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Introduction

The **Constant of Mathematics** series engages pupils' learning of mathematics through a variety of approaches. Based on the latest syllabus implemented by the Ministry of Education (MOE), Singapore, the series is centered on the use of the Concrete-Pictorial-Abstract (CPA) approach to develop and enhance the understanding of concepts in pupils.

The lesson flow is designed based on the Readiness-Engagement-Mastery (REM) model, which introduces concepts through visual stimuli, hands-on activities, pair work and practices to cater to students of different cognitive levels.

The series focuses on developing pupils' mathematical reasoning and communication skills as well as their confidence in problem solving.



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CPA Approach

The **Creeve Mathematics** series uses the CPA approach to mathematics teaching and learning.



Concrete materials introduce young learners to mathematical concepts through real-world experiences. This introduction to each topic enhances pupils' understanding and helps to build confidence in mathematics.





The use of a multi-representational approach involving concrete, pictorial and abstract representations enables pupils to make connections towards acquiring mathematical concepts.

X

Pictorial examples use illustrations and photographs to help pupils visualise core concepts and assist in solving word problems.

of the pupils are girls. of the boys wear glasses.) How many boys do not wear glasses?) $1-\frac{3}{5}=\frac{2}{5}$	drawing a model help solve this problem?
$\frac{\text{Method 1}}{\frac{1}{4} \text{ of } \frac{2}{5} = \frac{1}{4\pi^2} \frac{2^2}{5^2}$ $= \frac{1}{10}$ $\frac{1}{10} \text{ of the pupils who wear glasses are boys.}$ $\frac{1}{10} \times 480 = 48$	Method 2 $\frac{2}{5} \times 480 = 192$ $\frac{1}{4} \times 192 = 48$
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144 boys do not wear glasses.

Abstract examples

provide pupils with the opportunity to familiarise themselves with the use of mathematical symbols and relate the use of these symbols with the concrete and pictorial examples previously learnt.



Learning Experiences

Guided as well as exploratory learning experiences throughout the targeture learning experiences throughout the targeture learning experiences throughout the techniques that can be applied to a range of mathematical concepts.

The **tracks backet** series is designed to encourage active learning. Through these learning experiences, pupils can understand mathematical concepts effectively, acquire the skills for everyday use and foster a greater interest in mathematics.

Learning experiences in the www.labers.com

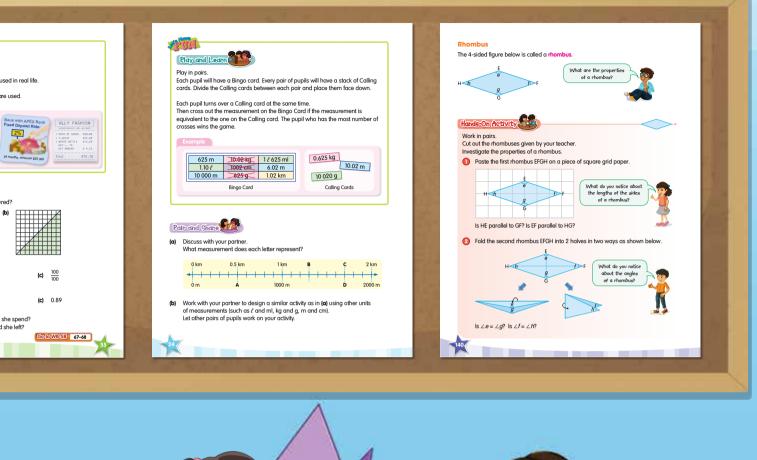
- Use of manipulatives in activities
- Hands-on Activities
- Show and Say
- ✓ Pair and Share
- Play and Learn



	Show and Say	
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	Look for examples where percentages Cut out the illustrations. Make a collag	ar e.
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figures of animals	made some	

using 4-sided figures.

My lantern is made up of 4-sided figures too.



 What are some properties of these 't-sided figures?

Textbook Features



Let's Talk About...

Prepares pupils for the mathematical concepts that will be taught. Teachers facilitate the discussion and encourage pupils to talk about the picture.

Operations involving multiplication and division only. Indy packed 12 cookes equally into 3 bags. She gave two of these bags of cookes did Cindy give her friends? This is my working in 2 steps. 12 * 3 = 4 13 * 12 * 3 = 2 14 * 2 = 8 15 * is my working in 1 step. 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 12 * 3 = 2 13 * 12 * 12 14 * 12 * 12 15 * 12 * 12 16 * 12 * 12 17 * 12 * 12 * 12 18 * 12 * 12 * 12 19 * 12 * 12 * 12 19 * 12 * 12 * 12 10 * 12 * 12 * 12 10 * 12 * 12 * 12 * 12 10 * 12 * 12 * 12 * 12 10 * 12 * 12 * 12 * 12 11 * 12 * 12 * 12 * 12 12 * 12 * 12 * 12 * 12 12 * 12 * 12 * 12 * 12 13 * 12 * 12 * 12 * 12 14 * 12 * 12 * 12 * 12 15 * 12 * 12 * 12 * 12

See and Learn

101

Wr Mohmud bought 5 cartons of drinks. There were 6 cans of drinks in a carton. He repacked all the cans of drinks into bags of 3. How many bags did he use? Method 1 $5 \times 6 = 30$ 30 + 3 = 10Mr Mahmud used 10 bags.

See and Learn

Introduces concepts in a visual manner which pupils can relate to and progress further to understand the concepts on an abstract level.

Do and Learn

Enables pupils to check their understanding of mathematical concepts by doing exercises.

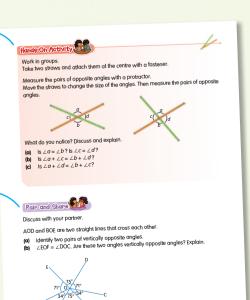
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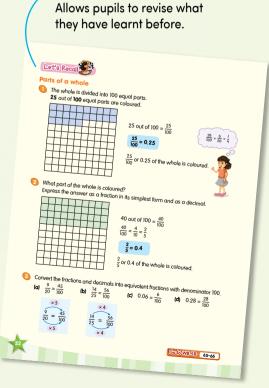
Hands-On Activity

Engages pupils and reinforces their grasp of mathematical concepts through the use of manipulatives in activities.

Pair and Share

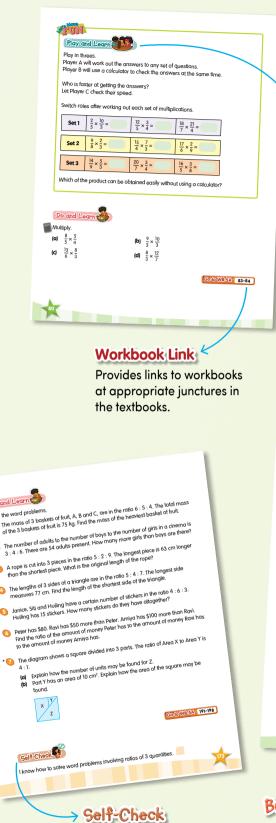
Provides opportunities for pupils to work in pairs to assess their learning.





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Let's Recall



Helps pupils reflect and self-assess their

and self-assess their learning.

MATHS Deal Lig

Shows the relevance of mathematics in real-life situations.

Play and Learn

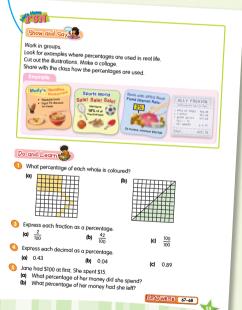
Engages pupils and reinforces their grasp of mathematical concepts through games and activities.

IT Activity

Enables pupils to show what they have learnt or done using another platform.

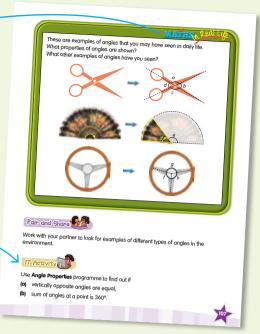
Show and Say

Allows pupils to communicate and share what they have learnt with their classmates.



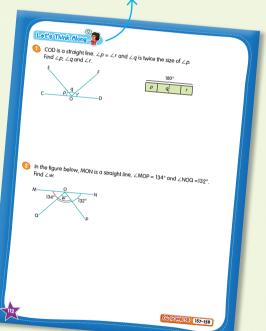
Buddies

Janice, Siti, Peter, Ravi and Robi are good buddies who will learn mathematics with pupils through their comments, prompts and inquiries.



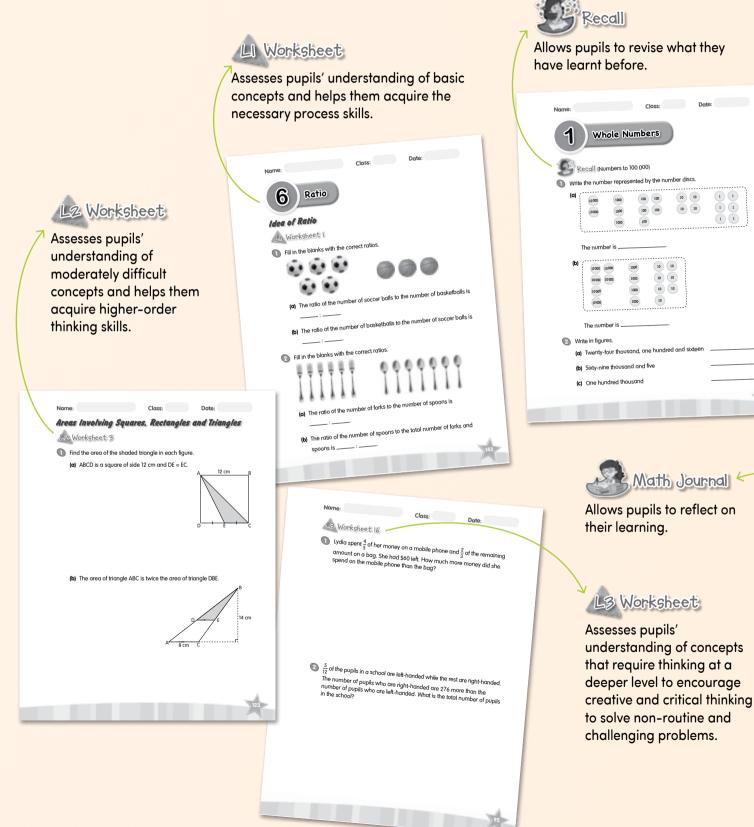
Let's Think Along ...

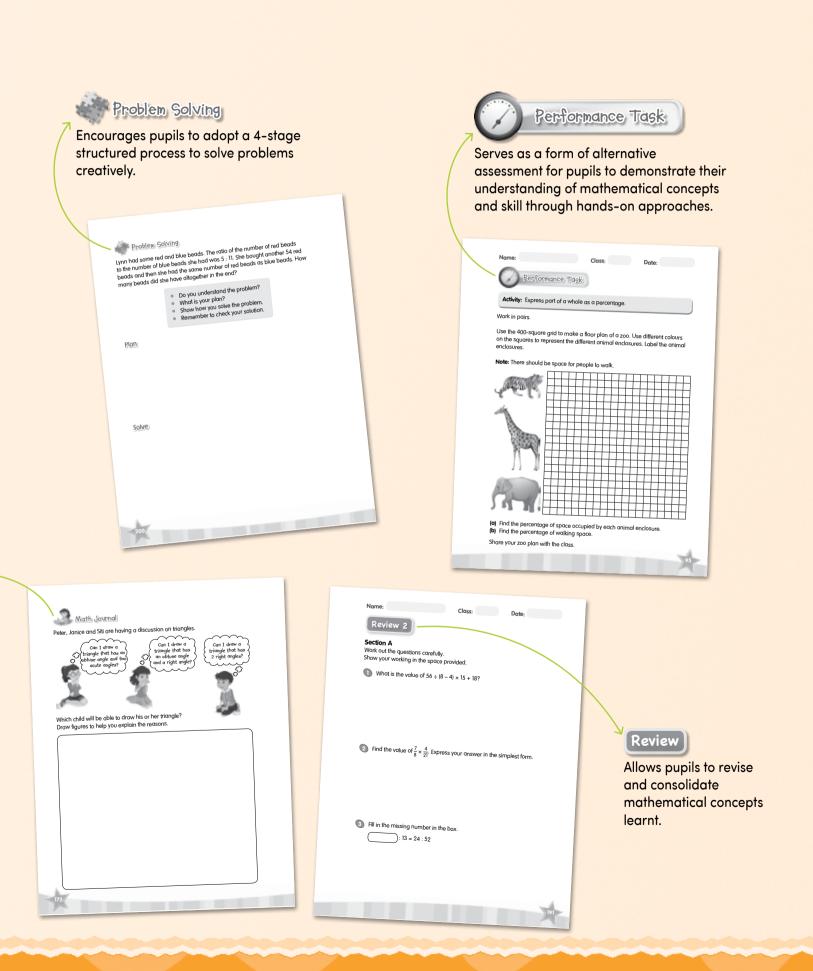
Encourages pupils to think and reason along as they attempt the activities or exercises.





Workbook Features



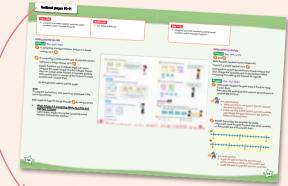


Support Resources

Teacher's Resources



A comprehensive lesson plan that consists of learning objectives, key concepts, thinking skills and model answers.



Wrap-around Teacher's guide provides model answers and teaching notes.



Scheme of Work assists with lesson planning by cross-referencing lesson objectives with relevant objectives and resources.

Performance Task Rubrics allows teachers to assess pupils' level of performance and give feedback.



Also includes:

- 👾 Various Exam-Type Questions for extra practice
- ਂ Mini Tests for pupils to revise
- 🔅 Challenging Questions to develop higher-order thinking abilities

Type the school name here. Name:	PRIMARY 4 MATHEMATICS MINI TEST 1 - Challenging 2016 Name: Date: Class: Primary 4 Parent's Signature:	Type the school name here. Name: Date:
 Whole numbers Challenge (or Tenhook pages 1 - 3a) Sam used some carets to form a 5-digit number. What is the digit engreened by X2 What is the 5-digit number is 3 x x x 0 Charts A components the same digit. • the difference between their value in the 5-digit number is 5940.	Total Time: 45 min Topics Included: Chapter 1 [Whole Numbers Numbers to 100 000] Chapter 2 [Factors and Multiples] Instructions to pupils: DO NOT open this booklet until you are told to do so. Follow all instructions carefully. Answer ALL questions.	1 Whole Numbers Lesson Worksheet (for trasthook pages 1 - 10) 1. Fill in the blanks: (a) (b) Write in numerals (c) Write in numerals (d) Write in sounds (d) Write in numerals (d) Write in numerals (d) Write in numerals (d) Write in numerals
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- Interactive tools such as drawing pens and pin-a-note
- 👾 Short stories with unique story telling rubrics
- ! Animated videos
- 🔅 Embedded calculator for games and quizzes

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ABCD is the related rectangle of the triangle ADC

Drag the blue dot to move the lines. Use the protractor to measure the angles and then till in the

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Our Authors

Dr Eric Chan Chun Ming PhD, MEd, BSc

Dr Eric Chan is a mathematics educator and author of mathematics books. He lectures on primary mathematics in both pre-service and in-service programmes at the National Institute of Education (NIE), Singapore. Prior to this, he has had more than 10 years' experience in teaching primary school mathematics and served as a Head of Department (Mathematics). He enjoys writing books on mathematics for the primary school level. His published books include Overcoming Learning Difficulties in Primary Mathematics, Assessment for Learning: Strategies to Enhance Primary Mathematics Learning, 101 Math Triggers, 101 More Math Triggers, Encounters with Problem Solving, Teacher's Notes – Techniques in Solving Higherorder Thinking Word Problems, 5 Maths Stories and 5 More Maths Stories.

Daniel William Cole MICD, BSc, PGDE

Daniel Cole is an author of several successful series of primary textbooks in Southeast Asia. He has extensive experience in primary education. His books have been approved by the respective authorities in different countries and are currently being used throughout Southeast Asia. Besides writing textbooks, he has also designed and programmed educational media and software.

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