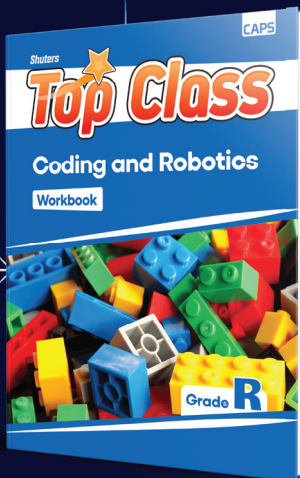


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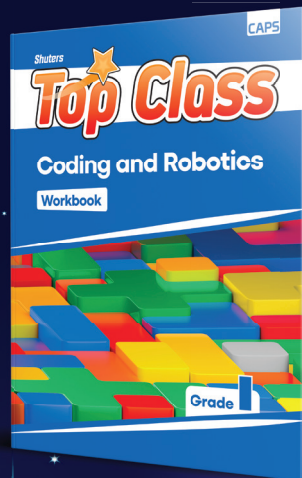
# Top Class

## Coding and Robotics

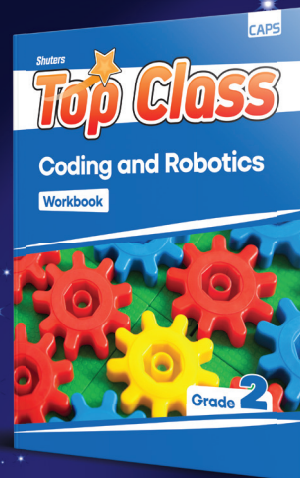
Grade R to 6



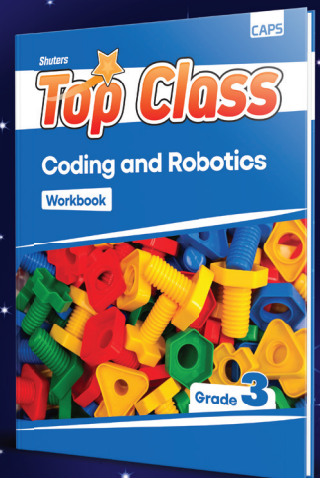
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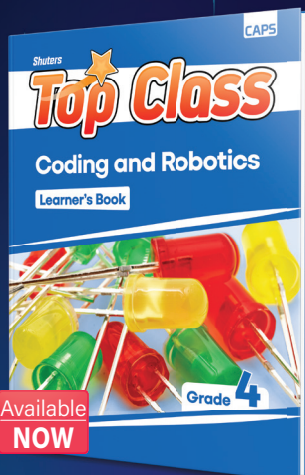
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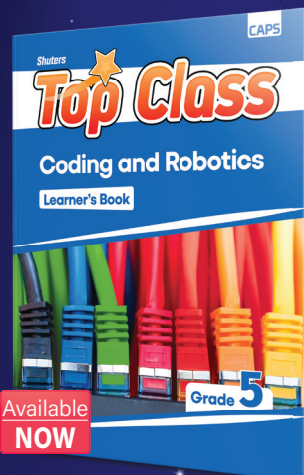
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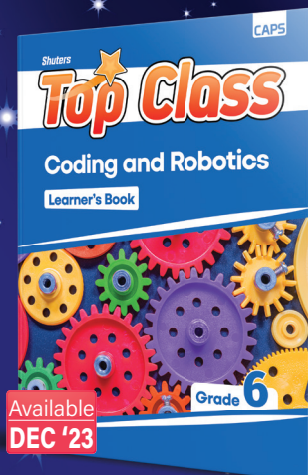
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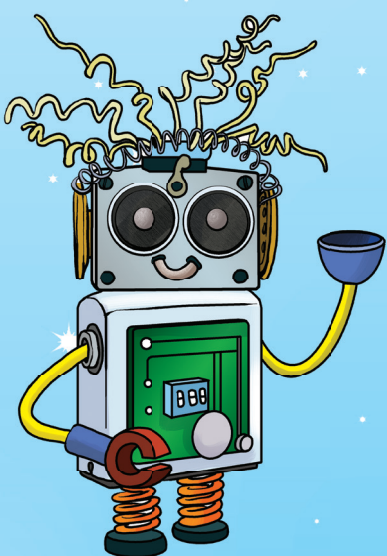
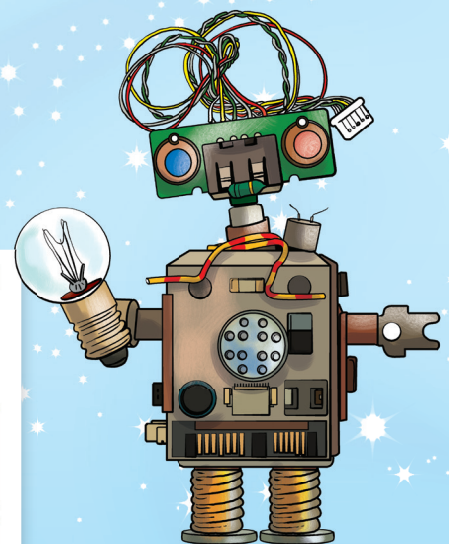
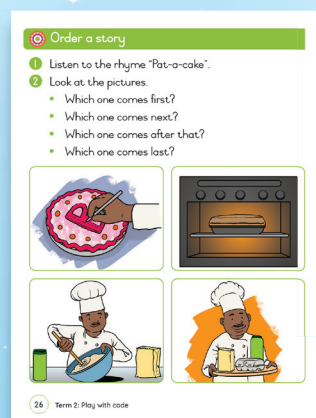
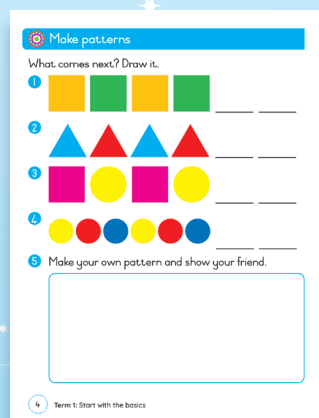
# Top Class Coding and Robotics has a full-colour Workbook for \*Grade R.

\*Translations in Afrikaans, isiXhosa and isiZulu will be available in January 2024.

- The content and activities in each workbook are clearly scaffolded, allowing for progression throughout the year.

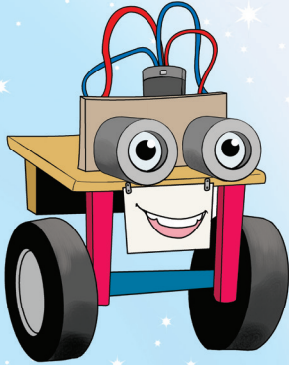


- The workbooks are packed with colourful activities that are enjoyable and fun.

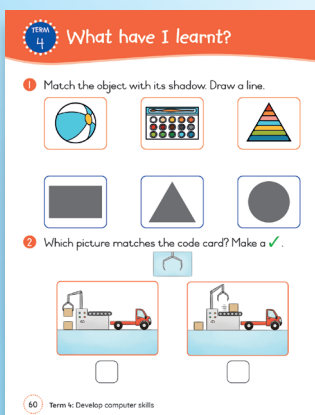
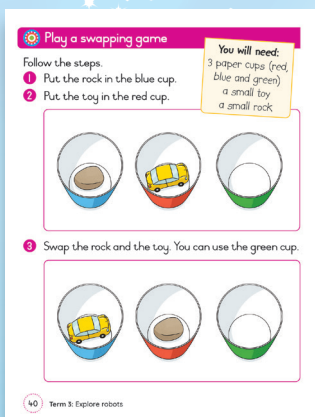




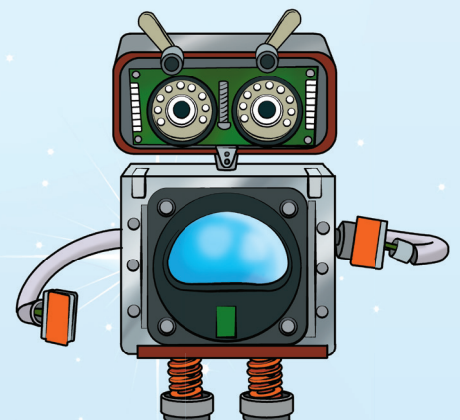
- Integration with other Foundation Phase subjects (Languages, Mathematics and Life Skills) is built in throughout the workbooks.



- Step-by-step instructions, with illustrations, make it easy for learners to understand the principles of **coding**.
- Robotics** is simple with easy-to-follow instructions that show learners how to build a robot from recycled materials.



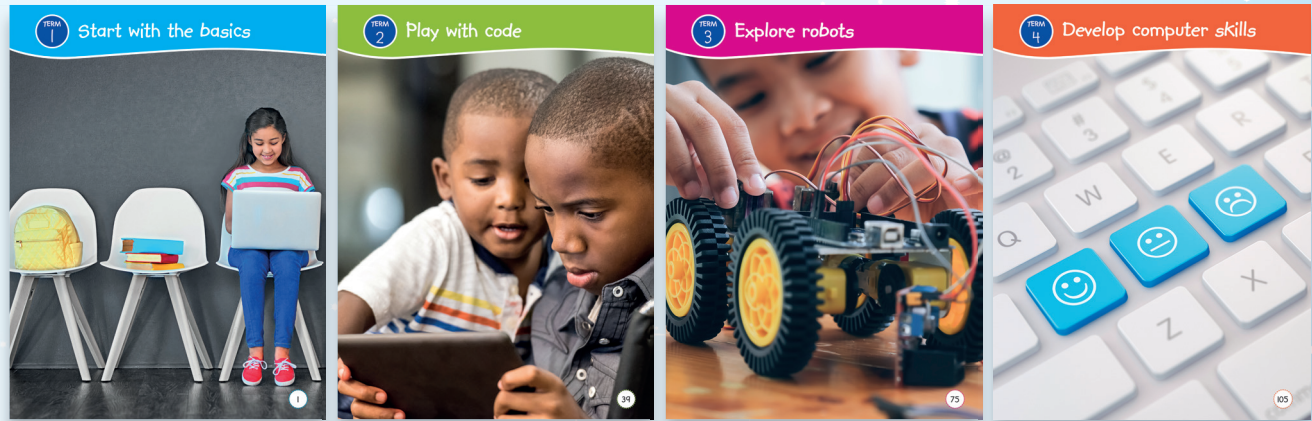
- At the end of each term, the new concepts are revised. The *What have I learnt* page helps learners to review whether they understood the new concepts.



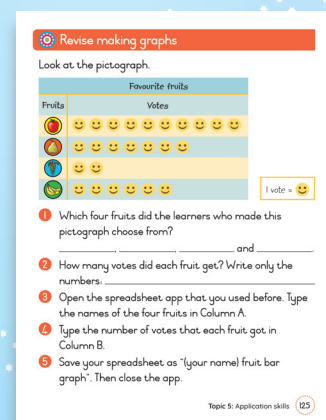
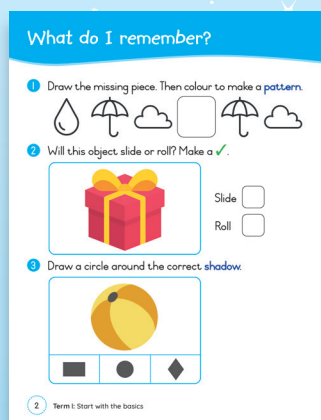
# Top Class Coding and Robotics has a full-colour Workbook for **\*Grade 1 to 3.**

\*Translations in Afrikaans, isiXhosa and isiZulu will be available in January 2024.

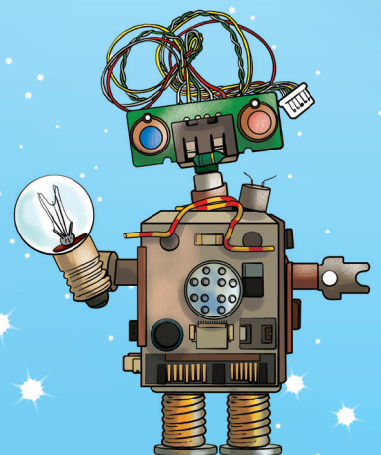
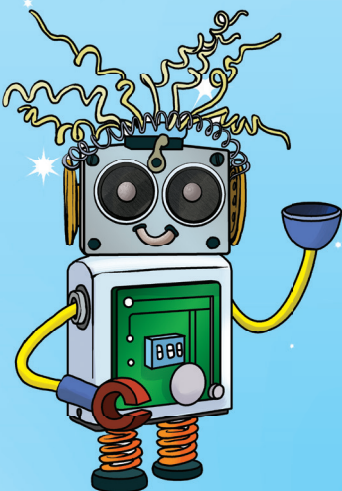
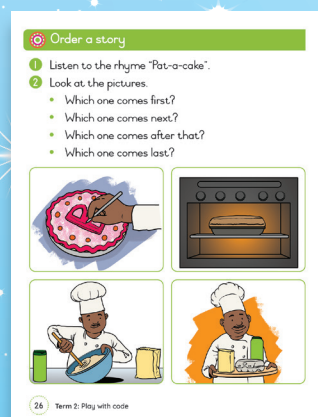
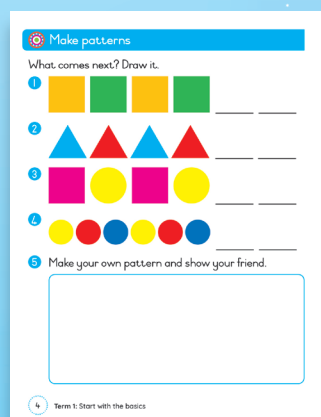
- The content and activities in each workbook are clearly scaffolded, allowing for progression throughout the year.



- Each grade starts with a *What do I remember?* page to activate important prior knowledge from the previous grade.
- Integration with other Foundation Phase subjects (Languages, Mathematics and Life Skills) is built in throughout the workbooks.

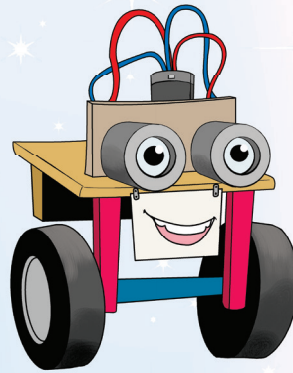


- The workbooks are packed with colourful activities that are enjoyable and fun.

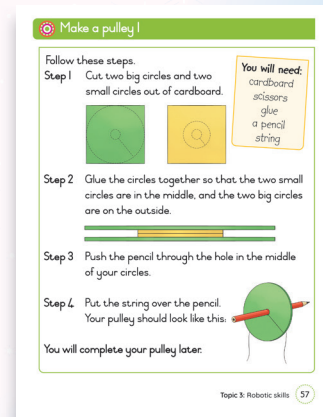




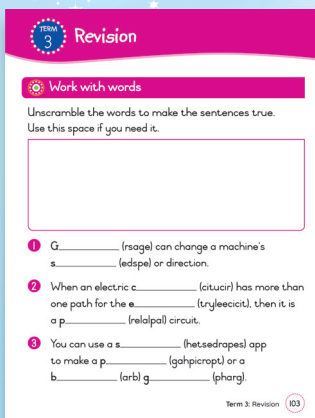
- Step-by-step instructions, with computer screenshots, make it easy for learners to understand the principles of **coding**.



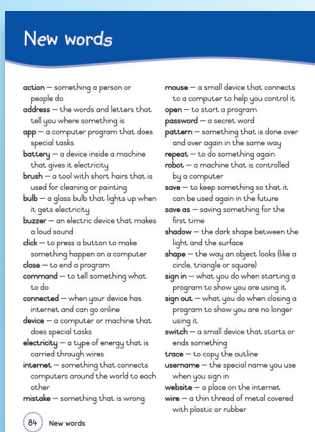
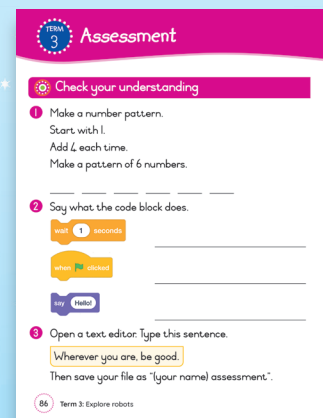
- Robotics** is simple with easy-to-follow instructions that show learners how to build the different components of a robot from recycled materials.



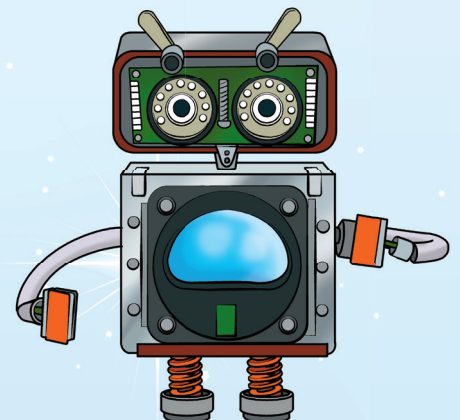
- At the end of each term, language across the curriculum is addressed in a *Revision* page.



- Each term ends with an *Assessment* page.



- At the back of the Workbook is a list of new words with easy definitions to help learners build their subject vocabulary.



# Top Class Coding and Robotics has a full-colour Workbook for Grade 4 to 6.

TOPIC

1

Internet and e-communications

What do you remember?

1. What does this symbol mean?  
Choose the correct answer from the boxes.  

offline

 or 

online

2. Explain to a partner how to do the following using a smartphone or tablet:  

a) Make a phone call.

b) Send a text message.

3. State whether each statement is true or false. If false, give the correct answer.  

a) The person who gets the message is called the sender.

b) The person who answers the phone call is called the receiver.

2

Term 1 • Week 1

Important prior knowledge from the previous grade or term is activated at the start of each topic.

Explanations and instructions with computer screenshots make it easy for learners to understand the principles of coding in Scratch.

How to boxes show learners step-by-step how to perform a new skill.

Where to find the + and - operator blocks

The operator blocks are green. You will find them under Operators in the block palette. There are four operator blocks (addition, subtraction, multiplication and division). You will learn about multiplication and division later.

Operators

add

subtract

multiply

divide

The Operators in the Scratch block palette.

Read these instructions to find out how to use the addition operator block.

How to use the + operator

Step 1

Create a number variable called age.

Step 2

Use the ask block to ask: "How old are you?"

Step 3

Set the age to the user's answer.

Step 4

Use the say block to say: "In a year from now you will be."

Step 5

Use the addition operator to set up the rest of the script.

age

say

ask

add

say

You should review using variables.

Topic 3: Algorithms and coding

71

E. Insert illustrations

Illustrations (or pictures) make a document look better. They can help to explain difficult ideas. They can also make the text easier to understand.

To insert illustrations, you have to select the Insert ribbon. Then you can choose whether you want to insert shapes or pictures.

Shapes

Text editor apps have shapes that you can insert. You can change how they look, their size and much more.

How to create a drawing

Step 1

Click on the Shapes menu.

Step 2

Select the shape you want to insert.

Step 3

Draw the shape you have selected on your page. Move it to where you want it.

Pictures

Text editor apps allow you to insert pictures from different places.

How to insert a picture

Step 1

Click on the Pictures menu.

Step 2

Select the place that you want to insert the picture from.

Step 3

Decide on the type of image.

Activity 2.3

Individual

Insert illustrations

1. Open your text editor app. Save a new document with the name: YourName TIT2A3.

2. Insert two shapes into your document.

3. Insert two pictures into your document.

4. Save your work and close your text editor app.

For now, we will only focus on pictures from File and Stock Images.

Activity 2.3

Individual

Insert illustrations

A robot helper gives hints and tips.

Activities allow learners to apply and practise their new skills.



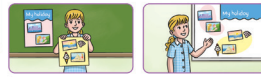
Easy definitions for the subject vocabulary appear in a keyword box on the same page.

### Presentation applications

#### Keywords

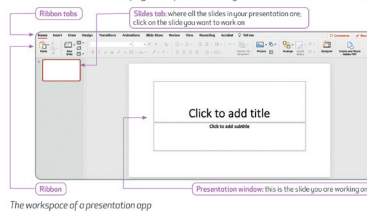
**visual aid** – things we can see that help us to understand a presentation better  
**presentation** – giving information on a topic to a group of people  
**slide** – a page in a presentation

When you present an oral, you can also show a poster to make your oral more interesting. A **visual aid**, **poster**, can also help the people listening to understand you better. To make a visual aid on a computer, you use a **presentation** app. Presentation apps like Microsoft® PowerPoint allow you to make presentations.



#### A presentation

When you open a presentation app, you will see a blank presentation. There are many things that look the same as text editor and spreadsheet apps. But, instead of different pages or spreadsheets, you will work on different **slides**.



The workspace of a presentation app

100 Term 3 • Week 2

Subject vocabulary is shown in blue where it appears for the first time.

### Topic 1 Revision

#### Work with words

- Say whether these sentences are an **advantage** or **disadvantage** of the internet.
  - You can stay in touch with friends who live far away.
  - Looking at your phone keeps you awake at night.
  - Your Aunt Martha shares news stories that make your Mom nervous about everything.
  - Information is easily available.
  - You do not talk to your brother at the breakfast table because you are busy watching online videos.

#### Look at this picture.

- Explain what fake news is.
- Explain what the picture is trying to tell us.



#### Test yourself

- Which of the following is likely to be a real news headline? Give a reason for your answer.
  - Will their B no water nat vik?
  - There are creepy crawlies in the water supply!!!!
  - Municipality asks residents to reduce water consumption
- Give one rule about screen time that could help to reduce the risk associated with it.

Topic 1 Revision 133

New concepts and skills are revised at the end of each topic.

The topic revision includes a section that addresses language across the curriculum.

Formal Assessment Exemplars are provided at the end of each term.

The appropriate Practical Assessment Task for each term is provided.

### Term 2 Mini-PAT

#### Your Practical Assessment Task for Grade 4

This year, you will do a Practical Assessment Task (PAT) to solve a problem. Each term, you will work towards the final project. Last term, you identified the problem statement. This term, you will investigate a solution.



#### Mini Practical Assessment Task 2: Investigate

##### Scenario

Traffic lights are used to control the movement of cars on the road. **Red** means stop and **green** means go.

Traffic lights help to do the following:

- Keep traffic flowing so that there is less congestion
- Prevent car accidents
- Slow cars down so that they do not go too fast.



Look at the picture below, and on the right.

Three cars approach an intersection. The yellow car wants to go straight. The blue car wants to go straight. The purple car wants to turn right.

#### 1. Complete these sentences.

- If the yellow car stops, the blue car sees a **light**.
- If the blue car goes, then the purple car sees a **light**.
- If the purple car sees a green light, the yellow car and blue car see a **light**.



#### 2. Draw diagrams for each of the scenarios in Question 1.

88 Term 2 Mini-PAT • Week 9

### Term 2 Exemplar Examination

Time: 90 minutes  
Total: 40 marks

- Fill in the missing word.
  - A computer's storage device is called the \_\_\_\_\_. (2)
  - You can find these blocks under \_\_\_\_\_ in the block palette. (2)
  - A spreadsheet app is used to sort \_\_\_\_\_. (2)
  - To connect multiple LEDs, you build circuits in \_\_\_\_\_. (2)
  - An accelerometer is a \_\_\_\_\_ sensor. (2)
- Match the description or example in Column A with the correct term in Column B. (6 × 1 = 6)

Column A	Column B
a) The symbol used to represent * in the Scratch operator block	A * (2)
b) The symbol used to represent x in the Scratch operator block	B Cell (2)
c) A1:D17	C Milliseconds (2)
d) C9	D / (2)
e) ms	E LED (2)
f) Provides light	F Range (2)

#### 3. Explain why a person might prefer to use a laptop instead of a desktop computer. (3)

4. Olivethu wants to create a program that asks a user in which year they were born. Then it will calculate the user's age. (2)

- Which two variables will Olivethu need to create? (1)
- Are the variables text variables or number variables? (1)
- Choose which operator block she must use. (1)



Term 2 Exemplar Examination 89



A comprehensive Teacher's guide, with term-by-term teaching guidelines is available for each grade.

A key component of **Top Class Coding and Robotics** is content guidance and modelling videos that are embedded in the Teacher's guide. Teachers can use them to prepare for lessons or to explain an answer or process in class.

**Modelling videos show how the activity is done, in a step-by-step manner.**

The screenshot displays a 'Term-by-term teaching' table with columns for Unit, Topic, and Week. It lists activities for various topics like 'Introduction to coding', 'Algorithms and coding', and 'Robotics skills'. Below the table, a detailed activity page for 'Activity 4.5 Write a program to make an LED blink' is shown, including objectives, specific aims, and step-by-step teaching guidelines.

Content guidance videos provide special support for teachers who have to teach the subject for the first time.



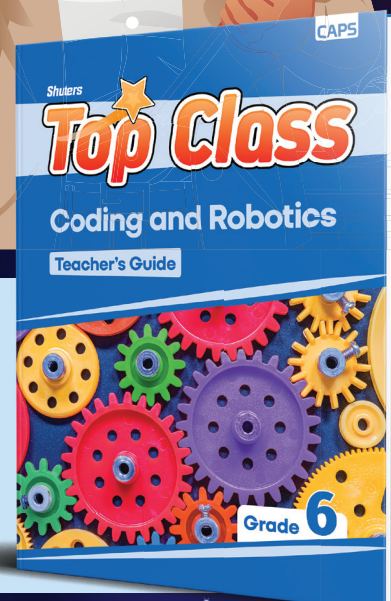
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 Top Class Coding and Robotics Grade 2 Teacher's Guide  
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**Top Class Coding and Robotics** for Grade 7 builds on the winning recipe of Grades 4 to 6. More age-appropriate features are added.

**Do not miss out!**

Grade 7 Learner's Book  
 Grade 7 Teacher's Guide

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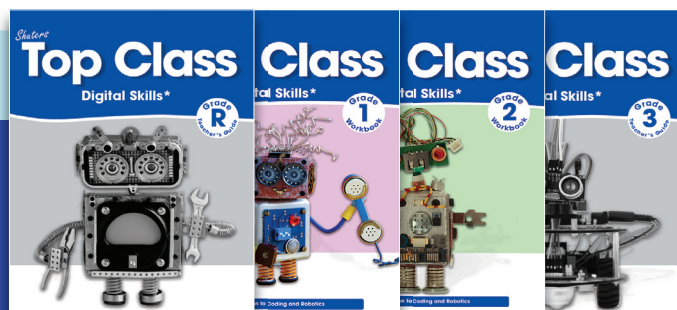
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**Additional  
resources**

# Digital Skills

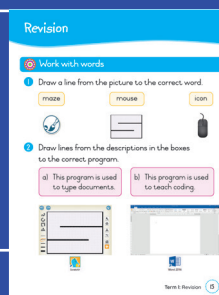


## Special features of this book:

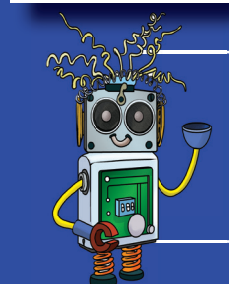
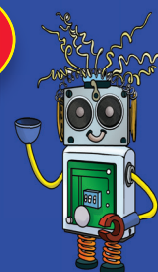


The Workbook is built around fun activities and colourful illustrations to help learners acquire the skills and enjoy learning about computers.

At the end of each term there is a revision page to consolidate and practise new terms and concepts.



**Also available  
in AFRIKAANS**



The little robot icon shares information and clues to do the activities.

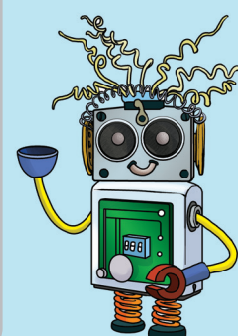


A computer dictionary with important computer terms and easy definitions helps learners to understand and build subject vocabulary.



We have also included a picture of a keyboard on the inside back cover so that learners who don't have access to computers can familiarise themselves with the keys.

	ENGLISH	AFRIKAANS
Top Class Digital Skills Grade R Workbook	9781485835882	9781485835899
Top Class Digital Skills Grade 1 Workbook	9781485835813	9781485835844
Top Class Digital Skills Grade 2 Workbook	9781485835790	9781485835820
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and prepare your learners for the future.**

# Coding and Robotics Kit



**R 4 250,00**



Discover the stimulating world of Coding and Robotics with this curriculum-compliant kit.

It is an excellent way to spark excitement in both learners and teachers who are introduced to the subject for the first time.

- The contents are easy to use for teacher demonstrations and learner activities.
- Technical specifications and visual representations for all components are included in the kit. This will enable teachers and learners to easily code and build their own robots!



# Wooden Start Coding



ISBN: 9781779921383

This activity pack will help any learner to discover the wonderful world of coding. It enables the learner to:

- explore the concept of unplugged coding in a fun and exiting way
- visualise abstract concepts
- plan and organise their thoughts
- become a confident problem solver.

Included in this activity pack:

- a double-sided game board
- 12 challenges on laminated cards
- 12 wooden arrow tiles
- 4 wooden character tiles



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