

CONTENTS

| | | |
|----------|--|-----------|
| | Introduction | 4 |
| 1 | Counting in multiples of 2s, 5s and 10s | 10 |
| 2 | Doubling | 17 |
| 3 | Equal groups | 22 |
| 4 | Adding equal groups | 25 |
| 5 | Arrays | 28 |
| 6 | The multiplication sign | 32 |
| 7 | 2-, 5- and 10-times tables | 36 |
| 8 | Halving | 54 |
| 9 | Division | 58 |

The components

Teacher's Book

The *Scholastic Times Tables Teacher's Book* provides you with a wealth of activities to help your children master the times tables. Work through the activities one by one or dip in and out – whatever works best for you and your class!

Choose from a bank of activities which promote problem-solving, reasoning and fluency. Aim to use a range of activities so that children have an opportunity to approach the times tables in a variety of ways.

The activities use a wide range of resources: some rely on using concrete resources, others have a whiteboard component to them, and others may require a photocopiable resource which can be downloaded from www.scholastic.co.uk/timestables-resources. Finally, some require no resources at all.

Key information to help you get the most out of your times tables practice

Visual examples of how to represent multiplication across all key stages

Handy table to help you choose quickly which activity will work best with your children

Practice Book links provide further opportunities for revision and practice

List of all resources, including photocopiable pages and digital files for class display

Where relevant, year groups are highlighted so you can be sure the activity matches your needs

Assessment questions to use during or after activities. Many are easily adaptable to use with a variety of activities or times tables.

Clear breakdown of how to work through each activity, including questions for deepening and assessing understanding

Strategies for extending each activity to encourage deeper thinking and provide further practice

1 COUNTING IN MULTIPLES OF 2s, 5s AND 10s

Counting in multiples, or steps, is an important part of early numeracy, providing a foundation for learning multiplication facts. Counting in multiples is best, although children can apply this outside of the classroom. There are many real-life opportunities for practice, such as writing the time, counting 2p, 5p and 10p coins, pairs of shoes or shoes, and groups of children. These activities provide practice to counting forwards and backwards in steps of 2, 5 and 10 from different multiples. Using concrete apparatus, number lines and 100 squares, children will look for and investigate emerging patterns within the number system, for example odd and even numbers or multiples of 2, 5 and 10.

| Activity | Objective | Focus | Organisation | Development |
|----------------------------|--|--|----------------------------------|-------------|
| Cap, step, stamp (p17) | Counting forwards and backwards in steps of 2, 5 and 10 | Counting forwards and backwards in steps of 2, 5 and 10 | Whole class standing in a circle | Fluency |
| Jump on (p12) | Counting forwards and backwards in 2s from any multiple of 2, highlighting the multiples of 2 on a number line | Counting forwards and backwards in 2s from any multiple of 2, highlighting the multiples of 2 on a number line | Whole class standing in a circle | Fluency |
| In the multiple band (p12) | Counting forwards and backwards in multiples of 2, 5 and 10 | Counting forwards and backwards in multiples of 2, 5 and 10 | Whole class standing in a circle | Fluency |
| 10s race (p18) | Counting forwards and backwards in steps of 10 | Counting forwards and backwards in steps of 10 | Whole class standing in a circle | Fluency |
| Pendulum event (p13) | Counting forwards and backwards in steps of 5 | Counting forwards and backwards in steps of 5 | Whole class standing in a circle | Fluency |
| Counting patterns (p15) | Counting forwards and backwards in steps of 2, 5 and 10 | Counting forwards and backwards in steps of 2, 5 and 10 | Individuals | Fluency |

| Activity | Objective | Focus | Organisation | Development |
|--|--|--|---------------------------------|-------------------------------|
| Multiple stations (p16) | Counting in multiples of 2, 5 or 10 | Using concrete resources to get a visual sense of counting in multiples | Small groups/pairs | Reasoning and problem-solving |
| Washing line multiples (p16) | Identifying and ordering multiples of 2 up to 20 | Identifying and ordering multiples of 2 up to 20 | Small groups/whole class | Reasoning |
| What's wrong? (p16) | Filling in missing numbers in a number sequence | Filling in missing numbers in a number sequence | Whole class/small groups | Reasoning and problem-solving |
| What's my number? (p16) | Using concrete and visual resources to identify multiples of 2, 5 and 10 and recognising patterns by sorting | Using concrete and visual resources to identify multiples of 2, 5 and 10 and recognising patterns by sorting | Pairs | Reasoning and problem-solving |
| Multiples of 2 and 5: What's the difference? (p16) | Counting in steps of 2, 3 or 5 from 0, and in 10s from any number | Counting in steps of 2, 3 or 5 from 0, and in 10s from any number | Small groups | Reasoning |
| Counting options (p16) | Recognising and comparing multiples of 2 and 5 | Recognising and comparing multiples of 2 and 5 | Pairs/individuals | Reasoning and problem-solving |
| Changeplaces (p16) | Counting in steps of 2, 5 and 10 and developing reasoning skills | Counting in steps of 2, 5 and 10 and developing reasoning skills | Whole class sitting in a circle | Fluency |

Assessment

Use these questions (or similar) to help you assess children's understanding during and after these activities.

- Can you count in steps of 2 from 20? 5 from 50? 10 from 100?
- Can you count forwards and backwards in steps of 2/5/10 from different starting numbers?
- Use all these numbers. Can you say which are multiples of 2/5/10?
- What's missing from the number sequence: 2, 4, 6, 8, 10?
- If I start at 5 and count on in 5s, will I say 33? How do you know?
- Is 10 a multiple of 2? How do you know?

2 DOUBLING

| Activity | Objective | Focus | Organisation | Development |
|---------------------|--|--|----------------------------------|-------------|
| Playing cards (p17) | Recall and use multiplication and division facts for the 2, 5, and 10 multiplication tables, including recognising odd and even numbers (Year 2) | Developing quick recall of known doubles | Whole class standing in a circle | Fluency |
| Hot potato (p17) | Developing quick recall of known doubles | Developing quick recall of known doubles | Whole class standing in a circle | Fluency |
| Double 10 (p17) | Developing quick recall of doubles for the multiples of 5 and 10 | Developing quick recall of doubles for the multiples of 5 and 10 | Pairs | Fluency |

Assessing progress

Use these questions (or similar) to help you assess children's understanding during and after these activities.

- Show children 3 dominoes (for example 3 spots/5 spots and 4 spots/5 spots). What domino is a double? How do you know?
- Can you roll a double with 2 dice? How do you know it is a double?
- Can you draw spots on domino to show double 5?
- What's double 10? Double 20? Double 20?
- There are apples in a bag. How many apples in 2 bags?
- If half of 12 is 6, what's double 6?

BODY DOUBLES!

You need no resources required

STEPS

- Put a child to stand at the front. Ask the class: How many legs on this body? How many arms? How many fingers and toes?
- Invite a second child to the front. Pose the same questions. Encourage children to explain how the answers have changed. Model and discuss appropriate language (for example greater, bigger, twice as many, double).
- Practice calculating doubles of small numbers. Everyone holds up 1 finger. Double a partner and holds up their fingers side by side to show double 2. Then 1 pair to describe what their fingers show. Double 2 makes 4. Practice doubling other numbers in this way.

EXTEND

Ask children to represent a double using apparatus and to draw a picture that shows a double.

TOWER BLOCKS

You need multi-link cubes or similar

STEPS

- Hold up a tower of 4 cubes. Challenge children to build a tower which is double its height.
- Look at the children's towers. Discuss: Are the towers taller or shorter than my tower? How much taller? Choose a child who has answered correctly to describe in their own words how they approached the problem and checked their answer.
- Repeat with cube towers of different heights. Ask children to represent their answer pictorially or using symbols, for example drawing blocks, representing a number line, as an addition sentence.

EXTEND

Children investigate halving small numbers. Ask: Can you build a tower that is half the height of this tower?

LADYBIRD DOUBLES

You need: digital file 4 Ladybird doubles, whiteboards and pens; counters, cubes; number lines

STEPS

- Show children digital file 4 Ladybird doubles and look at the ladybird picture. Ask: How many spots does the ladybird have on each wing? How many spots altogether? Let's say together: 'Double 4 makes 8'.
- Draw the outline of a ladybird on the board. Draw an equal number of spots on each wing. Ask: How can you tell me about the spots on this ladybird? Is it double? What if there is an equal number of spots? How could we represent the number of spots as an addition sentence?
- Repeat, this time drawing an unequal number of spots. Ask: Is this ladybird double? Why not?
- In pairs, children imagine a ladybird with 10 spots. Can you work out how many spots the ladybird has on each wing? Encourage children to calculate, check and explain the problem using pictorial apparatus (for example fingers, cubes, number lines, pictures and/or symbols). Ask: How did you work out the answer?

EXTEND

Use a class of playing cards; children work out the doubles of larger numbers. They investigate halving small numbers for example: can imaginary ladybirds have 10 legs altogether? How many legs are on each wing?

DOMINO DOUBLES

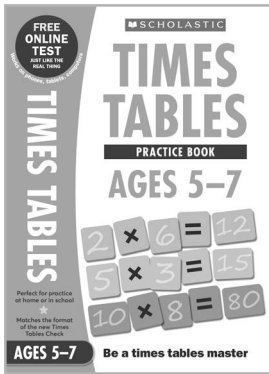
You need: a small bag containing all the domino doubles; 1 whiteboard and pen per child

STEPS

- Choose a volunteer to take a domino out of the bag without showing it to the other children.
- Ask them to say which domino it is. For example double 5. Tell children to draw a picture of what they think the domino looks like. Show them the double 5 domino. Ask: Does the domino you have drawn look like this? How did you know how many spots to draw on each side of the domino? Count how many spots are on the domino altogether. Say together: Double 5 makes 10. Return the domino to the bag.
- Repeat several times with different children picking a domino out of the bag.
- Ask children to draw all the doubles in a set of dominoes and write a number sentence to describe each double.


EXTEND

Children practise quick recall of doubles facts from 0 to 6. Call out a double, for example: Double 4! Children shout out the correct answer as quickly as they can.



The Practice Book

The *Scholastic Times Tables Practice Book* has been designed to provide children with further opportunities for revision and practice of the times tables.

Use it alongside the *Teacher's Book*, as part of general class practice or for home learning. Look for the *Practice Book* icon  in the 'You will need' section at the start of an activity for activities which relate directly to the *Times Tables Practice Book*.

Each unit focuses on a different topic or times table.

This section provides children with the opportunity to revisit what they have learned with visual examples to support their understanding.

Children should work through the questions in order for varied practice which builds in difficulty.

Encourage children to use a separate piece of paper if they need to.


There are opportunities throughout for children to explain their reasoning aloud in pairs if appropriate or with an adult.

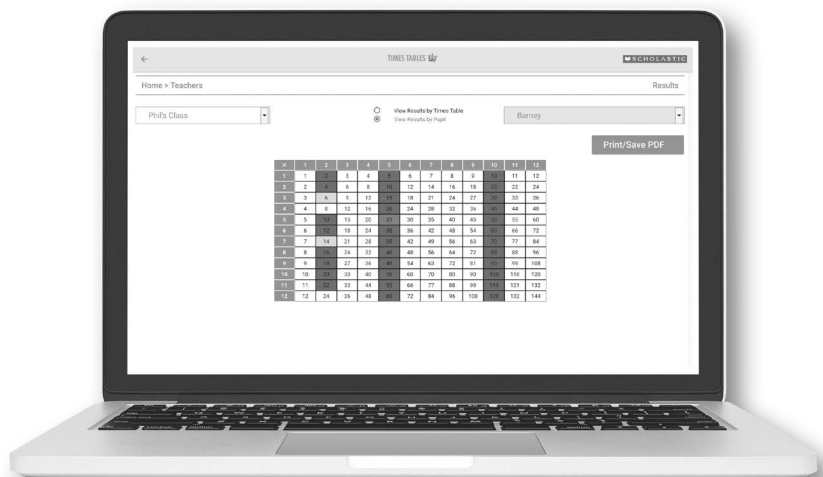
Using easy-to-access resources, children gain further practice at home or away from their desks.

Digital

Additional materials for this book can be found online at the following address:
www.scholastic.co.uk/timestables-resources these include:

- resource pages including games and worksheets
- supporting PowerPoint digital files for display during your classroom teaching
- quick-fire written tests for additional practice or homework. These tests have three levels of differentiation and are aligned with a unit or group of units from the *Teacher's Book*. Assign one of the three sections at a time and progress through them in order.

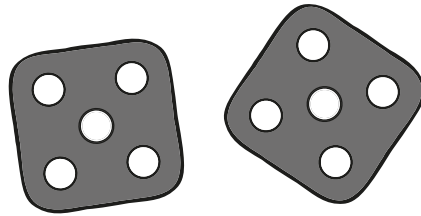
If digital files are required, they will be listed in the 'You will need' section at the start of an activity. Look for the digital icon  for activities using digital content.



DOUBLING

Recognising and recalling doubles of whole numbers is an early multiplication skill. Using the correct vocabulary, doubling can be introduced practically using everyday objects and pictures, such as counting the spots on dominoes or ladybirds. Many children may already have experience from playing dice games and dominoes.

Children should have opportunities to learn and develop quick recall of doubling facts for numbers to 12. They should be taught to choose and use suitable strategies for doubling larger numbers when playing games or solving simple everyday problems such as while shopping or baking (for example how to partition a 2-digit number into 10s and 1s before doubling it). Mastery of doubling can support children's developing understanding of early multiplication in several ways, for example understanding that doubling can be shown as repeated addition using the symbols + and = ($3 + 3 = 6$) or multiplying a number by 2 ($3 \times 2 = 6$). In these activities, children are shown how to partition a 2-digit number into 10s and 1s and how to recognise odd and even numbers.



I rolled 2 5s. That's double 5! That's 10 altogether.

| Activity | Objective | Focus | Organisation | Development |
|----------------------------------|--|--|--------------------------|-------------------------------|
| Body doubles! (p18) | | Using concrete resources to introduce the concept of doubling | Whole class | Fluency |
| Tower blocks (p18) | Solve 1-step problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context | Using concrete resources to provide a visual sense of calculating doubles | Pairs | Problem-solving |
| Ladybird doubles (p19) | | Using pictorial resources to practise doubling small quantities. Recording a double as a number sentence using the symbols + and = | Whole class/pairs | Fluency and reasoning |
| Domino doubles (p19) | Solve 1-step problems involving multiplication and division | Using concrete resources to get a visual sense of calculating doubles. To record a double as a number sentence using the symbols + and = | Whole class | Fluency |
| Shopping spree (p20) | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts (Year 2) | Learning how to double a 2-digit number by partitioning | Whole class/individuals | Problem-solving |
| Magic bean (p20) | | Doubling a 2-digit number by partitioning | Whole class/small groups | Problem-solving and reasoning |
| Fairy cakes (p21) | | Selecting suitable strategies to double numbers | Individuals/pairs | Fluency |

LADYBIRD DOUBLES



PAGES 12 TO 13

You need: digital file 4 (Ladybird doubles); whiteboards and pens; counters; cubes; number lines

STEPS

- Show children digital file 4 (Ladybird doubles) and look at the ladybird picture. Ask: *How many spots does the ladybird have on each wing? How many spots altogether? Let's say together, "double 4 makes 8."*
- Ask children to represent the double as a number sentence: $4 + 4 = 8$.
- Draw the outline of a ladybird on the board. Draw an equal number of spots on each wing. Ask: *What can you tell me about the spots on this ladybird? Is it a double? Why? (there is an equal/the same number of spots) How could we represent the number of spots as an addition sentence?*
- Repeat, this time drawing an unequal number of spots. Ask: *Is this ladybird a double? Why not?*
- In pairs, children imagine a ladybird with 16 spots. Can you work out how many spots the ladybird has on each wing? Encourage children to calculate, check and explain the problem using practical apparatus (for example fingers, cubes, number track), pictures and/or symbols. Ask: *How did you work out the answer?*

EXTEND

Using cubes or playing cards, children work out the doubles of larger numbers. They investigate halving small numbers for example *I am imagining a ladybird. It has 10 spots altogether. How many spots are on each wing?*

DOMINO DOUBLES

You need: a small bag containing all the domino doubles; 1 whiteboard and pen per child

STEPS

- Choose a volunteer to take a domino out of the bag without showing it to the other children.
- Ask them to say which domino it is (for example double 5). Tell children to draw a picture of what they think the domino looks like. Show them the double 5 domino. Ask: *Does the domino you have drawn look like this? How did you know how many spots to draw on each side of the domino? Count how many spots are on the domino altogether. Say together, Double 5 makes 10.* Return the domino to the bag.
- Repeat several times with different children picking a domino out of the bag.
- Ask children to draw all the doubles in a set of dominoes and write a number sentence to describe each double.

EXTEND

Children practise quick recall of doubles facts from 0–6. Call out a double, for example *Double 6!* Children shout out the correct answer as quickly as they can.