Coding and Robotics Grade 1 – Term 1 Weeks 1–3				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 1 **1 hour**	Pattern Recognition and Problem Solving (CAPS page 42)	• Revise concepts of pattern recognition and problem solving taught in Grade R.	• Learner's Book page 2 • Activity 1 • Worksheet 1.1 • Teacher's Guide page 2	• Blocks, counters, beads, etc. to demonstrate
Week 2 **1 hour**		• Debug a pattern consisting of three objects in a set, repeating three times.	• Learner's Book page 3 • Worksheet 1.2 • Teacher's Guide pages 2–3	• Blocks, counters, beads, etc. to demonstrate
Week 3 **(part 1)** **30 minutes**		• Design own pattern consisting of three objects in a set, repeating three times. • Continue a pattern.	• Learner's Book page 4 • Activity 2 • Worksheet 1.3 • Teacher's Guide page 4	• Blocks, counters, beads, etc. to demonstrate
Formal Assessment	Refer to page 100 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 102 of the Teacher's Guide.			
Week 3 **(part 2)** **30 minutes**	Robotics (CAPS page 42)	• Revise the definition of a robot. • Make a colour-by-number mask that will be used in Week 6 (role play activity).	• Learner's Book pages 5–6 • Activities 3–4 • Worksheet 1.4 • Teacher's Guide page 5	• Video: *Real-life robots* (QR code on page 5 of the Teacher's Guide)
Formal Assessment	See Week 6 for formal assessment of this topic.			

Coding and Robotics Grade 1 – Term 1 Weeks 4–6				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 4 **1 hour**	Algorithms & Coding (CAPS page 42)	• Revise computer hardware terminology (optional). • Introduce the ScratchJr interface. • Introduce Forward and Back movement blocks.	• Learner's Book pages 7–15 • Activities 5–7 • Worksheets 1.5, 1.6 & 1.7 (optional) • *How to scan a QR code* (inside cover of Learner's Book) • Teacher's Guide pages 6–10	• Video: *Make Tic walk* (QR code on page 15 of the Learner's Book) • Access to computers for Weeks 4 and 5 • ScratchJr application
Week 5 **1 hour**		• Introduce Turn Left and Turn Right blocks • Construct a program using each of the movement blocks taught.	• Learner's Book pages 15–17 • Activities 8–9 • Teacher's Guide pages 10–12	• Video: *Make Tic spin* (QR code on page 16 of the Learner's Book) • Video: *Real-life robots* (QR code on page 12 of the Teacher's Guide)
Formal Assessment	Refer to page 101 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 102 of the Teacher's Guide.			
Week 6 **1 hour**	Robotics (CAPS page 43)	• Practise counting blocks. • Practise using the words 'forward, back, left, right'. • Role play giving movement instructions to a robot (reinforcing Lessons 4 & 5).	• Learner's Book pages 18–19 • Activities 10–11 • Worksheet 1.8 • Teacher's Guide pages 13–14	• The masks in Week 3 • Objects to build a maze (chairs, bags, bins, etc.) • A basket or box into which to place the objects that are picked up • Toys, books, blocks, etc. to be picked up by the learner playing the robot
Formal Assessment	Refer to page 100 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 102 of the Teacher's Guide.			

Coding and Robotics Grade 1 – Term 1 Weeks 7–10				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 7 **1 hour**	Internet & E-communication (CAPS page 43)	• Revise the concepts of the internet and digital security. • Introduce the concepts of connectivity, working online and offline, logging in and websites.	• Learner's Book pages 20–23 • Digital safety tips (inside back cover of Learner's Book) • Activity 12 • Worksheet 1.9 • Teacher's Guide pages 15–17	• Log in to Scratch online (QR code on page 22 of the Learner's Book)
Formal Assessment	Refer to page 101 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 102 of the Teacher's Guide.			
Week 8 **1 hour**	Application Skills (CAPS pages 43–44)	• Revise the safe opening and shutting down of digital devices. • Revise the Windows interface. • Introduce the Paint interface.	• Learner's Book pages 24–30 • Activities 13–15 • Teacher's Guide pages 17–19	• Access to computers for Weeks 8–10 • Microsoft® Paint for Weeks 8–10
Week 9 **1 hour**		• Introduce drawing with a shape, fill colours and outline colours. • Use the Line and Pencil tools.	• Learner's Book pages 30–32 • Activities 16–18 • Teacher's Guide pages 19–21	• Video: *Make a coloured shape* (QR code on page 30 of the Learner's Book)
Week 10 **1 hour**		• Use the Brush tool to make a picture.	• Learner's Book pages 32–33 • Activity 19 • Teacher's Guide pages 21–22	• Video: *Fun with brushes* (QR code on page 33 of the Learner's Book)
Formal Assessment	Refer to page 101 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 102 of the Teacher's Guide.			

Coding and Robotics Grade 1 – Term 2 Weeks 1–3				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 1 **1 hour**	Pattern Recognition and Problem Solving (CAPS page 45)	• Revise concepts of pattern recognition and problem solving taught in Term 1.	• Learner's Book page 36 • Activity 1 • Worksheet 2.1 • Teacher's Guide page 24	• Blocks, counters, beads, etc. to demonstrate
Week 2 **1 hour**		• Continue a pattern consisting of three objects in a set, repeating twice.	• Learner's Book page 37 • Activity 2 • Worksheet 2.2 • Teacher's Guide page 25	• Blocks, counters, beads, etc. to demonstrate
Week 3 **(part 1)** **30 minutes**		• Debug a pattern consisting of three objects in a set, repeating three times.	• Learner's Book page 38 • Activity 3 • Worksheet 2.3 • Teacher's Guide pages 26–27	• Blocks, counters, beads, etc. to demonstrate
Formal Assessment	Refer to page 103 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 105 of the Teacher's Guide.			
Week 3 **(part 2)** **30 minutes**	Robotics (CAPS page 45)	• Identify basic parts of a robot. • Make a robot costume to be used in Week 6 (role play activity).	• Learner's Book pages 39–40 • Activity 4 • Worksheet 2.4 • Teacher's Guide page 28	• Video: *How do robots work?* (QR code on page 28 of the Teacher's Guide)
Formal Assessment	See Week 6 for formal assessment of this topic.			

Coding and Robotics Grade 1 – Term 2 Weeks 4–6				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 4 **1 hour**	Algorithms & Coding (CAPS pages 45–46)	• Revise Forward, Back, Left and Right blocks. • Introduce the Loop function.	• Learner's Book pages 41–43 • Activities 5–6 • Teacher's Guide page 29	• Video: *Make Tic repeat steps* (QR code on page 43 of the Learner's Book) • Access to computers for Weeks 4 and 5 • ScratchJr application
Week 5 **1 hour**		• Debug a program that uses the Loop function.	• Learner's Book pages 44–46 • Activity 7 • Teacher's Guide page 30	Video: *Debug a program* (QR code on page 44 of the Learner's Book)
Formal Assessment	Refer to page 103 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 105 of the Teacher's Guide.			
Week 6 **1 hour**	Robotics (CAPS page 46)	• Role play giving movement instructions to a robot. • Use symbols instead of words.	• Learner's Book pages 47–48 • Activity 8 • Worksheet 2.5 • Teacher's Guide page 31	• Online game: *Play with Bee-Bots online* (QR code on page 47 of the Learner's Book) • The robot mask made in Term 1 • The robot costume made in Week 3 • Carboard for making direction/ instruction cards • Objects to build a maze (chairs, bags, bins, etc.) • A basket or box into which to place the objects that are picked up • Toys, books, blocks, etc. to be picked up by the learner playing the robot
Formal Assessment	Refer to page 103 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 105 of the Teacher's Guide.			

Coding and Robotics Grade 1 – Term 2 Weeks 7–10				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 7 **1 hour**	Internet & E-communication (CAPS page 46)	• Revise the concepts of the internet and connectivity. • Introduce the concept of avatars as a means of protecting one's online identity.	• Learner's Book pages 49–50 • Digital safety tips (inside back cover of Learner's Book) • Activity 9 • Worksheet 2.6 • Teacher's Guide pages 32–33	• Carboard, wool, paint, etc. to decorate the 'avatars'
Formal Assessment	Refer to page 103 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 105 of the Teacher's Guide.			
Week 8 **1 hour**	Application Skills (CAPS pages 46–47)	• Revise the Paint tools taught in Term 1.	• Learner's Book pages 51–53 • Activities 10–11 • Teacher's Guide pages 34–35	• Access to computers for Weeks 8–10 • Microsoft® Paint for Weeks 8–10
Week 9 **1 hour**		• Practise creating shapes and filling them with colour. • Save a file.	• Learner's Book pages 54–56 • Activity 12 • Teacher's Guide pages 35–36	• Video: *Save a drawing* (QR code on page 55 of the Learner's Book)
Week 10 **1 hour**		• Open a saved file.	• Learner's Book pages 56–57 • Activity 13 • Teacher's Guide page 36	• Video: *Open a saved drawing* (QR code on page 57 of the Learner's Book)
Formal Assessment	Refer to page 104 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 105 of the Teacher's Guide.			

Coding and Robotics Grade 1 – Term 3 Weeks 1–3				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 1 **1 hour**	Pattern Recognition and Problem Solving (CAPS page 48)	• Revise concepts of pattern recognition and problem solving taught in Term 2.	• Learner's Book page 60 • Activity 1 • Worksheet 3.1 • Teacher's Guide page 38	• Blocks, counters, beads, etc. to demonstrate
Week 2 **1 hour**		• Continue a pattern consisting of four objects in a set, repeating twice.	• Learner's Book page 61 • Activity 2 • Worksheet 3.2 • Teacher's Guide pages 38–39	• Blocks, counters, beads, etc. to demonstrate
Week 3 **(part 1)** **30 minutes**		• Debug a pattern consisting of four objects in a set, repeating twice.	• Learner's Book page 62 • Activity 3 • Worksheet 3.3 • Teacher's Guide pages 39–40	• Blocks, counters, beads, etc. to demonstrate
Formal Assessment	Refer to page 106 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 108 of the Teacher's Guide.			
Week 3 **(part 2)** **30 minutes**	Robotics (CAPS page 45)	• Introduce the components of a basic electric circuit.	• Learner's Book pages 63–64 • Worksheet 3.4 • Teacher's Guide pages 41–42	• Video: *Build a simple circuit* (QR code on page 64 of the Learner's Book)
Formal Assessment	See Week 6 for formal assessment of this topic.			

Coding and Robotics Grade 1 – Term 3 Weeks 4–6				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 4 **1 hour**	Algorithms & Coding (CAPS pages 48–49)	• Revise the blocks taught in Terms 1 and 2. • Introduce Trigger and Events functions.	• Learner's Book pages 65–67 • Activities 4–6 • Teacher's Guide pages 43–44	• Video: *Set the scene for trigger events* (QR code on page 68 of the Learner's Book) • Access to computers for Weeks 4 and 5 • ScratchJr application
Week 5 **1 hour**		• Practise using Events.	• Learner's Book pages 68–69 • Activities 7–8 • Teacher's Guide page 45	• Video: *Program trigger events* (QR code on page 68 of the Learner's Book)
Formal Assessment	Refer to pages 106–107 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 108 of the Teacher's Guide.			
Week 6 **1 hour**	Robotics (CAPS page 49)	• Revise the parts of a basic electric circuit. • Build a simple circuit (using tinfoil as the conductor) to add a light to the robot costume built in Term 2 Week 3.	• Learner's Book pages 70–71 • Activities 9–10 • Worksheet 3.5 • Teacher's Guide pages 46–47	• The robot costume made in Week 3 • Per learner or group of learners: tinfoil, tape, scissors, an AA battery, a small bulb (such as from a torch)
Formal Assessment	Refer to page 106 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 108 of the Teacher's Guide.			

Coding and Robotics Grade 1 – Term 3 Weeks 7–10				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 7 **1 hour**	Internet & E-communication (CAPS page 49)	• Revise the concepts of digital safety and online identity. • Introduce the concepts of digital footprint and internet history.	• Learner's Book pages 72–73 • Activity 11 • Worksheet 3.6 • Teacher's Guide pages 48–49	
Formal Assessment	Refer to page 107 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 109 of the Teacher's Guide.			
Week 8 **1 hour**	Application Skills (CAPS pages 49–50)	• Revise the Paint tools taught in Terms 1 & 2.	• Learner's Book pages 74–75 • Activities 12–14 • Teacher's Guide pages 50–51	• Access to computers for Weeks 8–10 • Microsoft® Paint for Weeks 8–10
Week 9 **1 hour**		• Draw a polygon. • Turn a shape upside down. • Use shapes to draw a picture.	• Learner's Book pages 76–77 • Activity 15 • Teacher's Guide page 51	• Video: *Draw a funny shape* (QR code on page 76 of the Learner's Book) • Video: *Turn a shape upside down* (QR code on page 76 of the Learner's Book)
Week 10 **1 hour**		• Change the thickness of lines. • Draw a repeating pattern.	• Learner's Book pages 78–79 • Activity 16 • Teacher's Guide page 52	
Formal Assessment	Refer to page 107 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 108 of the Teacher's Guide.			

Coding and Robotics Grade 1 – Term 4 Weeks 1–3				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 1 **1 hour**	Pattern Recognition and Problem Solving (CAPS page 51)	• Revise concepts of pattern recognition and problem solving taught in Terms 1–3.	• Learner's Book page 82 • Activity 1 • Worksheet 4.1 • Teacher's Guide pages 54–55	Blocks, counters, beads, etc. to demonstrate
Week 2 **1 hour**		• Continue a pattern consisting of five objects in a set, repeating twice.	• Learner's Book page 83 • Activity 2 • Worksheet 4.2 • Teacher's Guide pages 55–56	Blocks, counters, beads, etc. to demonstrate
Week 3 **(part 1)** **30 minutes**		• Debug a pattern consisting of five objects in a set, repeating three times.	• Learner's Book page 84 • Activity 3 • Worksheet 4.3 • Teacher's Guide pages 56–57	Blocks, counters, beads, etc. to demonstrate
Formal Assessment	Refer to page 110 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 113 of the Teacher's Guide.			
Week 3 **(part 2)** **30 minutes**	Robotics (CAPS page 51)	• Revise the components of a basic electric circuit. • Introduce the concept of open and closed circuits.	• Learner's Book pages 85–86 • Activities 4–5 • Worksheet 4.4 • Teacher's Guide page 58	
Formal Assessment	See Week 6 for formal assessment of this topic.			

Coding and Robotics Grade 1 – Term 4 Weeks 4–6				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 4 **1 hour**	Algorithms & Coding (CAPS pages 51–52)	• Revise the blocks and functions taught in Terms 1–3. • Practise using Up and Down blocks and saving a program	• Learner's Book pages 87–89 • Activities 6–7 • Teacher's Guide pages 59–60	• Video: *Tac moves in a square* (QR code on page 88 of the Learner's Book) • Video: *Save and open projects* (QR code on page 88 of the Learner's Book) • Access to computers for Weeks 4 and 5 • ScratchJr application
Week 5 **1 hour**		• Debug a maze program.	• Learner's Book page 90 • Activity 8 • Teacher's Guide pages 60–61	
Formal Assessment	Refer to pages 111–112 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 113 of the Teacher's Guide.			
Week 6 **1 hour**	Robotics (CAPS page 52)	• Practise giving good instructions. • Practise counting squares and using direction words.	• Learner's Book pages 91–92 • Activities 9–10 • Worksheet 4.5 • Teacher's Guide pages 62–63	• Cardboard for making direction cards • QR code for playing Bee-Bots online (Learner's Book page 92)
Formal Assessment	Refer to page 110 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 113 of the Teacher's Guide.			

Coding and Robotics Grade 1 – Term 4 Weeks 7–10				
Week & Time allocation	**CAPS Topic**	**Objective(s)**	***Connect* Resources**	**Additional Resources**
Week 7 **1 hour**	Internet & E-communication (CAPS page 52)	• Continue exploring the concepts of a digital footprint and internet history.	• Learner's Book pages 93–94 • Activities 11–12 • Worksheet 4.6 • Teacher's Guide page 64	• Template of lion's footprint (for Activity 12) on page 114 of the Teacher's Guide
Formal Assessment	Refer to page 112 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 113 of the Teacher's Guide.			
Week 8 **1 hour**	Application Skills (CAPS pages 52–53)	• Practise using shapes to draw a picture. • Practise using colour in a drawing.	• Learner's Book pages 95–98 • Activities 13–15 • Teacher's Guide pages 65–66	• Access to computers for Weeks 8–10 • Microsoft® Paint for Weeks 8–10 • Video: *Delete a shape* (QR code on page 95 of the Learner's Book) • Video: *Use the fill with colour tool* (QR code on page 96 of the Learner's Book)
Week 9 **1 hour**		• Practise using shapes and colours to make pictures.	• Learner's Book page 99 • Activity 16 • Teacher's Guide pages 66–67	
Week 10 **1 hour**		• Practise using shapes and colours to make pictures.	• Learner's Book pages 100–101 • Activity 17 • Teacher's Guide page 67	
Formal Assessment	Refer to page 112 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 113 of the Teacher's Guide.			