

Lesson Structure

There are five main stages of a **Maths — No Problem!** Lesson. These components are exploration, structured discussion, practice, journalling and reading. There is no right or wrong order to these components and the lesson structure can vary from teacher to teacher.

Before we move on to the individual parts of a lesson, it is important to note that we do not necessarily have to include all five components in every lesson for the learning to be well-rounded and complete.

Exploration

The teacher will present the whole class with a problem to explore. We call this the anchor task, it will be the central focus of the whole lesson, and it can be found in the **Explore** section of the textbooks. The anchor tasks have been designed to motivate learning for the whole class.

During this part of the lesson, learners will be working in groups exploring the task themselves, however they see fit, whether this is with concrete resources, modeling or different strategies etc. After teachers have presented the problem and set a time for exploration, their role is observation and assessment. They are giving their class independence to experiment.

Structured discussion

If you are following Zoltan Dienes' theory, then structured discussion would come after exploration in the lesson order. This part of the lesson is a teacher-led whole class discussion. The aim is to use targeted questions to draw out from the group, different methods to discuss and any misconceptions to rectify. The **Master** section of the book can provide some anticipated methods for solving the problem and teachers can use this to guide the discussion.

The questioning will be based on: 'What are you doing in this strategy to solve the problem and why are you doing it?'

Practice

In the **Maths — No Problem!** programme there are two types of practice: guided and independent. **Guided Practice** can be found in the textbook, where learners can work through the questions in pairs, whereas Independent Practice can be found in the workbook and as the name suggests pupils work through these by themselves. Both sets of questions have been designed with variation in mind, so learners can develop a deeper understanding of the topic as they work through the exercises.

During both types of practice, the teacher will be observing. If they notice a common misconception throughout the class, they could choose to close this section of the lesson with a plenary to immediately address it.

Additionally, in each chapter you will find various **Activity Times** which have been included to help learners explore mathematical concepts further. And there is a **Mind Workout** at the end of each chapter to encourage pupils to work on their greater depth thinking.

Journalling

The aim of journalling is to give learners a question or task based on the lesson's problem, so it could be creating a story for an equation, taking a Guided Practice question and explaining the calculation, picking one method for solving a problem and justifying why it is the most effective, etc. It allows learners to explore new ideas and to create a completely personal

journal entry, making it easier for teachers to assess which individuals have truly grasped the concept and who in the class is working at a greater depth. It also gives learners an opportunity to develop their communication skills by learning to articulate their ideas and explicate their mathematical thinking that surfaced during exploration.

There are four types of journalling — descriptive, evaluative, creative and investigative — and it is important to try and utilise all of them throughout the school year. For some inspiration you can find a **Maths Journal** idea at the end of each chapter.

Reading

At some point in the lesson, the learners should be given an opportunity to read through the corresponding content in the textbook. The **Maths — No Problem!** textbook can be thought of as our friend's journal, with the aim being that pupils can validate their exploration and the class discussion by comparing methods. It is a time for learners to reflect upon which methods they think are the most effective and why. Additionally, it is a good opportunity to learn clear and concise ways to articulate their ideas when writing their own journals.