

## Coding and Robotics Grade 3 – Term 1

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Pattern Recognition and Problem Solving (CAPS page 66)			
<b>Week 1</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise identifying patterns in letter–number codes.</li> <li>Encode and decode words and sentences, using a variety of letter–number, letter–letter and letter–symbol codes.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 2–5</li> <li>Activities 1–4</li> <li>Worksheet 1.1</li> <li>Teacher’s Guide pages 2–4</li> </ul>	<ul style="list-style-type: none"> <li>Whiteboard and different coloured markers to demonstrate</li> </ul>
<b>Formal Assessment</b>	Refer to page 116 in the Teacher’s Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 119 of the Teacher’s Guide.		
<b>CAPS Reference:</b> Algorithms and Coding (CAPS pages 66–67)			
<b>Week 2</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise concepts from Grade 2.</li> <li>Create their own sprite.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 6–10</li> <li>Activities 5–7</li> <li>Teacher’s Guide pages 5–6</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 2–3</li> <li>ScratchJr application</li> <li><i>How to scan a QR code</i> (inside front cover of the Learner’s Book)</li> <li>Video: <i>Create your own sprite</i> (QR code on page 10 of the Learner’s Book)</li> </ul>
<b>Week 3</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Make sprites move and speak.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 10–12</li> <li>Activity 8</li> <li>Teacher’s Guide pages 7–8</li> </ul>	<ul style="list-style-type: none"> <li>Video: <i>Program your own sprite</i> (QR code on page 12 of the Learner’s Book)</li> </ul>
<b>Formal Assessment</b>	Refer to page 116 in the Teacher’s Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 119 of the Teacher’s Guide.		

## Coding and Robotics Grade 3 – Term 1

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Robotics Skills (CAPS page 67)			
<b>Week 4</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise the components of a basic electric circuit.</li> <li>Introduce the layout and components of a breadboard electric circuit.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 13–15</li> <li>Activities 9–10</li> <li>Worksheet 1.2</li> <li>Teacher's Guide pages 9–10</li> </ul>	<ul style="list-style-type: none"> <li>Useful website (QR code on page 10 of the Teacher's Guide)</li> </ul>
<b>Week 5</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Work with two- and three-dimensional shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 16–17</li> <li>Worksheet 1.3</li> <li>Teacher's Guide pages 10–11</li> </ul>	<ul style="list-style-type: none"> <li>Online game: <i>Carroll shapes</i> (QR code on page 17 of the Learner's Book)</li> <li>Online game: <i>Find 3D objects</i> (QR code on page 17 of the Learner's Book)</li> </ul>
<b>Week 6</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Introduce the engineering design thinking process.</li> <li>Build a bridge.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 18–19</li> <li>Activity 11</li> <li>Worksheet 1.4</li> <li>Teacher's Guide pages 11–12</li> </ul>	
<b>Week 7</b> <b>(part 1)</b> <b>1 hour</b>	<ul style="list-style-type: none"> <li>Continue building a bridge.</li> <li>Explore ways to strengthen structures.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 18–20</li> <li>Activity 11</li> <li>Worksheet 1.5</li> <li>Teacher's Guide pages 11–12</li> </ul>	
<b>Formal Assessment</b>	Refer to page 117 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 119 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 1

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Internet and E-communication (CAPS page 68)			
<b>Week 7 (part 2)</b> <b>1 hour</b>	<ul style="list-style-type: none"> <li>Revise connectivity concepts.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book page 21</li> <li>Activity 12</li> <li>Teacher's Guide page 13</li> </ul>	<ul style="list-style-type: none"> <li><i>Internet safety and security guidelines for learners</i> (inside back cover of the Learner's Book)</li> </ul>
<b>Week 8</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Introduce the components of a computer network.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 22–24</li> <li>Activity 13</li> <li>Worksheets 1.6 &amp; 1.7</li> <li>Teacher's Guide pages 13–16</li> </ul>	<ul style="list-style-type: none"> <li>Physical examples of the components of a simple computer network, e.g. network cables, network switch, laptop and printer</li> </ul>
<b>Formal Assessment</b>	Refer to page 118 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 120 of the Teacher's Guide.		
<b>CAPS Reference:</b> Application Skills (CAPS pages 68–69)			
<b>Week 9</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise working with columns and rows by doing a crossword.</li> <li>Revise the Microsoft® Word interface.</li> <li>Introduce the Microsoft® Excel interface.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 25–29</li> <li>Activities 14–17</li> <li>Teacher's Guide pages 17–19</li> <li>Crossword puzzle (QR code on page 17 of the Teacher's Guide)</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 9–10</li> <li>Microsoft® Excel application for Weeks 9–10</li> <li>Video: <i>Get to know the Excel screen</i> (QR code on page 29 of the Learner's Book)</li> <li>Website to create more crosswords (QR code on page 17 of the Teacher's Guide)</li> </ul>
<b>Week 10</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Create and save a simple spreadsheet.</li> <li>Adjust column widths and wrap text.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 30–34</li> <li>Activity 18</li> <li>Teacher's Guide pages 19–20</li> </ul>	<ul style="list-style-type: none"> <li>Video: <i>Create and save a spreadsheet</i> (QR code on page 32 of the Learner's Book)</li> </ul>
<b>Formal Assessment</b>	Refer to page 118 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 120 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 2

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Pattern Recognition and Problem Solving (CAPS page 70)			
<b>Week 1</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise principles of algorithmic thinking.</li> <li>Give directions using symbols instead of words.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 37–38</li> <li>Activity 1</li> <li>Worksheet 2.1</li> <li>Teacher's Guide pages 22–23</li> </ul>	<ul style="list-style-type: none"> <li>Whiteboard and different coloured markers to demonstrate</li> </ul>
<b>Formal Assessment</b>	Refer to page 121 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 125 of the Teacher's Guide.		
<b>CAPS Reference:</b> Algorithms and Coding (CAPS pages 66–67)			
<b>Week 2</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise creating and programming a sprite.</li> <li>Use the Stamp tool to create a maze.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 39–42</li> <li>Activities 2–4</li> <li>Teacher's Guide pages 24–26</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 2–3</li> <li>ScratchJr application</li> <li>Video: <i>Use the Stamp tool</i> (QR code on page 42 of the Learner's Book)</li> </ul>
<b>Week 3</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Move a sprite through a maze.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 43–45</li> <li>Activity 5</li> <li>Teacher's Guide pages 26–27</li> </ul>	<ul style="list-style-type: none"> <li>Video: <i>Move a car through the cones</i> (QR code on page 45 of the Learner's Book)</li> </ul>
<b>Formal Assessment</b>	Refer to pages 121–122 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 125 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 2

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Robotics Skills (CAPS pages 70–71)			
<b>Week 4</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Build a basic breadboard electric circuit.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 46–47</li> <li>Activities 6–7</li> <li>Worksheet 2.2</li> <li>Teacher’s Guide pages 28–29</li> </ul>	<ul style="list-style-type: none"> <li>Useful website (QR code on page 10 of the Teacher’s Guide)</li> </ul>
<b>Week 5</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Introduce pulleys.</li> <li>Build a crane.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 48–50</li> <li>Activity 8</li> <li>Worksheet 2.3</li> <li>Teacher’s Guide pages 29–31</li> </ul>	<ul style="list-style-type: none"> <li>Physical examples of pulley systems, such as a flag pole or roll-up blind</li> <li>Per learner or group of learners: stiff cardboard, cardboard tube, string, kebab sticks, 3 plastic bobbins, liquid glue, paint and brushes, a pair of scissors</li> </ul>
<b>Week 6</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Continue building a crane.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 49–50</li> <li>Activity 8</li> <li>Worksheet 2.4</li> <li>Teacher’s Guide pages 30–31</li> </ul>	
<b>Week 7 (part 1)</b> <b>1 hour</b>	<ul style="list-style-type: none"> <li>Introduce linkages.</li> <li>Build a ‘monster’ that uses linkages.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 51–53</li> <li>Activities 9–10</li> <li>Worksheet 2.5</li> <li>Teacher’s Guide pages 31–32</li> </ul>	<ul style="list-style-type: none"> <li>Per learner or group of learners: stiff cardboard, 7 split pins, a reamer, ruler, pencil, a pair of scissors.</li> </ul>
<b>Formal Assessment</b>	Refer to page 123 in the Teacher’s Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 125 of the Teacher’s Guide.		

## Coding and Robotics Grade 3 – Term 2

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Internet and E-communication (CAPS page 68)			
<b>Week 7 (part 2)</b> <b>1 hour</b>	<ul style="list-style-type: none"> <li>Revise network terminology taught in Term 1.</li> <li>Introduce connector ports, modem, router and switch.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 54–56</li> <li>Activity 11</li> <li>Worksheet 2.6</li> <li>Teacher's Guide pages 33–34</li> </ul>	<ul style="list-style-type: none"> <li>Video to further explain network components (QR code on page 34 of the Teacher's Guide)</li> </ul>
<b>Week 8</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Introduce wired and wireless networks.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 57–59</li> <li>Activities 12–13</li> <li>Worksheet 2.7</li> <li>Teacher's Guide pages 35–36</li> </ul>	<ul style="list-style-type: none"> <li>Physical examples of the components of a simple computer network, e.g. network cables, network switch, laptop and printer</li> </ul>
<b>Formal Assessment</b>	Refer to page 123 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 126 of the Teacher's Guide.		
<b>CAPS Reference:</b> Application Skills (CAPS page 72)			
<b>Week 9</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise opening a saved spreadsheet and using grid references.</li> <li>Work with column headings, font and text colour.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 60–64</li> <li>Activities 14–16</li> <li>Teacher's Guide pages 37–38</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 9–10</li> <li>Microsoft® Excel application for Weeks 9–10</li> <li>Video: <i>Change the font</i> (QR code on page 62 of the Learner's Book)</li> <li>Video: <i>Change the colour of text and cells</i> (QR code on page 64 of the Learner's Book)</li> </ul>
<b>Week 10</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Create a numbered list.</li> <li>Fill cells with colour to create a picture.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 64–67</li> <li>Activities 17–20</li> <li>Teacher's Guide pages 38–40</li> </ul>	
<b>Formal Assessment</b>	Refer to pages 123–124 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 126 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 3

Week & Time allocation	Objective(s)	<i>Connect Resources</i>	Additional Resources
<b>CAPS Reference:</b> Pattern Recognition and Problem Solving (CAPS page 73)			
<b>Week 1</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise giving instructions using symbols instead of words.</li> <li>Practise algorithmic thinking.</li> <li>Debug instructions that use symbols.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 70–72</li> <li>Activities 1–2</li> <li>Worksheet 3.1</li> <li>Teacher's Guide pages 42–43</li> </ul>	<ul style="list-style-type: none"> <li>Whiteboard and different coloured markers to demonstrate</li> </ul>
<b>Formal Assessment</b>	Refer to page 127 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 129 of the Teacher's Guide.		
<b>CAPS Reference:</b> Algorithms and Coding (CAPS page 73)			
<b>Week 2</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise Trigger events.</li> <li>Introduce event-driven programming.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 73–76</li> <li>Activity 3</li> <li>Teacher's Guide pages 44–45</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 2–3</li> <li>ScratchJr application</li> <li>Video: <i>Set the scene for a story</i> (QR code on page 74 of the Learner's Book)</li> </ul>
<b>Week 3</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Continue using event-driven programming.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 76–80</li> <li>Activities 4–6</li> <li>Teacher's Guide pages 45–48</li> </ul>	<ul style="list-style-type: none"> <li>Video: <i>Use a message block to start a program</i> (QR code on page 76 of the Learner's Book)</li> </ul>
<b>Formal Assessment</b>	Refer to page 127 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 129 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 3

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Robotics Skills (CAPS pages 73–74)			
<b>Week 4</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Introduce series and parallel circuits.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 81–84</li> <li>Activities 7–8</li> <li>Worksheet 3.2</li> <li>Teacher’s Guide pages 49–50</li> </ul>	<ul style="list-style-type: none"> <li>Per learner or group of learners: half-sized breadboard, 9 V battery, battery holder with wires, switch, 2 LED bulbs, resistor, jumper wire</li> </ul>
<b>Week 5</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Introduce a DC motor.</li> <li>Build a fan.</li> <li>Introduce gears.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 85–87</li> <li>Activity 9</li> <li>Worksheet 3.3</li> <li>Teacher’s Guide pages 51–52</li> </ul>	<ul style="list-style-type: none"> <li>Per learner or group of learners: thick cardboard tube, plastic bottle, battery holder with wires, DC motor, 9 V battery, switch, half-sized breadboard, resistor, jumper wires, Prestik, tape, scissors</li> </ul>
<b>Week 6</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Add gears to the fan.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book page 88</li> <li>Activity 10</li> <li>Worksheet 3.4</li> <li>Teacher’s Guide page 52</li> </ul>	<ul style="list-style-type: none"> <li>Per learner or group of learners: the fan made in Activity 9, 2 plastic or nylon spur gears,</li> </ul>
<b>Week 7 (part 1)</b> <b>1 hour</b>	<ul style="list-style-type: none"> <li>Introduce polarity.</li> <li>Class presentation of the fans.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book page 89</li> <li>Activities 11–12</li> <li>Worksheet 3.5</li> <li>Teacher’s Guide pages 52–53</li> </ul>	<ul style="list-style-type: none"> <li>The fan built in Activity 9</li> </ul>
<b>Formal Assessment</b>	Refer to pages 127–128 in the Teacher’s Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 130 of the Teacher’s Guide.		

## Coding and Robotics Grade 3 – Term 3

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Internet and E-communication (CAPS pages 74–75)			
<b>Week 7 (part 2)</b> 1 hour	<ul style="list-style-type: none"> <li>Revise services available via the internet.</li> <li>Explain how the internet works.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 90–93</li> <li>Activities 13–14</li> <li>Worksheet 3.6</li> <li>Teacher's Guide pages 54–56</li> </ul>	<ul style="list-style-type: none"> <li>Video showing the laying of the undersea fibre optic cables (QR code on page 54 of the Teacher's Guide)</li> <li>Video: <i>How the internet works</i> (see QR code on page 56 of the Teacher's Guide)</li> </ul>
<b>Week 8</b> 2 hours	<ul style="list-style-type: none"> <li>Introduce the concept of a website.</li> <li>Revise principles of online safety.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 93–95</li> <li>Activities 15–16</li> <li>Worksheet 3.7</li> <li>Teacher's Guide pages 56–58</li> </ul>	<ul style="list-style-type: none"> <li><i>Internet safety and security guidelines for learners</i> (inside back cover of the Learner's Book)</li> </ul>
<b>Formal Assessment</b>	Refer to page 128 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 130 of the Teacher's Guide.		
<b>CAPS Reference:</b> Application Skills (CAPS page 75)			
<b>Week 9</b> 2 hours	<ul style="list-style-type: none"> <li>Revise numbered lists and cell references.</li> <li>Introduce bar charts.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 96–100</li> <li>Activities 17–21</li> <li>Teacher's Guide pages 59–61</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 9–10</li> <li>Microsoft® Excel application for Weeks 9–10</li> <li>Video: <i>Create a bar chart</i> (QR code on page 100 of the Learner's Book)</li> </ul>
<b>Week 10</b> 2 hours	<ul style="list-style-type: none"> <li>Introduce pictograms.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 101–103</li> <li>Activities 22–23</li> <li>Teacher's Guide pages 61–63</li> </ul>	<ul style="list-style-type: none"> <li>Video: <i>Copy data from a pictogram</i> (QR code on page 103 of the Learner's Book)</li> </ul>
<b>Formal Assessment</b>	Refer to page 128 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 130 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 4

Week & Time allocation	Objective(s)	<i>Connect Resources</i>	Additional Resources
<b>CAPS Reference:</b> Pattern Recognition and Problem Solving (CAPS page 76)			
<b>Week 1</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Practise algorithmic thinking.</li> <li>Give directions using symbols.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 106–109</li> <li>Activities 1–3</li> <li>Worksheet 4.1</li> <li>Teacher's Guide pages 65–66</li> </ul>	<ul style="list-style-type: none"> <li>Whiteboard and different coloured markers to demonstrate</li> </ul>
<b>Formal Assessment</b>	Refer to page 131 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 135 of the Teacher's Guide.		
<b>CAPS Reference:</b> Algorithms and Coding (CAPS pages 76–77)			
<b>Week 2</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Introduce broadcasting as a Trigger event.</li> <li>Program the sender sprite.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 110–112</li> <li>Activities 4–5</li> <li>Teacher's Guide page 67</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 2–3</li> <li>ScratchJr application</li> <li>Video: <i>Program the sender</i> (QR code on page 111 of the Learner's Book)</li> </ul>
<b>Week 3</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Program the receiver sprite.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 112–116</li> <li>Activity 6</li> <li>Teacher's Guide pages 68–69</li> </ul>	<ul style="list-style-type: none"> <li>Video: <i>Program the receivers</i> (QR code on page 115 of the Learner's Book)</li> </ul>
<b>Formal Assessment</b>	Refer to pages 131–132 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 135 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 4

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Robotics Skills (CAPS page 77)			
<b>Week 4</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Revise components of an electric circuit, pulleys, linkages and gears.</li> <li>Begin building a Ferris wheel.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 117–119</li> <li>Activity 7</li> <li>Worksheet 4.2</li> <li>Teacher's Guide pages 70–71</li> </ul>	<ul style="list-style-type: none"> <li>Per learner or group of learners: 18 LEGO beams (6 medium sized, 6 long, 6 small), 18 short LEGO Technic pins, 6 long LEGO Technic pins, 1 small connector, 1 axle, 2 hubs</li> </ul>
<b>Week 5</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Continue building the Ferris wheel.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 117–119</li> <li>Activity 7</li> <li>Worksheet 4.3</li> <li>Teacher's Guide pages 70–71</li> </ul>	<ul style="list-style-type: none"> <li>Suggestion for video about the London Eye (see QR code on page 71 of the Teacher's Guide)</li> </ul>
<b>Week 6</b> <b>2 hours</b>	<ul style="list-style-type: none"> <li>Build an electric circuit to power the Ferris wheel.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book pages 119–120</li> <li>Activities 8–9</li> <li>Teacher's Guide page 72</li> </ul>	<ul style="list-style-type: none"> <li>The Ferris wheel built in Activity 7</li> <li>Per learner or group of learners: 1 DC motor, battery holder with wires, 2 AA batteries, switch</li> </ul>
<b>Week 7 (part 1)</b> <b>1 hour</b>	<ul style="list-style-type: none"> <li>Present the projects to the class.</li> </ul>	<ul style="list-style-type: none"> <li>Learner's Book page 120</li> <li>Activity 9</li> <li>Worksheets 4.4 &amp; 4.5</li> <li>Teacher's Guide pages 72–73</li> </ul>	
<b>Formal Assessment</b>	Refer to page 132 in the Teacher's Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 136 of the Teacher's Guide.		

## Coding and Robotics Grade 3 – Term 4

Week & Time allocation	Objective(s)	<i>Connect</i> Resources	Additional Resources
<b>CAPS Reference:</b> Internet and E-communication (CAPS pages 74–75)			
<b>Week 7 (part 2)</b> 1 hour	<ul style="list-style-type: none"> <li>Revise concepts of the internet, websites and online safety.</li> <li>Introduce search engines.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 121–122</li> <li>Activity 10</li> <li>Worksheet 4.6</li> <li>Teacher’s Guide pages 74–75</li> </ul>	<ul style="list-style-type: none"> <li><i>Internet safety and security guidelines for learners</i> (inside back cover of the Learner’s Book)</li> </ul>
<b>Week 8</b> 2 hours	<ul style="list-style-type: none"> <li>Use a search engine to find images and videos.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 123–125</li> <li>Activities 11–12</li> <li>Worksheet 4.7</li> <li>Teacher’s Guide pages 75–78</li> </ul>	
<b>Formal Assessment</b>	Refer to page 133 in the Teacher’s Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 136 of the Teacher’s Guide.		
<b>CAPS Reference:</b> Application Skills (CAPS page 78)			
<b>Week 9</b> 2 hours	<ul style="list-style-type: none"> <li>Revise bar charts and pictograms.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 126–127</li> <li>Activities 13–14</li> <li>Teacher’s Guide pages 79–80</li> </ul>	<ul style="list-style-type: none"> <li>Access to computers for Weeks 9–10</li> <li>Microsoft® Excel application for Weeks 9–10</li> </ul>
<b>Week 10</b> 2 hours	<ul style="list-style-type: none"> <li>Copy spreadsheet data into a document.</li> </ul>	<ul style="list-style-type: none"> <li>Learner’s Book pages 128–131</li> <li>Activity 15</li> <li>Teacher’s Guide pages 80–81</li> </ul>	<ul style="list-style-type: none"> <li>Video: <i>Copy, paste and change a table</i> (QR code on page 128 of the Learner’s Book)</li> <li>Video: <i>Copy a spreadsheet table into a document</i> (QR code on page 130 of the Learner’s Book)</li> </ul>
<b>Formal Assessment</b>	Refer to page 134 in the Teacher’s Guide for suggested formal assessment of this topic. Adapt the questions to suit your class. Suggested answer on page 136 of the Teacher’s Guide.		