



Sample Lesson Plan
The Big Bus Activity: Mental Maths 8-11 years



Mental Maths
8 - 11 years

Title

Using *The Big Bus Mental Maths* to provide children with the opportunity to practise their mental calculation skills.

Introduction

A highly motivating program with the facility to draw on all four number operations. Mental Maths can be tailored to suit all abilities.

In this lesson: The children are introduced to the program and go on to participate in the exercises to practise their multiplication and division skills.

Age Range: 8 – 11 years

Lesson Plan

Learning objectives

Having completed this activity most children will have developed their ability to:

- Respond quickly and accurately to maths problems presented on screen.
- Use the computer mouse with speed and accuracy.

Technical preparation

Install *The Big Bus* CD-ROM on to the computer. After a short opening sequence select the button to take you to **Explorers' World**. Open the notebook index and scroll through the available activities. Select **Mental Maths**. Click on the **Set Up** option. By default, this is set on the **Quick Set Up** with all four operations selected. Use the tick boxes to deselect addition and subtraction, and if appropriate to the class, tailor the difficulty level and response time. Alternatively, if required, using the **Full Set Up** it is possible to be very much more specific about the types of problems which will be presented on screen. Click on **Start Mental Maths**.

Previous experience

A previous knowledge of suitable mental calculation strategies for multiplication and division will help the children gain the maximum benefit from this activity.

Introducing the activity

Gather the children around a large computer monitor or interactive whiteboard.

Recap the **key terminology** the children will encounter in the activity. Recap the mental maths strategies the children are already aware of for multiplication and division, and explain that they are going to be able to use these to take part in an activity using the computer.

Direct the children's attention to the computer monitor or whiteboard, select "**Start the activity**" then select the flower and leaf icon at the top left of the screen.

Ten problems are presented, along with ten possible answers. Demonstrate to the children how to click on an answer and drag it into position. Questions can be taken in any order. A correct answer initiates a reward animation on the right of the screen, whilst an incorrect answer or too long a time gap before answering see the reward disappearing. Having correctly answered all the questions, a further reward is shown and the children are encouraged to take on another set of questions and answer them more quickly.

After the initial demonstration, and if more than one computer is available, the children could now break into working groups and undertake the activity for themselves. It is possible to tailor the activity to suit the ability level of different groups. Ask them to try all four possible activities. The mathematical challenges remain the same, but the range of animations significantly increases the level of motivation.

Allow the children about 15 minutes to complete the activity, and then gather them back together to discuss how they got on. Were they getting faster with their calculations the more they practised? Did it help them to be playing against the clock? Did they have a favourite animation?

Classroom management

A single classroom computer running *The Big Bus*, using a large monitor or interactive whiteboard, is an effective whole class teaching resource. Introduce the activity to the whole class before pupils break into their groups.

If you have access to a computer suite this activity can be completed as a whole class lesson.

If you have access to only one or two computers, pupils will need to complete the activity on a rotational basis.

Duration

Each group of children will require approximately 15 minutes of computer time. The teacher introduction and follow-up time will take approximately 15 minutes and 10 minutes respectively.

Differentiation

- This activity can be differentiated to suit a very wide range of ability levels. It can also be tailored to support specific mental maths strategies.

Extending the activity

- Keep this program available for the children to use on a regular basis, taking advantage of slots during their day to further reinforce their skills.

Curriculum Information

The National Curriculum in England for Mathematics (KS1)

Ma2 Number: 3c, 3d.

The Scotland 5-14 Guidelines for Mathematics

Number, Money and Measurement: Levels A, B.

The Northern Ireland Curriculum for Mathematics (KS1)

Number: - Operations and their Applications: a, b, c.

The National Curriculum in Wales for Mathematics (KS1)

Ma2 Number: 2.3

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