



**THIRD SPACE
LEARNING**

Ultimate Times Tables

Teacher notes for Year 4
games and activities

Year 4

Overview

Activity	Individual activity	Pairs activity	Small group activity	Whole class activity	Resources needed
1 - Five in a Row		×		×	• Resource 1 per pair • Some coloured counters per pupil
2 - Train, Train			×	×	• Mini whiteboards
3 - Sixes Splat				×	
4 - Sixes on Target			×		• Mini whiteboards
5 - Sevens Choir			×		
6 - Linked Sevens			×		
7 - Sevens Museum		×			
8 - Shark Nines				×	• A large area • 12 hoops • Resource 2
9 - Nines Dice Duel		×			• 6 sided die per pupil
10 - Racing Elevens				×	• Large digit cards from 0 to 9 • A large area
11 - Geo Eleven	×	×			• Geoboards (per pupil or per pair) • Elastic bands

Activity	Individual activity	Pairs activity	Small group activity	Whole class activity	Resources needed
12 - Double Vision?		×	×		
13 - Reach the Twelves				×	• Resource 2 • An area
14 - Looping Tables				×	• Resource 3
15 - All out Skirmish		×			• Playing cards per pair
16 - Back to Back			×		• Mini whiteboards

Five in a Row

Focus: Recognise and use multiplication and division facts for the 2, 3, 4, 5, 8 and 10 times tables.

Aim: Get five of your colour counters in a row.

Resources:

- Resource 1 per pair; some coloured counters per person

Instructions:

- 1 To place a counter, pupils need to point at a number and say two multiplication or division facts related to the number. If the fact is incorrect, they can't place the counter.

Key questions:

- Which facts are linked to the number you are pointing to? Are there other facts you could have said?
- Are there any numbers that are linked to more than two times tables?

Extension:

- Identify at least 3 facts for each number.

Train, Train

Focus: Recall multiplication and related division facts for the 2, 5 and 10 times tables.

Aim: Double the start number across your train of people.

Resources:

- Mini whiteboards

Instructions:

- 1 Put pupils into groups of four or more, one standing in front of another.
- 2 Say a number. The pupils need to continually double the number and pass the whiteboard back.
- 3 When the final person has written the doubled number, they hold up their whiteboard to show they're finished.

Key questions:

- Can you describe the method you used to double the number? Is doubling linked to any multiplication facts?
- Are the positions in the train linked to any multiplication facts?

Extension:

- Increase the range of starting number used.

Sixes Splat

Focus: Recall multiplication and division facts for the 6 times table.

Aim: Splat your opponent with the correct answer to a question.

Instructions:

- 1 Pupils stand in a circle. A question master stands in the middle of the circle.
- 2 The question master points at someone and says a question from the six times tables. The pupil who is pointed at ducks and the pupils on either side have to race to answer the question first. Whoever answers first wins, the other pupil sits down and is out.
- 3 Continue play until there are two pupils left. The final pupils stand back to back, take three steps apart and are given one final question. Whoever answers the question correctly first is the overall champion.

Key questions:

- What methods do you have for finding the answers?
- Are there other multiplication or division facts that link to the question I've just asked?

Extension:

- The overall champion could become the question master.

Sixes on Target

Focus: Recall division facts for the 6 times tables.

Aim: Be the first to write a division calculation using the number 6 and the target number.

Resources:

- Mini whiteboards

Instructions:

- 1 Put pupils in groups of 4 to 6 and write a multiple of 6 on the whiteboard.
- 2 Pupils race against their team to be the first to write a division question involving the number you have written.
- 3 The first person in each group to write a correct division calculation with the target number wins a point. The first person in the group with 10 points wins.

Key questions:

- Is there more than one division fact that you could write?
- Can you use any other facts to help you find the answer?

Extension:

- Write all the division facts.

Sevens Choir

Focus: Recall multiplication and division facts for the 7 times tables.

Aim: Say the correct calculations when your group is pointed to.

Instructions:

- 1 Put pupils into groups of three.
- 2 Point to a group. They need to say $1 \times 7 = 7$. The next group you point to will need to say the next fact in the seven times tables.
- 3 Continue like this. You can point in order or out of order.

Key questions:

- Which fact comes next?
- Which facts can help you find the correct answer? Which other times tables can help you?

Extension:

- Use division facts.
- A child could be the conductor.

Linked Sevens

Focus: Investigate and explore links between the 7 times tables and other known times tables.

Aim: Find links between the 7 and 6 times tables.

Instructions:

- 1 Present pupils with this statement: Kieron says, “I think my 7 times table is linked to my 6 times table.”
- 2 Pupils to discuss this in groups and prove the link. Then they can identify links between the seven and other times tables (7s and 8s then 7s and 4s).

Key questions:

- Can you link the 2 times tables and the 7 times tables?

Extension:

- Can you use your one and two times tables and addition to find answers to the seven times tables?
- Find links between other times tables.

Sevens Museum

Focus: Recall and represent multiplication and division facts for the 7 times tables.

Aim: Create different representations for 7 times table facts.

Instructions:

- 1 In pairs, pupils create at least 4 different images that show seven times table facts (multiplication and division).

Key questions:

- Which fact are you representing?
- Convince me this is a 7 times table fact.
- How are the representations similar or different?

Extension:

- Create the most unique representation.

Shark Nines

Focus: Recall multiplication and division facts for the 9 times tables.

Aim: Don't get eaten by sharks!

Resources:

- A large area; 12 hoops; resource 2

Instructions:

- 1 Set up 12 hoops with each hoop labelled using one of the number cards from 1 to 12.
- 2 Tell pupils to 'swim' around the area. Say a multiple of 9.
- 3 If pupils are standing in the multiplier that is used to create the multiple of 9 said, they are eaten by the sharks and are out (e.g. if you say 18, anyone standing in the 2 hoop is eaten).

Key questions:

- How do you know if you are going to be out?
- Which operation are you using?

Extension:

- One of the pupils can become the caller.

Nines Dice Duel

Focus: Fluency in the 9 times tables.

Aim: Add the numbers of the dice and multiply the answer by 9 before your partner.

Resources:

- 6 sided die each

Instructions:

- 1 Partners take it in turns to roll a die. Then race against each other to multiply the number on the die by 9. The first person to say the correct calculation wins.
- 2 The first person to 10 points wins.

Key questions:

- What do you notice about the answer you are giving?
- Is there a pattern to the 9 times tables?
- Do you have a strategy for finding the answers?

Extension:

- Say the related division fact as well.

Racing Elevens

Focus: Recall multiplication and division facts for the 11 times tables.

Aim: Race to create the answer to the calculation.

Resources:

- Large digit cards from 0 to 9; a large area

Instructions:

- 1 This game is designed to be played with groups of 20 but can be played with any number of pupils if each pupil holds more than one digit card. With numbers over 20, put pupils in two 'teams' that have to compete to get the answer to the middle first.
- 2 Give pupils digit cards. Say an 11 times tables multiplication or division question.
- 3 Pupils race to the middle to display the answer. If two people have the same digit (e.g. $22 \text{ divided by } 11 = 2$), the first person into the middle wins.

Key questions:

- How can you work out which digits will be needed?
- Do all the answers have the same digit twice?

Extension:

- A pupil can call out the questions.

Geo Eleven

Focus: Recall and represent multiplication and related division facts for the 11 times tables.

Aim: Make an array showing the given fact.

Resources:

- Geoboards; elastic bands

Instructions:

- 1 Say a multiplication calculation for the 11 times table or a multiple of 11.
- 2 Pupils display this calculation or multiple on their geoboard. If there are enough geoboards, give one per pupil. If there are not enough, pupils can work in pairs.

Key questions:

- How do you know your array reflects what was said?
- Is there another array you could make?

Extension:

- Give a multiplication and division fact for the array created.

Double Vision?

Focus: Conceptual understanding of the 11 times table.

Aim: Decide if the statement is always, sometimes or never true.

Instructions:

- 1 Present pupils with this statement: Mia says, "To answer any 11 times table question, you simply write the number you are multiplying 11 by twice. So if you are working out 5×11 , you just write 5 twice making 55."
- 2 Pupils discuss this in groups and decide if the statement is always, sometimes or never true.
- 3 The statement is sometimes true. Encourage pupils to prove this using different representations (tens frames, number lines, the link between $10 \times$ and $11 \times$ etc).

Key questions:

- What are the multiples of 11?
- What do you notice about the multiples of 11?

Extension:

- Apply this to division. How can you use this to answer division questions such as $99 \div 9$.

Reach the Twelves

Focus: Recall multiplication and division facts for the 12 times tables.

Aim: Run to the correct number around the room.

Resources:

- Resource 2; an area

Instructions:

- 1 Before the lesson, place the numbers 1 to 12 around the room.
- 2 Pupils stand in the middle of the room.
- 3 Say a multiple of 12. Pupils run to the correct multiplier (e.g. 24 is called, pupils run to 2).
- 4 Say the fact together.

Key questions:

- How do you know that is the answer?
- How are you working out the answer?

Extension:

- After chanting the multiplication fact, also chant a related division fact.

Looping Tables

Focus: Recall multiplication and division facts for the 1 to 12 times tables.

Aim: Complete the loop of question cards as a class.

Resources:

- Resource 3

Instructions:

- 1 Hand out the loop cards.
- 2 Pick someone to start by saying the question on their card. The pupil with the answer says the answer then reads their question.
- 3 Continue until the first person says their answer.

Key questions:

- Which fact do you think will match your answer / question?
- Which times table matches your question?

Extension:

- Put pupils into two groups with a complete set of cards. Which team can be the quickest to complete the loop?

All Out Skirmish

Focus: Recall of multiplication and division facts for the 1 to 12 times tables.

Aim: Multiply the values of two cards together first.

Resources:

- Playing cards per pair

Instructions:

- 1 Pupils deal the cards between them. Ace = 1, Jack = 11, Queen and King = 12.
- 2 They both count down from three, on one they both turn over the top card. Then they race to multiply the numbers together, say the calculation out loud and put their hand on the card.
- 3 If the pupil touching the card first said the correct calculation, they win the card. If they said the wrong calculation, their partner gets the card.

Key questions:

- Which method are you using to find the answer?
- Which times tables are easier to work out? Why?

Extension:

- Change the value of the picture cards to focus on specific times tables that pupils are struggling with.

Back to Back

Focus: Recall of multiplication and division facts for the 1 to 12 times tables.

Aim: Calculate the missing number written by a partner.

Resources:

- Mini whiteboards

Instructions:

- 1 Put pupils in threes and label them A, B and C.
- 2 A and B will need whiteboards.
- 3 C will be the 'spotter'.
- 4 A and B write down numbers between 1 and 12 on their whiteboards.
- 5 C multiplies the two numbers together and says the product only.
- 6 A and B race to calculate the number on the other person's whiteboard using this information.

Key questions:

- How can you work out the missing number?
- Which facts can you use to help you?
- Can you explain the strategy you are using?

Extension:

- Add restrictions e.g. you can't use 1 or 2.