

Lesson Plan – 0 Times Table



Introduction

Within the App the Times tables are taught in a sequence that facilitates the learning, as opposed to a sequence that matches any particular curricula. The learning is designed so that students can learn them all within a few weeks which in effect should bring forward learning goals from future year curricula. This will have a tremendous impact on the capacity of each student to move onto more advanced curricula such as division or fractions.

The Zero (0) Times tables is the first of the 13 tables taught. It is taught as a standalone table prior to moving onto the other tables. The zero times table is taught by Sean the Snake. Sean is a friendly snake and is the perfect animal to teach to zero times tables as he has no hands or fingers to count and can also roll-up into a zero. Sean helps explain to the students in his own unique way that if there are “no groups to count or no objects within groups to count, then there is nothing to count and the answer will always be zero”.

Learning Outcomes

- Each student grasps the concept that if there are no groups to count or objects within groups to count, then there is nothing to count, so the answer will always be zero.
- Each student understands that if you swap the zero around in multiplication you get the same product or answer of zero (commutative property). It doesn't matter if it is $x0$ or $0x$, the product is always zero.
- Every student understands that the number 0 can be interchanged in Times Tables problems with the words “zero”, “no” or even “none”.
- Each student understands how to navigate their way through the sequence of Learn, Tips and Practice for each Times Table.
- Each student is competent in using the Practice Screen. They can use the working out space, answer questions, ask for help with the “Watch Again” button, select the “I've Got This” button to be rewarded with stickers followed by the “Next” button to move back to the Practice screen and onto the next question.

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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 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 Zero Times Table questions. After login, select the “Learn the Times Tables” button followed by the “Start” button or “0 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 0 times videos which will take a few minutes.

Lesson

Time	Task
15 mins	<p><u>Key Concepts for 0 Times</u></p> <p>Select the “Start” Button or the “0 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>“What were Sean the Snakes key messages within the Learn video?”</p> <p>Responses should include but not be limited to:</p> <ul style="list-style-type: none">- Whenever you see zero times or times zero, it means there are either no groups to count or no objects within groups to count so the answer will always be zero.- Sean teaches the zero times tables because there is nothing to count and he has no hands

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20 mins	<p><u>Tips to help with Zero Times</u></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>“What were Sean the Snakes key messages within the Tips video?”</p> <p>Responses should include but not be limited to:</p> <ul style="list-style-type: none">- When you multiply by zero there is nothing to count so the answer is always going to be zero.- You will be given real life problems to solve- The question is on the left-hand side of the screen and a space to work out the solution on the right-hand side. You can use your finger, or a stylus designed for the device.- When you have your answer, click on the “Check” button.
60 mins	<p><u>Solving the Zero Times Tables</u></p> <p>The objective is to work through the 12 zero 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 Sean and his “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 within those groups. I then need you to solve that</p>

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	<p>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 0. Show the working in the working out space by writing the equation and then highlighting there are zero objects. Then ask,</p> <ul style="list-style-type: none">- “If there are zero objects (or groups), then the answer is “????”..... ZERO.- Type the answer 0 and select the “Check” button- Watch the correct answer video from Sean- 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- Look for the words “no” or “zero” in the question and talk through how these words and also the word “none” can be substituted for the number 0.- Ask each student or groups to solve this one. 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 Sean. 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 on the screen- Ask them to type in the correct answer and select “Check”
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	<ul style="list-style-type: none"> - Select the “I’ve Got This” button to receive your sticker - Select the “Next” button to move onto the next question - Repeat the above sequence until all 12 questions are answered correctly - Select the “Flashing Sean sticker” in the middle of the sticker wheel - The Congratulations video will play and the Sean Sticker will pop into place on the Home Screen as recognition that you have learnt and understand the Zero Times table. <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"> - Do you now feel like can solve zero times table questions or do you need some more practice? <p>If they feel like they need more practice, then click on the 0 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 zero times table, then announce “you are now ready to move onto the 1 Times Table”.</p>
10-15 mins	<p><u>Creative Activity – “A Sinister Snake”</u></p> <p>Explain to the students that “Sean the Snake has been cast as a friendly snake in the App. Quite often Snakes are cast as sinister or sneaky characters. I’d like each of you to spend a few minutes to recast Sean as the sinister snake, Steve or Sally snake. What would Steve or Sally, the “sinister” snakes voice sound like for the following saying: “Hi, I’m Sally (or</p>

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	<p>Steve) the Snake. Zero times is my favourite because there is nothing to count”.</p> <p>Let the students practice for a few minutes and then ask for any volunteers to share their voice acting with the class. Encourage applause after each attempt.</p>
	<p><u>Follow-Up Activity – 0 Times Worksheet</u></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 times table, 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>https://educationthroughanimation.com/pages/worksheets</p>