

# Lesson Plan – 11 Times Table



## Introduction

The 11 times table is taught by Fiona the Frog. Fiona is a Hippie Frog who teaches in her own chilled out style. Fiona helps explain to the students in her own unique way that “you can work out each 11 times problem by adding 10 times and 1 times together to get 11 times”. This should already be familiar to the students as it was introduced in some of the earlier times tables. Fiona then shows “there is groovy pattern up to 9 times 11 that makes the 11 times table even more hip. You just take the number being multiplied by 11 and make 2 of then for the answer”.

Once they know the 11 times pattern most students will want to solve all equations up to 9 times 11 times using this knowledge as opposed to using number sense or even swapping the around (commutative property). For 10 times 11 they can just pace a zero on the end. For 11 and 12 times eleven they will need to use number sense. Hence the example in the learn scene is 12 times 11. Fiona rightly points out that “most people flip out when they see all those dots to count” and then goes on to show how easy it is to solve using number sense.

## Learning Outcomes

- Each student grasps the concept that number sense can be used to work out the 11 times table
- Each student understands that 11 times can be solved by 10 times plus 1 times and is competent in these calculations particularly for 11 times and 12 times 11
- Each student understands the 11 times pattern and can solve up to 9 times 11 using this pattern
- Each student understands that if you swap the 11 around in the multiplication you get the same product, or answer (commutative property). They also arrive at the conclusion that up to 9 times 11 it is easiest to just use the 11 times pattern. It is only the 10 times tables where swapping the numbers around is the most efficient way to solve.
- Each student continues to develop their mindset through the feedback provided for correct and incorrect answers.

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## Resources Required

- The App on a device with 3GB of available memory to download all of the videos
- Overhead projector or TV Monitor connected to the device (if teaching in a Group)
- Paper and pens/pencils for students
- Cardboard
- Coloured pencils, crayons on pens

## Scenes

- This activity involves watching the “Learn” scene, followed by the “Tips” scene and then successfully answering all twelve 11 Times Table questions. After login, select the “Learn the Times Tables” button followed by the “Start” button or “11 Times” tile on the Home Screen. Before commencing the lesson make sure that you have completed this step as it will start the process of downloading the 11 times videos which will take a few minutes.

## Lesson

Time	Task
15 mins	<p><b><u>Key Concepts for 11 Times</u></b></p> <p>Select the “11 Times” tile on the home screen. Select the “Learn” button and watch the video (3 minutes).</p> <p>At the conclusion of the video, ask the student/s:</p> <p><b>“What were Fiona the Frog’s key messages within the Learn video?”</b></p> <p>Responses should include but not be limited to:</p> <ul style="list-style-type: none"><li>- 11 times problems can be solved using number sense</li><li>- You just split the 11 times into 10 times and 1 times and add these together to get the answer</li><li>- There is a pattern in the 11 times table up to 9 times 11. The answers are just repeating the multiplied number twice.</li></ul>

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	<ul style="list-style-type: none"> <li>- You can solve all 11 times problems using the pattern and 10 times plus 1 times.</li> </ul>
20 mins	<p><b><u>Tips to help with 11 Times</u></b></p> <p>Select the “Tips” Button and watch the video on the Practice screen (1.5 minutes). You can expand the video to full screen by pushing the expand button on the top right-hand corner of where the video is playing. It will automatically drop back to the practice screen at the end.</p> <p>At the conclusion of the video the first question will play. Wait for it to finish and ask the student/s:</p> <p><b>“What were Fiona the Frog’s key messages within the Tips video?”</b></p> <p>Responses should include but not be limited to:</p> <ul style="list-style-type: none"> <li>- If you are multiplying 11 by a single digit number, then you can use the 11 times pattern for the answer</li> <li>- For 10 times 11 you just place a zero on the end for the answer</li> <li>- For 11 and 12 times 11 you add 10 times and 1 times together to solve these</li> <li>- If you get stuck on an 11 times question you can always use number sense to work it out</li> </ul>
60 mins	<p><b><u>Solving the 11 Times Tables</u></b></p> <p>The objective is to work through the 12 eleven times questions until all 12 stickers are obtained for the correct answers. You also want to enter some mistakes, firstly so the students can all learn from the mistakes and, secondly so you can listen to Fiona and her “Growth Mindset” advice when you do make a mistake.</p> <p>This activity can be done as individuals or in groups of up to 4 students.</p> <p>“For each real-life example, you will need to look at the question and firstly work out the times tables problem that you need to solve and write this in the working out space. The numbers are in bold to make it easier. Remember the way to</p>

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	<p>write it is the number of groups multiplied by the objects. I then need you to solve that problem. We will then type it in and check if it is the correct answer.”</p> <p>Help the students with the first question which will be x times 11. Show the working in the working out space by writing the equation and then highlighting there is x groups each with eleven objects resulting in the equation x times 11. Then ask,</p> <ul style="list-style-type: none"> <li>- “If there are x times 11 objects, then what is going to be the best strategy to solve this. Is it using the 11 pattern, is it using number sense or is 10 times where you will just change the place value?”</li> <li>- Use the working out space to work out the solution for 11 and 12 times. Just write the answer and reinforce the pattern or changing the place value for up to 10 times.</li> <li>- Type the answer and select the “Check” button</li> <li>- Watch the correct answer video from Fiona and discuss any interesting points.</li> <li>- Select the “I’ve Got This” button to receive your sticker</li> <li>- Select the “Next” button and the next question will automatically appear on the practice screen</li> <li>- Ask each student or groups to solve this one using number sense or by swapping the numbers around and using one of the previous times tables they have learnt. Give them a few minutes to report back.</li> <li>- Ask first if there are any ways you could make a mistake with this question as learning from mistakes is when our brain grows the most. If there is, then show how you could make the mistake, type in the wrong answer and watch the video response from Fiona. There are some excellent mindset sayings and examples in each of the incorrect answer videos that are well worth sharing with the students.</li> <li>- Select the “Watch Again” button and watch the video to show the coaching available if the student answers incorrectly.</li> </ul>
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	<ul style="list-style-type: none"> <li>- Ask for someone to come up and show the correct workings or the use of the pattern to solve the problem. Explore the concept of x groups of 11 objects, with them.</li> <li>- Ask them to type in the correct answer and select "Check"</li> <li>- Select the "I've Got This" button to receive your sticker</li> <li>- Select the "Next" button to move onto the next question</li> <li>- Repeat the above sequence until all 12 questions are answered correctly</li> <li>- Select the "Flashing Fiona Sticker" in the middle of the sticker wheel</li> <li>- The Congratulations video will play, and the Fiona Sticker will pop into place on the Home Screen as recognition that you have learnt and understand the 11 Times table.</li> </ul> <p>Give your student/class some applause or other form of recognition.</p> <p>Wrap this activity up by asking the student/group:</p> <ul style="list-style-type: none"> <li>- Do you now feel like can solve 11 times table questions using the 11 times pattern and number sense or do you need some more practice?</li> </ul> <p>If they feel like they need more practice, then click on the 11 times tile again which will take you to the Progress Screen where you can select the "Reset" button. It will ask if you want to reset. Select "Yes" and then select the "Next" button to start the first question again.</p> <p>Once the student/class are comfortable that they understand and can solve the 11 times table, then announce "you are now ready to move onto the 12 Times Table".</p>
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40 mins	<p><b><u>Creative Activity – “11 Times Pattern Poster”</u></b></p> <p>This activity can be done as individuals, in groups of up to 4 or as a class.</p> <p>“Fiona has shown there is a there is groovy pattern up to 9 times 11 that makes the 11 times table hip. Your task is task is to draw a poster that shows this pattern. You may also want to include Fiona with some of her hippie hand signs, some flowers, lily pads, her magic carpet or anything else you think will add to the appeal of your poster.”</p> <p>You have 30 minutes to create your post and then we will share with the class.</p> <p>Ask each student or group to share their poster and talk through any special features.</p> <p>Applaud them for their efforts after each group or student have shown their poster.</p>
	<p><b><u>Follow-Up Activity – 11 Times Worksheet</u></b></p> <p>The App is designed with the real-life questions as a means of formative assessment to give an indication how each student is learning the material throughout the course. Once the students have demonstrated an understanding of the 11 times tables, there is a worksheet available with 12 different questions to either continue practicing or to use as a means of summative assessment. The worksheets include a space for the students to work out the answers. All worksheets are available for download from the following link:</p> <p><a href="https://educationthroughanimation.com/pages/worksheets">https://educationthroughanimation.com/pages/worksheets</a></p>