

# UNLOCK THE POWER OF LEARNING MATHS AND SCIENCE IN ENGLISH

A course to support teachers to deliver effective lessons in Maths and Science to learners whose first language is not English.



## COURSE CONTENT



# INTRODUCING NILE

## Unlock the power of teaching maths and science in English

### For primary maths and science teachers

As part of our commitment to providing professional teacher development, we have partnered with NILE, a leading provider of professional development for teachers, trainers and education professionals around the world. Together, we develop and promote quality teacher education programmes, globally.

The Teaching through English: Primary Maths and Science teacher training programme has been developed in conjunction with NILE, with a specific focus on supporting International or English-medium schools where teachers and learners may not have English as their first language. The course content addresses the language of maths and science, and aims to help teachers to develop confidence in explaining ideas and concepts in English in order to achieve the best learning outcomes for students. The course content is delivered via 8 weeks of online tutorials or bespoke face-to-face options.

### The programme features:

- An online course comprised of 8 modules with a half-term in the middle. Participants are expected to work between 5 to 7 hours per week
- Content which is written and developed specifically for teachers whose first language may not be English or who are teaching students whose first language is not English
- Options for face-to-face delivery - either locally, or in the UK



# WEEKLY CONTENT

## WEEK 1 – Introductions

In this unit you will find out about the course and how to get the most from it, including learning to use the platform and all the facilities that it offers. You will also find out about your tutor on this course and introduce yourself to your course colleagues and 'meet' them. You will read an article about how we can work together online in the best way. Finally, you will look at ways of teaching maths and/or science and share the methods you use.



## WEEK 2 – Key principles and challenges of teaching primary maths and science through English

You will share your experiences and feelings about teaching through English. You will also consider some potential challenges and solutions related to your own English skills. You will listen to some teachers discussing the benefits and challenges of teaching through English. You will share details of your individual maths or science teaching experience. To round off the week, you will 'meet' your colleagues and tutor in a live webinar to discuss issues in teaching maths and science through English.



## WEEK 3 – Managing the class in English

This week you will think about the value of using English throughout the lesson for both managing the class and teaching the subject. You will consider the distinction between Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP), and why an understanding of this distinction can help a teacher in lesson planning. You will look at how the language the teacher uses in the classroom varies according to its function (e.g. giving praise, checking understanding, conducting feedback etc). Finally, you will consider the strategies a teacher can use to switch codes (from L1 to L2) and when this may be necessary or appropriate.



## WEEK 4 – Subject Language

In this unit you will learn how to identify the key vocabulary used for different maths and science concepts. You will also focus on strategies for teaching vocabulary, including recording and recycling target words and phrases. In addition, there will be opportunities to identify the language structures required for learners to complete particular maths or science tasks. This focus on identifying the language demands will lead on to the introduction of language support techniques. This process is at the heart of the scaffolding required for teaching in English. This process will be explored in greater detail in the following weeks.

# WEEKLY CONTENT

## WEEK 5 – Scaffolding Receptive Skills

In this unit you will think about how to scaffold and support learners when they are reading and listening in English. First, you will look at what scaffolding is. You will also think about the difference between productive and receptive skills and share your own language learning experience related to these skills. You will consider how you can support your learners in understanding teacher talk. You will then think about the language demands of short texts (maths word problems and science texts) and how you can offer language support for these kinds of texts. Finally, you will look at language for giving feedback to learners.



## WEEK 6 – Supporting Speaking and Writing

This week the focus switches to productive skills: speaking and writing. Teachers often say that the children can speak to them in English, but they tend to switch to their mother tongue when they are asked to work in pairs or groups. Therefore, speaking skills need to be scaffolded to be strong, clear and easy to access. This will give learners the confidence to actually produce the language; you will look at strategies for doing this in this unit. You will also have the chance to produce language support sheets for spoken tasks. In addition, writing also presents a real challenge. Your learners may still be in the early stages of learning how to write in their own language and their motor skills may be underdeveloped. Moreover, they may be meeting a new script or writing in a different direction. The strategies to use here (in addition to a language support sheet) will be largely “encouragement” strategies and tasks that are short and simple.



## WEEK 7 – Issues in Assessment

Week 7 will see you look at two different types of testing: formative and summative, and the different objectives of each one. You will consider the fact that with informal testing in the second language, learners need the same type of scaffolding that they do when they are being taught. You will look at the importance and value of assessment for learning or informal testing. Finally, you will consider the strategies you need to use to ensure that your learners are fully aware of and engaged with the learning process.



## WEEK 8 – Course Review and Assignment

In the final week we will review the whole course and look at what you need to do for your assignment. You will have the opportunity to choose from two assignment options and get some peer feedback on your ideas before you finalise and submit your assignment. Finally, we'll say 'goodbye' to one another!

Further details about this training programme and information on how to register can be found on [macmillanic.com/maxmaths](https://www.macmillanic.com/maxmaths)