

# Lesson Plan – 8 Times Table



## Introduction

The 8 times table is taught by Bianca the Beagle. Bianca is a very Regal Beagle. Bianca helps explain to the students that “The most scintillating aspect of the 8 times table is that by the time you get to learning them, you already know how to calculate most questions using the other times tables. It would most admirable, and often quicker, if you swap the numbers around and solve the problem using the easier times tables”. She then explains that 8 times is just “Double, Double, Double”, with 2 times being the first double, 4 times the second double and 8 times the third double.

Using number sense to solve 8 times requires a prior understanding of the 2 times tables and 4 times table as these are the first 2 Doubles. The assumption has been made the students are now competent in doubling or skip counting in 2’s and hence this does not form part of the lesson plan. If your students need more practice in 2 times the please add the “2x song” into the plan.

The students have already most of the times tables so the concept of swapping numbers around to solve using the easier times tables is one that should be explored fully with the students. They are likely to want to swap the numbers around for most of the questions as it will be more efficient than Double, Double, Double.

## Learning Outcomes

- Each student grasps the concept that multiplying by 8 can be solved by doubling that number 3 times. It’s Double, Double, Double.
- Each student understands that the first double is to solve 2 times, the second double to solve 4 times and the third double to solve 8 times.
- Each student understands that the answer to all 8 times questions end in an even number
- Each student understands that if you swap the 8 around in the multiplication you get the same product, or answer (commutative property) and they do this to make most of the 8 times calculations more efficient. There are some exceptions being 8 times 8, as well as 11 and 12 times 8 which are yet to be taught.

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- Each student continues to develop their mindset through the feedback provided for correct and incorrect answers.

## 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

## Scenes

- This activity involves watching the “Learn” scene, followed by the “Tips” scene and then successfully answering all twelve 8 Times Table questions. After login, select the “Learn the Times Tables” button followed by the “Start” button or “8 Times” tile on the Home Screen. Before commencing the lesson make sure that you have completed this step as the it will start the process of downloading the 8 times videos which will take a few minutes.

## Lesson

Time	Task
25 mins	<p><b><u>Key Concepts for 8 Times</u></b></p> <p>Select the “8 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 Bianca the Beagle’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>- You can swap the numbers around and use your understanding of the other times tables to solve most of the 8 times questions (commutative property). This will often make the calculation quicker.</li><li>- You can solve the 8 times table by Double, Double, Double.</li><li>- The first double is to solve 2 times, the second double to solve 4 times and the third double to solve 8 times.</li></ul>

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20 mins	<p><b><u>Tips to help with 8 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 Bianca the Beagle’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>- It takes a bit longer to solve 8 times problems as you have to double 3 times</li><li>- With 8 times you should always ask yourself, can I swap the numbers around and solve it using an easier times table</li><li>- Just pretend you’re at an auction when you need to solve an 8 times problem. Double once, double twice, double 3 times ..... SOLVED for 8 times.</li></ul>
60 mins	<p><b><u>Solving the 8 Times Tables</u></b></p> <p>The objective is to work through the 12 two 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 Bianca 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 write it is the number of groups multiplied by the objects. I</p>

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then need you to solve that problem. We will then type it in and check if it is the correct answer.”

Help the students with the first question which will be  $x$  times 8. Show the working in the working out space by writing the equation and then highlighting there is  $x$  groups each with two objects resulting in the equation  $x$  times 8. Then ask,

- “If there are  $x$  times 8 objects (or 8 groups), should we use “Double, Double, Double” or should we swap the numbers around to get the answer.
- Work out the solution
- Type the answer and select the “Check” button
- Watch the correct answer video from Bianca
- Select the “I’ve Got This” button to receive your sticker
- Select the “Next” button and the next question will automatically appear on the practice screen
- Ask each student or groups to solve this one using either “Double, Double, Double” or by swapping the numbers around to solve using the easier times tables. Give them a few minutes to report back.
- 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 Bianca. There are some excellent mindset sayings and examples in each of the incorrect answer videos that are well worth sharing with the students.
- Select the “Watch Again” button and watch the video to show the coaching available if the student answers incorrectly.
- Ask for someone to come up and show the correct workings to solve the problem. Explore the concept of  $x$  groups of 8 objects, with them
- Ask them to type in the correct answer and select “Check”

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	<ul style="list-style-type: none"> <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 Bianca sticker" in the middle of the sticker wheel</li> <li>- The Congratulations video will play, and the Bianca Sticker will pop into place on the Home Screen as recognition that you have learnt and understand the 8 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 8 times table questions using Double, Double, Double?</li> </ul> <p>If they feel like they need more practice, then click on the 8 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 8 times table, then announce "you are now ready to move onto the 11 Times Table".</p>
15 mins	<p><b><u>Creative Activity – "Double Fever"</u></b></p> <p>This activity can be done as individuals, in groups of up to 4 or as a class.</p> <p>"By now we are all familiar with how doubling is really useful skill to have for solving maths problems. This exercise is to demonstrate how quickly numbers grow if you keep doubling. Your task is to take the number 2 and keep doubling it as many times as you can until you can no longer work out the answer. We know that you all can all get to 8 but how much</p>

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	<p>further can you go with doubling until the number just gets too big?”</p> <p>You have 15 minutes for this exercise and then you can tally up how many times you were able to double and what was the answer.</p> <p>At the end of 15 minutes, ask the students if any would like to share their findings. You may also want to explain that mathematically, this exercise is calculating <math>2^n</math> where <math>n</math> is the number of times you doubled.</p>
	<p><b><u>Follow-Up Activity – 8 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 8 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>