

empoweredED

Maths

Teaching Guide

Teacher
Space

How to Use It

Table of Contents Page



Overview: The Table of Contents Page lists all of the concepts covered in the unit.

What It Includes: All Learning Intentions covered in the unit are listed as well as a space for students to record the number of questions they got correct (according to which pages they completed).

TAHI /15	RUA /15	TORU /15

In the example above, students should only fill in marks for the pages they attempted (e.g. if a student attempted orange Rua page, then he or she would write their mark out of 15 below the orange rectangle).

Lesson Time: It will take about 1 minute for students to record the marks for their work if done each day.



Table of Contents Page

Teacher Tips

- **Recording Marks:** It is important to get students into the habit of recording their marks each day or every other day. The amount of time it takes to record marks will lessen as students become familiar with the process.
- **Workbooks vs Printing:** If you ordered the Student Workbooks, then you're sorted! The Table of Contents are at the front of every unit. If you don't have the workbooks, then you can print the Table of Contents when logged into the website (ebmcresources.com) and have students glue this into their books.
- **Teacher Marking:** You can have students show you their recorded mark once they finish the Practice Pages and before going onto the Puzzle Page. Look for quality and completion of student work. If a student's mark is low, select two problems for the student to re-work in a Working Space Page or in a book. You can also record all student marks in your own mark book to track progress.

Introduction Pages



Overview: The Introduction Pages are the first two pages of every concept. This is the 'teaching' part of the set of concept pages.

What It Includes:

<i>Explore</i>	Open-ended exploration questions to engage student thinking relevant to the concept before teaching
<i>Notice</i>	Students look for patterns and draw conclusions
<i>Understand</i>	Explanation using colour, visuals and examples aimed at building conceptual understanding
<i>Remember</i>	Recalling prior knowledge from a previous lesson or year.
<i>Worked Examples</i>	Step-by-step guide of the procedure using colour, visuals and examples
<i>Think About It</i>	Discussion questions aimed to deepen student understanding and address common misconceptions
<i>Our Turn</i>	Differentiated examples to work as a class (teacher and students)
<i>Your Turn</i>	Independent practice questions (support and on-level)
<i>Extension</i>	Independent practice questions (extension) for students who finish the 'Your Turn' section early
<i>Puzzle</i>	An activity involving creative solutions for students who finish the 'Extension' questions early
<i>Success Criteria</i>	Students tick boxes next to statements matching the Learning Intention(s)
<i>Pause and Reflect</i>	Reflective questions for students to answer about their learning

Lesson Time: It will take roughly 45 minutes to deliver a lesson using both the Introduction Pages and accompanying Teaching Presentation.

Introduction Pages

Teacher Tips

- **Teaching Presentation:** Remember the Teaching Presentation matches the Introduction Pages – it's easy! Access these slide shows by signing into your account on ebmcresources.com.
- **Preparation:** Read through the Teaching Presentation beforehand so you know what it discusses.
- **Printing:** If you have the Student Workbooks, you will be all sorted! If not, you will need to print the pages from your account on ebmcresources.com. If you are trying to minimize printing, only print the second page of the Introduction Pages containing the 'Your Turn', 'Extension' and 'Puzzle' sections.
- **Checking Student Progress:** Most students will be able to complete the Your Turn section in the allotted time. You can quickly check student progress by marking the first two or three Your Turn questions for each student as you walk around the classroom. This allows you to identify students who may benefit from small group assistance for the concept.
- **Marking:** All answers to the 'Our Turn', 'Your Turn', 'Extension' and 'Puzzle' sections are on the Teaching Presentation. You can display these answers as your class works or at the end.



How to Use It

Teaching Presentation



Overview: The Teaching Presentation is a slide show used for teaching a concept that can be accessed by logging into your account on ebmcresources.com.

What It Includes: This is a slide show presentation matching the Introduction Pages. It also includes answers for the 'Our Turn', 'Your Turn', 'Extension' and 'Puzzle' sections of the Introduction Pages.

Lesson Time: It will take roughly 45 minutes to deliver a lesson using both the Introduction Pages and accompanying Teaching Presentation.

Teaching Presentation

Teacher Tips

- **Introduction Pages:** Remember the Teaching Presentation matches the Introduction Pages – easy! Be sure to print the Introduction Pages for students, unless you have the Student Workbooks. For printing tips, see the Teacher Tips on page 5.
- **Preparation:** Read through the Teaching Presentation (slide show) beforehand so you know what it discusses.
- **Teacher Judgement:** You know your class best. Feel free to skip parts of the Teaching Presentation or add in your own two cents! Keep in mind, the 'Our Turn' section is differentiated – select two to four problems that fit your class level.
- **Marking:** All answers to the 'Our Turn', 'Your Turn', 'Extension' and 'Puzzle' sections are on the Teaching Presentation. You can display these answers as your class works or at the end.

Practice Pages



Overview: The Practice Pages are the three colour coded pages that contain differentiated questions for each concept.

What It Includes: Each concept contains a set of three differentiated Practice Pages (support, on-level and extension). They are colour coded as follows:

Year 7: Red = support, Yellow = on-level, Blue = extension

Year 8: Purple = support, Orange = on-level, Green = extension

Lesson Time: It will take between 20 and 45 minutes for students to complete one page, depending on their chosen level and speed.



Practice Pages

- **The Power of Choice:** Allowing students to choose which level they work on is empowering. Students are generally quite honest with themselves when choosing a level. They can also choose different levels for different concepts (e.g. choose on-level for certain topics but support level for more challenging concepts).
- **Early Finishers:** Students who finish the Practice Pages early can continue on to the next level of Practice Page (e.g. if they start on the on-level page then they continue to the extension page) OR they go on to the Puzzle Page.
- **Printing:** If you have the Student Workbooks, you will be all sorted! If not, you will need to print the pages from your online account. If you are trying to minimize printing, print pages double-sided with the following combinations: support and on-level; on-level and extension. Predict the number of copies needed based on the strength of your individual students. Be sure to provide both options as there will be varied levels of understanding in every class – even if classes are streamed!

Puzzle Page



Overview: The Puzzle Page is a fun activity involving the concept. Questions begin at support level then progress to on-level and extension.

What It Includes: Puzzle Pages can vary in format. See the descriptions of the various puzzles below.

<i>Codebreaker</i>	Solve problems and find the answer in a code. Write down the corresponding letter and unscramble the letters at the end to find the answer to a joke.
<i>Maze Runner</i>	Solve problems in a maze and follow the path that contains the correct answer.
<i>Crossword Maths</i>	Solve problems and write the answer in a crossword puzzle.
<i>Favourite Mistakes</i>	Identify common mistakes made by students. Explain what went wrong and solve the problem correctly.
<i>Game Time</i>	Play a game with a partner involving questions relevant to the concept taught.
<i>Addition Trees</i>	In a pyramid, add adjacent squares and put the sum in the square above them. The answer in the square at the top of the pyramid corresponds to a letter in the code. Unscramble the letters at the end to find the answer.

Lesson Time: These puzzles will take between 10 and 20 minutes for students to complete, depending on their understanding of the concept and speed.

Puzzle Page

Teacher Tips

- **Early Finishers:** Students who finish the Puzzle Page early can complete any previous pages not yet finished. They can also record their marks in the Table of Contents Page.
- **Printing:** If you have the Student Workbooks, you are all sorted! If not, you will need to print the pages. Print one Puzzle Page for each student. They are a lot of fun and all students will want to participate!
- **Student Understanding:** The Puzzle Page is a fast way to gauge student understanding. You can quickly see if a student is on the right or wrong track depending on the letters they are getting in the Codebreakers or the path they are following in Maze Runners. This also helps students recognize their own mistakes (e.g. if they end up with letters m, q and n then they know they have made a mistake since there is no three letter word made of those letters).
- **Short on Time or Revising?** Skip the Practice Pages and have the class work on the Puzzle Page! The problems are differentiated within the page and it is easy to spot student misconceptions (see tip above).



Test Pages



Overview: The Test Pages are included at the back of each unit. There are three levels (support, on-level and extension). The levels match the colours of the Practice Pages.

Year 7: Red = support, Yellow = on-level, Blue = extension

Year 8: Purple = support, Orange = on-level, Green = extension

What It Includes: 15-30 problems based on the content covered in the unit.

Lesson Time: The tests will take between 30 and 60 minutes for students to complete, depending on their understanding of the concept, test level and speed.



Test Pages

Teacher Tips

- **Pre-Test/Post-Test:** You can give students the same test at the beginning and end of the unit to track their progress.
- **Practice Test:** If your school has a department-wide test, you can use the Test Pages provided as either an in-class practice test or take-home revision material.
- **Printing:** Either print the same level test for the whole class or the appropriate level for individual students. It's up to you!

Answer Pages



Overview: The Answer Pages are accessible by logging into an account on the website (ebmcresources.com). These pages can be projected onto a board for marking or printed for students to use. A hard-copy Answer Book is also available through the website (ebmcresources.com/purchase-now).

What It Includes: Answers to all of the Practice Pages and Puzzle Pages, organised by concept. Most of these pages also provide working so students can spot where they have made errors.

Lesson Time: It will take between 5-10 minutes for students to mark their work, depending on speed.

Answer Pages

Teacher Tips

- **Self-Marking:** It is recommended that students mark their own work. This gives them the opportunity to use integrity and have ownership of their work. It also allows students to see their mistakes directly after completing the problems. Students should record their mark in the Table of Contents Page.
- **Printing:** To access the Answer Pages, you will need to log in to the website. You can print the answers by first downloading the PDF then printing.
- **Answer Books:** The easiest way to go is to order three to five Answer Books for your class! Put these on a table and encourage students to take their student workbook to the table (with red pen) to self-mark.

