



Computing - Year 6 Threshold Concepts and Milestones



Term	Threshold Concept	Sub-division	Statement	Activity
Autumn 1	Code	Draw	Control pens	<p>Recall drawing shapes from Year 4 and 5. Create procedures for simple shapes e.g. square and challenge the children to draw other regular shapes e.g. equilateral triangle.</p> <p>Reintroduce variables - create a procedure called 'shape'</p> <p>Use the repeat function to draw multiple shapes to create a pattern with a set number of shapes in a full circle. Children to discuss and experiment and then create a final piece of artwork using the Turtle.</p>
	Communicate		<p>Choose the most suitable applications and devices for the purposes of communication. Use many of the advanced features in order to create high quality, professional or efficient communications.</p>	<p>Use PowerPoint as a journal to demonstrate what they have learnt during sections of work, using screenshots, video clips and voice recordings.</p> <p>THIS WILL BE CONTINUED THROUGHOUT THE YEAR IN DIFFERENT AREAS</p>

Commented [SH1]: Repeat 3

Fd 10
Rt 120
end

Commented [SH2]: Repeat sides

Fd 10
Rt 360/sides
end

Commented [SH3]: Repeat x

Shape
Rt 360/x
end



Computing - Year 6

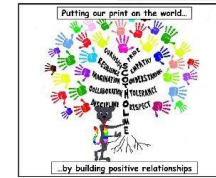
Threshold Concepts and Milestones



Autumn 2	Code	Sound	Upload sounds from a file and edit them Add effects such as fade in and out and control their implementation	Record poems/stories with added sound effects either using the Voice Memo and Garageband app on the iPads or use Audacity in the computer suite Use Scratch to create a musical band, importing sounds where appropriate
Spring 1	Code	Sensing	Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions.	Children code racing apps with events to prevent vehicles passing through walls and other objects.
		Motion	Set IF conditions for movements. Specify types of rotation giving the number of degrees	Use Discovery Coding (Rocket Blaster) or Scratch to demonstrate control of objects coordinates and rotation
		Operators	Use the Boolean operators To define conditions To perform conditions	Use Booleans to create a stopwatch
Spring 2	Collect		Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.	Use databases to collect data on the passengers of the Titanic
	Code	Variables and lists	Use variables in a list to select different events	Learn how to create random team selectors using lists and variables in Python Generate poetry with Ada Lovelace using lists



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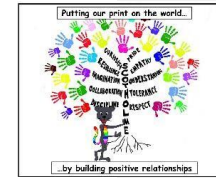
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Summer 1	Code	Sound	Add effects such as fade in and out and control their implementation	Use Scratch to create a musical band, importing sounds where appropriate
	Connect		<p>Collaborate with others online on sites approved and moderated by teachers. Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems. Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder.</p> <p>Understand the effect of online comments and show responsibility and sensitivity when online.</p> <p>Understand how simple networks are set up and used.</p>	<p>Use Teams and OneNote to collaborate between small groups of children and see the power in working together. Use to collect ideas during the Create term</p> <p>Use Class Story and children's posts to generate constructive feedback, allowing discussion of appropriate comments etc.</p> <p>Share electronic work with teachers/parents to help present work to a wider audience.</p> <p>Discuss and draw diagrams of simple networks that the chn may encounter e.g. at home or in school.</p>
Summer 2	Code	Events	Set events to control other events by broadcasting information as a trigger	Create quizzes in Scratch that test children's times table knowledge (use prototypes with Year 4 as users) where an event is broadcast to trigger a 'correct' or 'incorrect' response.
		Control	Use IF THEN ELSE conditions.	Use Scratch to design and implement IF THEN ELSE statements making an interactive quiz



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Threshold Concept	Sub-division	Statement	Content
Code This concept involves developing an understanding of instructions, logic and sequences.	Motion	Set IF conditions for movements. Specify types of rotation giving the number of degrees	Use Discovery Coding (Rocket Blaster) or Scratch to demonstrate control of objects coordinates and rotation
	Looks	Change the position of objects between screen layers (send to back, bring to front)	Use PowerPoint/KeyNote to produce presentations about humans' impact on biomes using multiple layers of images to use as a backing for a speech
	Sound	Upload sounds from a file and edit them Add effects such as fade in and out and control their implementation	Record poems/stories with added sound effects either using the Voice Memo Or Garageband app on the iPads or use Audacity in the computer suite Use Scratch to create a musical band, importing sounds where appropriate
	Draw	Control pens	Children use 2Go to draw simple shapes (squares, rectangles). Change colours and line thickness when confident with drawing shapes.
	Events	Set events to control other events by broadcasting information as a trigger	Create quizzes in Scratch that test children's times table knowledge (use prototypes with Year 4 as users) where an event is broadcast to trigger a 'correct' or 'incorrect' response.
	Control	Use IF THEN ELSE conditions.	Use Scratch to design and implement IF THEN ELSE statements making an interactive quiz
	Sensing	Use a range of sensing tools (including proximity, user inputs, loudness and	Children code racing apps with events to prevent vehicles passing through walls and other objects.



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		mouse position) to control events or actions.	
	Variables and lists	Use variables in a list to select different events	Learn how to create random team selectors using lists and variables in Python Generate poetry with Ada Lovelace using lists
	Operators	Use the Boolean operators To define conditions Use the Reporter operators (from Y3/4/5) To perform conditions	Use Booleans to create a stopwatch
Connect This concept involves developing an understanding of how to safely connect with others.		Collaborate with others online on sites approved and moderated by teachers. Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems. Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder. Understand the effect of online comments and show responsibility and sensitivity when online.	Use Teams and OneNote to collaborate between small groups of children and see the power in working together. Use to collect ideas during the Create term Use Class Story and children's posts to generate constructive feedback, allowing discussion of appropriate comments etc. Share electronic work with teachers/parents to help present work to a wider audience. Discuss and draw diagrams of simple networks that the chn may encounter e.g. at home or in school.



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		Understand how simple networks are set up and used.	
Communicate This concept involves using apps to communicate one's ideas.		Choose the most suitable applications and devices for the purposes of communication. Use many of the advanced features in order to create high quality, professional or efficient communications.	Use PowerPoint as a journal to demonstrate what they have learnt during sections of work, using screenshots, video clips and voice recordings.
Collect This concept involves developing an understanding of databases and their uses.		Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.	Use databases to collect data on real-life events or occurrences (related to Citizenship?).