Core activity boards 13, 14 and 15 are examples of higher-order cognitive skills.

If at the end of the chapter of activities the student still is having significant **difficulty mastering the lower-order cognitive activities** such as Build a Wall, Addition and Subtraction boards make a note on their Recording Sheet.

- Continue onto the next chapter or two. The chapters have been ordered so as there is a chapter with very heavy content (such as Bonds of 5), followed by chapters with lighter content (such as Doubling and Halving to 10, Five Plus Bonds).
- After this return to the activity chapter that the student had difficulty mastering the lower-order cognitive activities (such as Bonds of 5). Repeat the lower-order cognitive activities such as Build a Wall, Addition and Subtraction from that chapter.
- Then return to the chapter of activities that the student was up to.



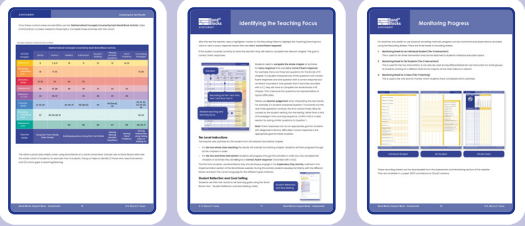
Chapter 1	Counting to 10 and 20	Activities 1 to 5
Chapter 2	Bonds of 5	Activities 6 to 10
Chapter 3	Doubling and Halving to 10	Activities 16 to 20
Chapter 4	Five Plus Bonds	Activities 21 to 25
Chapter 5	Bonds of 10	Activities 26 to 33
Chapter 6	Bonds of 6 and 7	Activities 34 to 40
Chapter 7	Ten Plus Bonds (Bonds to 20)	Activities 41 to 49
Chapter 6	Bonds of 8 and 9	Activities 34 to 40
Chapter 7	Ten Plus Bonds (Bridging Ten)	Activities 50 to 56
Chapter 8	Doubling and Halving to 20	Activities 57 to 63
Chapter 9	Bonds of 11 to 20	Activities 64 to 71

Differentiating Activities

The **Tier 2 & 3 Intervention Implementation Planner** does not contain week numbers, but as a guide, each row is equivalent to one week. Students requiring intervention may take longer than one week to complete an activity.

Please refer to the **Tier Two and Three Intervention Implementation** instructions under the heading of **“Intervention is Differentiated”**.

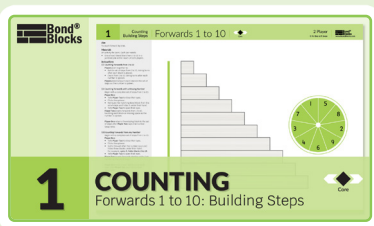
Activity Number



Bond Blocks Test and Student Goal Setting

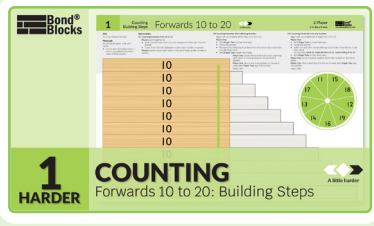
Exploratory Play

- If this is the first-time students used Bond Blocks they will need at least three sessions of Exploratory Play.
- Exploratory Play Activity Notes are in the Implementation section of the website.



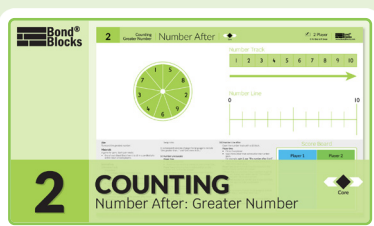
1 COUNTING
Forwards 1 to 10: Building Steps

1) Forwards 1 to 10: Building Steps



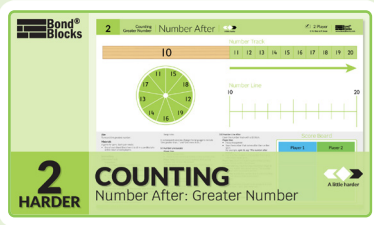
1 HARDER COUNTING
Forwards 10 to 20: Building Steps

1) Forwards 10 to 20: Building Steps (a little harder)



2 COUNTING
Number After: Greater Number

2) Number After: Greater Number

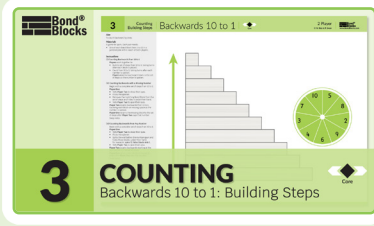


2 HARDER COUNTING
Number After: Greater Number

2) Number After: Greater Number (a little harder)

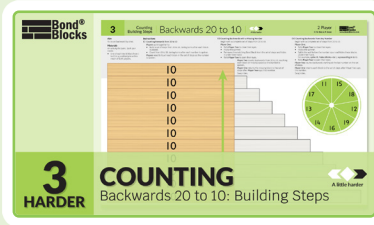
Chapter 1) Counting

Activity Number



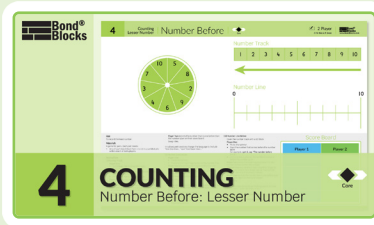
3 COUNTING
Backwards 10 to 1: Building Steps

3) Backwards 10 to 1: Building Steps



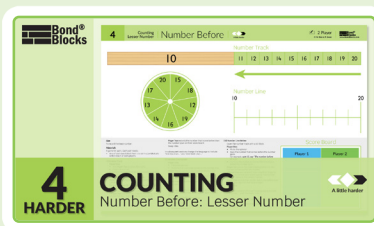
3 HARDER COUNTING
Backwards 20 to 10: Building Steps

3) Backwards 20 to 10: Building Steps (a little harder)



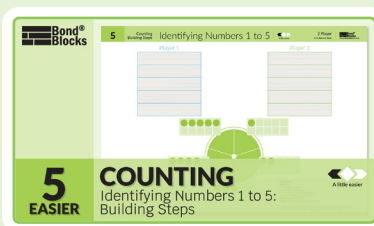
4 COUNTING
Number Before: Lesser Number

4) Number Before: Lesser Number



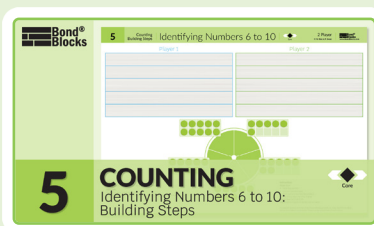
4 HARDER COUNTING
Number Before: Lesser Number

4) Number Before: Lesser Number (a little harder)



5 EASIER COUNTING
Identifying Numbers 1 to 5: Building Steps

5) Identifying Numbers 1 to 5: Building Steps (a little easier)



5 COUNTING
Identifying Numbers 6 to 10: Building Steps

5) Identifying Numbers 6 to 10: Building Steps

Chapter 1) Counting



Chapter 2) Bonds of 5

Activity Number

6 BONDS OF 5
Bonds: Building a Wall

6) Bonds: Building a Wall (Section 1)

6 BONDS OF 5
Bonds: Building a Wall

6) Bonds: Building a Wall (Section 2)

6 BONDS OF 5
Bonds: Building a Wall

6) Bonds: Building a Wall (Section 3)

7 BONDS OF 5
Fluency: Filling a Wall

7) Fluency: Filling a Wall

8 BONDS OF 5
Fluency: Tic-Tac-Toe

8) Fluency: Tic-Tac-Toe

9 BONDS OF 5
Fluency: Racing Cars

9) Fluency: Racing Cars

Chapter 2) Bonds of 5

Activity Number

10 BONDS OF 5
Addition: Building a Wall

10) Addition: Building a Wall

11 BONDS OF 5
Subtraction: Building a Wall

11) Subtraction: Building a Wall

12 BONDS OF 5
Equation: Building

12) Equation: Building (a little easier)

12 BONDS OF 5
Equation: Building

12) Equation: Building

13 BONDS OF 5
Missing Number Equations: Fill a Row

13) Missing Number Equations: Fill a Row (a little easier)

13 BONDS OF 5
Missing Number Equations: Three In a Row

13) Missing Number Equations: Three In a Row

Chapter 2) Bonds of 5

Activity Number

13 BOND OF 5
HARDER
Missing Number Equations:
Tic-Tac-Toe

13) Missing Number Equations:
Tic-Tac-Toe (a little harder)

14 BOND OF 5
Representing Addition:
Thinkboard

14) Representing Addition: Thinkboard

14 BOND OF 5
Representing Subtraction:
Thinkboard

14) Representing Subtraction: Thinkboard

15 BOND OF 5
Word Problems: Wholes to 5

15) Word Problems: Wholes to 5

Chapter 3) Doubling and Halving to 10

SECTION 1
LINEAR REPRESENTATION
16 DOUBLING AND HALVING TO 10
Bonds: Building a Wall

16.1) Bonds: Building a Wall (Section 1)

SECTION 2
TEN FRAME REPRESENTATION
16 DOUBLING AND HALVING TO 10
Bonds: Building a Wall

16.2) Bonds: Building a Wall (Section 2)

Chapter 3) Doubling and Halving to 10

Activity Number

17 DOUBLING AND HALVING TO 10
Fluency Doubles: Filling a Wall

17) Fluency Doubles: Filling a Wall

18 DOUBLING AND HALVING TO 10
Fluency Halves: Filling a Wall

18) Fluency Halves: Filling a Wall

19 DOUBLING AND HALVING TO 10
Near Double: Strategy Concept

19) Near Double: Strategy Concept

19 DOUBLING AND HALVING TO 10
HARDER
Near Double: Strategy Concept

19) Near Double: Strategy Concept
(a little harder)

20 DOUBLING AND HALVING TO 10
Near Double: Strategy Fluency

20) Near Double: Strategy Fluency

Chapter 4)

SECTION 1
LINEAR REPRESENTATION
21 FIVE PLUS BONDS
Bonds: Building a Wall

21.1) Bonds: Building a Wall (Section 1)



Chapter 4) Five Plus Bonds

Chapter 5) Bonds of 10

Activity Number

21 FIVE PLUS BONDS
Bonds: Building a Wall

21.2) Bonds: Building a Wall (Section 2)

22 FIVE PLUS BONDS
Bonds: Multiple Representations

22) Bonds: Multiple Representations

23 FIVE PLUS BONDS
Fluency: Tic-Tac-Toe

23) Fluency: Tic-Tac-Toe

24 FIVE PLUS BONDS
Addition: Building a Wall

24) Addition: Building a Wall

25 FIVE PLUS BONDS
Subtraction: Building a Wall

25) Subtraction: Building a Wall

26 BONDS OF 10
Bonds: Building a Wall

26.1) Bonds: Building a Wall (Section 1)

Activity Number

26 BONDS OF 10
Bonds: Building a Wall

26.1) Bonds: Building a Wall (Section 2)

26 BONDS OF 10
Bonds: Building a Wall

26.2) Bonds: Building a Wall (Section 3)

27 BONDS OF 10
Fluency: Filling a Wall

27) Fluency: Filling a Wall

28 BONDS OF 10
Fluency: Tic-Tac-Toe

28) Fluency: Tic-Tac-Toe

29 BONDS OF 10
Addition: Building a Wall

29) Addition: Building a Wall

30 BONDS OF 10
Subtraction: Building a Wall

30) Subtraction: Building a Wall

Chapter 5) Bonds of 10

Activity Number

31 BONDS OF 10
Equation: Building

31) Equation: Building (a little easier)

31 BONDS OF 10
Equation: Building

31) Equation: Building

32 BONDS OF 10
Missing Number Equations: Fill a Row

32) Missing Number Equations: Fill a Row

32 BONDS OF 10
Missing Number Equations: Fill a Row

32) Missing Number Equations: Tic-Tac-Toe (a little harder)

- Note, this board is very difficult and is not usually appropriate for intervention.

33 BONDS OF 10
Representing Addition: Thinkboard

33) Representing Addition: Thinkboard

33 BONDS OF 10
Representing Subtraction: Thinkboard

33) Representing Subtraction: Thinkboard

Activity Number

34 BONDS OF 6 OR 7
Bonds: Building a Wall

34) Bonds of 6: Building a Wall (Section 1)

34 BONDS OF 6 OR 7
Bonds: Building a Wall

34) Bonds of 6: Building a Wall (Section 2)

34 BONDS OF 6 OR 7
Bonds: Building a Wall

34) Bonds of 6: Building a Wall (Section 3)

36 BONDS OF 6, 7, 8, 9
Fluency: Shake and Spill

36) Fluency: Shake and Spill

34 BONDS OF 6 OR 7
Bonds: Building a Wall

34) Bonds of 7: Building a Wall (Section 1)

34 BONDS OF 6 OR 7
Bonds: Building a Wall

34) Bonds of 7: Building a Wall (Section 2)



Chapter 6) Bonds of 6 and 7

Activity Number

34 BONDS OF 6 OR 7
Bonds: Building a Wall

34) Bonds of 7: Building a Wall (Section 3)

35 BONDS OF 6, 7, 8, 9
Subtraction: Building a Wall

35.1) Subtraction: Building a Wall (Section 1) Bonds of 6

37 BONDS OF 6, 7, 8, 9
Fluency: Racing Monster Trucks

37) Fluency: Racing Monster Trucks

35 BONDS OF 6, 7, 8, 9
Subtraction: Building a Wall

35.2) Subtraction: Building a Wall (Section 2) Bonds of 7

38 BONDS OF 6 OR 7
Equation: Building

- 38) Equation: Building Bonds of 6
- **Session 1:** Build the wall and fill in part-part-whole diagrams.
 - **Session 2:** Write the addition equations.
 - **Session 3:** Write the subtraction equations.
 - Students who find this easy can write the matching addition and subtraction equations for each bond working horizontally across the board.

Activity Number

39 BONDS OF 6
Missing Number Equations: Tic-Tac-Toe

34) Missing Number Equations: Tic-Tac-Toe Bonds of 6

38 BONDS OF 6 OR 7
Equation: Building

38) Equation: Building Bonds of 7

- **Session 1:** Build the wall and fill in part-part-whole diagrams.
- **Session 2:** Write the addition equations.
- **Session 3:** Write the subtraction equations.
- Students who find this easy can write the matching addition and subtraction equations for each bond working horizontally across the board.

39 BONDS OF 7
Missing Number Equations: Tic-Tac-Toe

39) Missing Number Equations: Tic-Tac-Toe Bonds of 7

40 BONDS OF 6, 7, 8, 9
Word Problems: Wholes to 10

40) Word Problems: Wholes to 10
Cards 1 and 2, Questions 1 to 6

Chapter 7)

41 TEN PLUS BONDS
Bonds: Three In a Row

41) Bonds: Three In a Row

Activity Number

42 TEN PLUS BONDS
Bonds: Multiple Representations

42) Bonds: Multiple Representations

43 TEN PLUS BONDS
Bonds: Place Value Partitioning

43) Bonds: Place Value Partitioning

44 TEN PLUS BONDS
Addition and Subtraction: Ten and One

44) Addition and Subtraction: Ten and One

45 TEN PLUS BONDS
Addition: Building With Three Parts

45) Addition: Building With Three Parts

46 TEN PLUS BONDS OF 20
Equation: Building

46.1) Equation: Building (Section 1)

- **Session 1:** "Say and Point to Two-Part Bonds of 20".
- **Session 2:** "Fluency Option One". "Fluency Option Two" is optional for extension.
- **Session 3:** "Swap the Position of the Parts" through to "Say and Point Rearranged Two-Part Bonds of 20". The "Fluency Options One, Two and Three" that follow are optional for extension.

Activity Number

46 TEN PLUS BONDS OF 20
Equation: Building

46.2) Equation: Building (Section 2)

47 TEN PLUS BONDS OF 20
Addition: Building a Wall

37) Addition: Building a Wall

48 TEN PLUS BONDS OF 20
Subtraction: Tic-Tac-Toe

48.1) Subtraction: Tic-Tac-Toe (Section 1)

- Develop fluency Playing Game A.
- Then Play Game B.

48 TEN PLUS BONDS OF 20
Subtraction: Tic-Tac-Toe

48.2) Subtraction: Tic-Tac-Toe (Section 2)

- Develop fluency Playing Game A.
- Then Play Game B.

49 TEN PLUS BONDS OF 20
Missing Number Equations: Tic-Tac-Toe

49) Missing Number Equations: Tic-Tac-Toe



Chapter 7

Activity Number

49 TEN PLUS BONDS OF 20
Missing Number Equations:
Tic-Tac-Toe

**49) Missing Number Equations:
Tic-Tac-Toe (a little harder)**

SECTION 1
BUILD A WALL
ORDER A WALL
VERBALISE

34 BONDS OF 8 OR 9
Bonds: Building a Wall

34) Bonds of 8: Building a Wall (Section 1)

- The first time students build a wall it will not be in counting order.
- When repeating the building a wall activity if they ask “Can we do it in counting order straight away?” Celebrate and reply “Yes you can because maths is the science of pattern!”

SECTION 2
COMMUTATIVE PROPERTY

34 BONDS OF 8 OR 9
Bonds: Building a Wall

34) Bonds of 8: Building a Wall (Section 2)

SECTION 3
PART-PART-WHOLE

34 BONDS OF 8 OR 9
Bonds: Building a Wall

34) Bonds of 8: Building a Wall (Section 3)

36 BONDS OF 6, 7, 8, 9
Fluency: Shake and Spill

36) Fluency: Shake and Spill

Chapter 6) Bonds of 8 and 9

Activity Number

SECTION 1
BUILD A WALL
ORDER A WALL
VERBALISE

34 BONDS OF 8 OR 9
Bonds: Building a Wall

34) Bonds of 9: Building a Wall (Section 1)

SECTION 2
COMMUTATIVE PROPERTY

34 BONDS OF 8 OR 9
Bonds: Building a Wall

34) Bonds of 9: Building a Wall (Section 2)

SECTION 3
PART-PART-WHOLE

34 BONDS OF 8 OR 9
Bonds: Building a Wall

34) Bonds of 9: Building a Wall (Section 3)

SECTION 1
TAKING AWAY

35 BONDS OF 6, 7, 8, 9
Subtraction: Building a Wall

**35) Subtraction: Building a Wall
(Section 1) Bonds of 8**

37 BONDS OF 6, 7, 8, 9
Fluency: Racing Monster Trucks

37) Fluency: Racing Monster Trucks

SECTION 2
ADDING ON

35 BONDS OF 6, 7, 8, 9
Subtraction: Building a Wall

**35) Subtraction: Building a Wall
(Section 2) Bonds of 9**

Chapter 6) Bonds of 8 and 9

Chapter 6) Bonds of 8 and 9

Activity Number

38 BONDS OF 8 OR 9
Equation: Building

38) Equation: Building Bonds of 8

- **Session 1:** Build the wall and fill in part-part-whole diagrams.
- **Session 2:** Write the addition equations.
- **Session 3:** Write the subtraction equations.
- Students who find this easy can write the matching addition and subtraction equations for each bond working horizontally across the board.

39 BONDS OF 8
Missing Number Equations: Tic-Tac-Toe

39) Missing Number Equations: Tic-Tac-Toe Bonds of 8

38 BONDS OF 8 OR 9
Equation: Building

38) Equation: Building Bonds of 9

- **Session 1:** Build the wall and fill in part-part-whole diagrams.
- **Session 2:** Write the addition equations.
- **Session 3:** Write the subtraction equations.
- Students who find this easy can write the matching addition and subtraction equations for each bond working horizontally across the board.

39 BONDS OF 9
Missing Number Equations: Tic-Tac-Toe

39) Missing Number Equations: Tic-Tac-Toe Bonds of 9

Activity Number

Chapter 6)

40 BONDS OF 6, 7, 8, 9
Word Problems: Wholes to 10

40) Word Problems: Wholes to 10
Cards 3 and 4, Questions 7 to 12

50 TEN PLUS BONDS
Bridging Ten Addition: Strategy 9+

50) Bridging Ten Addition: Strategy 9+

50 HARDER TEN PLUS BONDS
Bridging Ten Addition: Strategy 19+

50) Bridging Ten Addition: Strategy 19+ (a little harder)

51 TEN PLUS BONDS
Bridging Ten Addition: Strategy 8+

51) Bridging Ten Addition: Strategy 8+

51 HARDER TEN PLUS BONDS
Bridging Ten Addition: Strategy 18+

51) Bridging Ten Addition: Strategy 18+ (a little harder)

Chapter 7) Ten Plus Bonds (Bridging Ten)

52 TEN PLUS BONDS
Bridging Ten Addition: Strategy 7, 8, 9+

52) Bridging Ten Addition: Strategy 7, 8, 9+



Chapter 7) Ten Plus Bonds (Bridging Ten)

Activity Number

52 TEN PLUS BONDS
HARDER
Bridging Ten Addition:
Strategy Teen+

52) Bridging Ten Addition: Strategy Teen+
(a little harder)

53 TEN PLUS BONDS
Bridging Ten Subtraction:
Strategy Taking Away

53) Bridging Ten Subtraction:
Strategy Taking Away

53 TEN PLUS BONDS
HARDER
Bridging Ten Subtraction:
Strategy Taking Away

53) Bridging Ten Subtraction:
Strategy Taking Away (a little harder)

54 TEN PLUS BONDS
Bridging Ten Subtraction:
Strategy Adding On

54) Bridging Ten Subtraction:
Strategy Adding On

54 TEN PLUS BONDS
HARDER
Bridging Ten Subtraction:
Strategy Adding On

54) Bridging Ten Subtraction:
Strategy Adding On (a little harder)

Activity Number

55 TEN PLUS BONDS
Partitioning Addition:
Strategy Five Plus Bonds

55) Partitioning Addition:
Strategy Five Plus Bonds

55 TEN PLUS BONDS
HARDER
Partitioning Addition:
Strategy Five Plus Bonds

55) Partitioning Addition:
Strategy Five Plus Bonds

56 TEN PLUS BONDS
Partitioning Subtraction:
Strategy Five Plus Bonds

56) Partitioning Subtraction:
Strategy Five Plus Bonds

56 TEN PLUS BONDS
HARDER
Partitioning Subtraction:
Strategy Five Plus Bonds

56) Partitioning Subtraction:
Strategy Five Plus Bonds (a little harder)

Chapter 7) Ten Plus Bonds (Bridging Ten)

Chapter 8) Doubling and Halving to 20

57 DOUBLING AND HALVING TO 20
Bonds: Building a Wall

57.1) Bonds: Building a Wall (Section 1)

57 DOUBLING AND HALVING TO 20
Bonds: Building a Wall

57.2) Bonds: Building a Wall (Section 2)



Chapter 8) Doubling and Halving to 20

Activity Number

58 DOUBLING AND HALVING TO 20
Fluency Doubles: Filling a Wall

58) Fluency Doubles: Filling a Wall

59 DOUBLING AND HALVING TO 20
Fluency Halves: Filling a Wall

58) Fluency Halves: Filling a Wall

60 DOUBLING AND HALVING TO 20
Fluency Doubles: Racing Kayaks

60) Fluency Doubles: Racing Kayaks

61 DOUBLING AND HALVING TO 20
Fluency Halves: Racing Snowboards

61) Fluency Halves: Racing Snowboards

62 DOUBLING AND HALVING TO 20
Near Double: Strategy Concept

62) Near Double: Strategy Concept

62 DOUBLING AND HALVING TO 20 HARDER
Near Double: Strategy Concept

62) Near Double: Strategy Concept (a little harder)

Chapter 8)

Chapter 9) Bonds of 11 to 20

Activity Number

63 DOUBLING AND HALVING TO 20
Near Double: Strategy Fluency

63) Near Double: Strategy Fluency

64 BONDS OF 11 TO 20
Addition: Lulu

64) Addition: Lulu

65 BONDS OF 11 TO 20
Subtraction: Difference

65) Subtraction: Difference

66 BONDS OF 11 TO 20
Equation: Building

66) Equation: Building (Set A)

67 BONDS OF 11 TO 20
Missing Number Equations: Racing Motorcycles

67) Missing Number Equations: Racing Motorcycles

66 BONDS OF 11 TO 20
Equation: Building

66) Equation: Building (Set B)



Chapter 9) Bonds of 11 to 20

Activity Number

68 BOND OF 11 TO 20
Word Problems: Wholes to 20

68) Word Problems: Wholes to 20
Cards 1 and 2, Questions 1 to 6

69 BOND OF 11 TO 20
Near Ten: Strategy +9

69) Near Ten: Strategy +9

69 BOND OF 11 TO 20
Near Ten: Strategy +9

69) Near Ten: Strategy +9 (a little harder)

70 BOND OF 11 TO 20
Near Ten: Strategy -11

70) Near Ten: Strategy -11

70 BOND OF 11 TO 20
Near Ten: Strategy -11

70) Near Double: Strategy -11
(a little harder)

71 BOND OF 11 TO 20
Near Ten: Strategy -9

71) Near Ten: Strategy -9

Activity Number

71 BOND OF 11 TO 20
Near Ten: Strategy -9

71) Near Ten: Strategy -9 (a little harder)

68 BOND OF 11 TO 20
Word Problems: Wholes to 20

68) Word Problems: Wholes to 20
Cards 3 and 4, Questions 7 to 12

Chapter 9) Bonds of 11 to 20