Entrust Computing
Scheme of Work Overview
ICT Team | September 2013 | V1
Computing Curriculum

Aims
The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

“The core of computing is computer science, in which pupils are taught the principles of information and computation, and how digital systems work.”

The national curriculum in England
Framework document July 2013
## National Curriculum in England:
### Computing Programmes of Study

### Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

<table>
<thead>
<tr>
<th>Key Stage 1</th>
<th>E-Safety and Digital Literacy</th>
<th>Programming</th>
<th>Information and Communication Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</td>
<td>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</td>
<td>use technology purposefully to create, organise, store, manipulate and retrieve digital content</td>
</tr>
<tr>
<td></td>
<td>create and debug simple programs</td>
<td>use logical reasoning to predict the behaviour of simple programs</td>
<td>recognise common uses of information technology beyond school.</td>
</tr>
<tr>
<td>Key Stage 2</td>
<td>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</td>
<td>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</td>
<td>understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration</td>
</tr>
<tr>
<td></td>
<td>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</td>
<td>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</td>
<td>select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</td>
</tr>
<tr>
<td></td>
<td>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Entrust Scheme of Work Overview: Computing

<table>
<thead>
<tr>
<th></th>
<th>E-Safety and Digital Literacy</th>
<th>Programming in the world around us</th>
<th>Skills and Technology in the World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EY's</strong></td>
<td><em>Laying the foundations for e-safety teaching</em></td>
<td></td>
<td>Practice logging on and off from a computer.</td>
</tr>
<tr>
<td></td>
<td>Learn that staying safe online is similar to staying safe in the real world.</td>
<td></td>
<td>Improve mouse control.</td>
</tr>
<tr>
<td></td>
<td>Be introduced to the basics of online searching.</td>
<td></td>
<td>Learn how to print.</td>
</tr>
<tr>
<td></td>
<td>Explore and comment on different types of websites with the teacher, which are pupils</td>
<td></td>
<td>QCA 1D Labelling and classifying</td>
</tr>
<tr>
<td></td>
<td>favourites and why?</td>
<td></td>
<td>Entrust Early Years DC1 and Entrust Early Years DV1 Understand the differences between a still</td>
</tr>
<tr>
<td></td>
<td>Discuss how they use the computer/tablets at home and the difference between home and</td>
<td></td>
<td>and moving image.</td>
</tr>
<tr>
<td></td>
<td>school use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td><em>Other e-safety resources to consider</em></td>
<td></td>
<td>My World, Textease Studio</td>
</tr>
<tr>
<td></td>
<td><strong>Digi Duck</strong></td>
<td></td>
<td>Digital camera/video/iPad</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.kidrex.org/">http://www.kidrex.org/</a></td>
<td></td>
<td><strong>Resources for ALL titles in Textease Studio</strong></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.thinkuknow.co.uk/5_7/">http://www.thinkuknow.co.uk/5_7/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Adventures of Smartie the Penguin</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Apps</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BeeBot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>E-Safety and Digital Literacy</td>
<td>Programming</td>
<td>Skills and Technology in the World</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------</td>
<td>-------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td></td>
<td>Hyperlinks are provided to resources and materials from Common Sense Media</td>
<td>Refer to Entrust Progressing in Programming scheme for full detail</td>
<td>Refer to Entrust Units or QCA Units for full detail</td>
</tr>
<tr>
<td>Y1</td>
<td>Going Places Safely</td>
<td>I Robot</td>
<td>Know how to use a spell checker effectively</td>
</tr>
<tr>
<td></td>
<td>Staying safe online</td>
<td></td>
<td>QCA 2B Creating Pictures</td>
</tr>
<tr>
<td></td>
<td>ABC Searching</td>
<td></td>
<td>Entrust DC2 Using a Digital Camera</td>
</tr>
<tr>
<td></td>
<td>Simple search techniques</td>
<td></td>
<td>Entrust DV2 Using a Digital Video Camera</td>
</tr>
<tr>
<td></td>
<td>Keep it Private</td>
<td></td>
<td>QCA 1E Represent information graphically: pictograms</td>
</tr>
<tr>
<td></td>
<td>Keep personal information private</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>My Creative Work</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Having ownership of what is yours</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sending Email</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication in a digital world</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td>Other e-safety resources to consider</td>
<td>Roamer World Textease Turtle BeeBot Software My World Sequences</td>
<td>MS Word Colour Magic/Textease Paint Digital Camera/Video/iPad Textease Database/Starting Graph/2Create Resources for ALL titles in Textease Studio</td>
</tr>
<tr>
<td></td>
<td>Think You Know resources/Hector's World</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cybersmart Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apps</td>
<td></td>
<td>BeeBot</td>
<td></td>
</tr>
</tbody>
</table>
### Year 2

#### E-Safety and Digital Literacy

Hyperlinks are provided to resources and materials from Common Sense Media

<table>
<thead>
<tr>
<th>Y2</th>
<th>Programming</th>
<th>Skills and Technology in the World</th>
</tr>
</thead>
</table>
| **Staying Safe Online**  
Using sites suitable for age | **Entrust Progressing in Programming scheme for full detail** | **Refer to Entrust Units or QCA Units for full detail** |
|  | **Follow the Digital Trail**  
Digital Footprints |  |
|  | **Screen out the Mean**  
Introduction to cyberbullying |  |
|  | **Using Keywords**  
Efficient searching |  |
|  | **Sites I like**  
Rating websites |  |

#### Other e-safety resources to consider

<table>
<thead>
<tr>
<th>Resources</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Think You Know resources/Lee and Kim</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Cybersmart Resources</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Programming

**Say that again!**

- Roamer World or Textease Turtle
- BeeBots and or Roamers

#### Skills and Technology in the World

- **QCA 2A Writing stories, communication information using text**
- **Entrust DV3 Recording and Editing** - Use a digital video camera to record and make simple edits
- **Entrust MM1 Multimedia Presentations** – ICT in the World Around You - Illustrate information with pictures using presentation software
- **QCA 2E Questions and answers**

#### Apps

- **Cut the Rope**
- **Where’s My Water**
- **BeeBot**
- **BeeBot Pyramid**

---

**Year 2**

© Entrust Education Services  page 6
## E-Safety and Digital Literacy
Hyperlinks are provided to resources and materials from Common Sense Media

### Year 3

| Y3 | Powerful Passwords  
The why behind passwords | My Online Community  
Making connections through the internet | Things for Sale  
Online advertising | Show Respect Online  
Friends online and offline | Writing Good Emails  
Effective communications |
|----|-------------------------------------------------|--------------------------------------------------|-----------------|--------------------------|--------------------------|

### Programming
Refer to Entrust Progressing in Programming scheme for full detail

### Skills and Technology in the World
Refer to Entrust Units or QCA Units for full detail

#### I Teach You Learn

- **MSW Logo** – free program to download OR Textease Turtle OR Roamer World
- **MS Word/Textease Studio/MS Publisher Audacity** – free download [http://audacity.sourceforge.net/](http://audacity.sourceforge.net/)
- **Textease Database**
- **Textease Branch**
- **Textease Paint/Colour Magic**
- **Pivot Stick Animator** – free download
- **Resources for ALL titles in Textease Studio**

#### Other e-safety resources to consider
- **Captain Kara, Winston and the SMART Crew**
- **Cybersmart Resources**

#### Resources
- **iLogo**
- **I Can Animate**
- **Animation Desk**
- **Animation Desk for Kids**
## E-Safety and Digital Literacy
Hyperlinks are provided to resources and materials from Common Sense Media

### Programming
Refer to Entrust Progressing in Programming scheme for full detail

### Skills and Technology in the World
Refer to Entrust Units or QCA Units for full detail

<table>
<thead>
<tr>
<th>Y4</th>
<th>Resources</th>
<th>Inside Out</th>
<th>Other e-safety resources to consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rings of Responsibility</td>
<td>Showing respect online and offline</td>
<td>QCA 4A Writing for different audiences</td>
<td></td>
</tr>
<tr>
<td>Private and Personal Information</td>
<td>Sharing your information with others</td>
<td>QCA 6A Multimedia Presentation</td>
<td></td>
</tr>
<tr>
<td>The Power of Words</td>
<td>Cyberbullying</td>
<td>QCA 4D Collecting and presenting information; questionnaires and pie charts</td>
<td></td>
</tr>
<tr>
<td>The Key to Keywords</td>
<td>Accuracy in searches</td>
<td>PROJECT</td>
<td></td>
</tr>
<tr>
<td>Whose is it, Anyway?</td>
<td>Introduction to plagiarism</td>
<td>Entrust Mad About Ads</td>
<td></td>
</tr>
</tbody>
</table>

#### Other e-safety resources to consider
- Think You Know Resources
- Cybersmart Resources

#### Other e-safety resources to consider
- MSW Logo free program to download OR Textease Turtle OR Roamer World

#### Resources
- iLogo

#### Apps
- iLogo
- KeyNote
- Explain Everything
## E-Safety and Digital Literacy
Hyperlinks are provided to resources and materials from Common Sense Media

### Year 5

<table>
<thead>
<tr>
<th>Topic</th>
<th>Programming</th>
<th>Skills and Technology in the World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong Passwords</strong>&lt;br&gt;Creating secure passwords</td>
<td>Refer to Entrust Progressing in Programming scheme for full detail</td>
<td>Entrust MM2 Making Choices – Building on prior learning&lt;br&gt;Pupils produce a story for Reception to include narration and music using one or more multimedia programs of their choice</td>
</tr>
<tr>
<td><strong>Digital Citizenship Pledge</strong>&lt;br&gt;Working together</td>
<td>Let’s Make it Happen</td>
<td>Entrust Stop Motion Animation 2 – 3D Animations</td>
</tr>
<tr>
<td><strong>You’ve Won a Prize!</strong>&lt;br&gt;Introduction to Spam</td>
<td></td>
<td>QCA 5D Introduction to spreadsheets</td>
</tr>
<tr>
<td><strong>How to Cite a Site</strong>&lt;br&gt;What is a citation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Picture Perfect</strong>&lt;br&gt;Digital manipulation and the implications</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Other e-safety resources to consider

<table>
<thead>
<tr>
<th>Resources</th>
<th>Programming</th>
<th>Skills and Technology in the World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Think You Know Resources</strong></td>
<td>Flowol – more info <a href="http://www.flowol.com/">http://www.flowol.com/</a>&lt;br&gt;Control Station&lt;br&gt;Control Box</td>
<td>Pupils choose from a variety of software titles that they have already experienced in prior learning</td>
</tr>
<tr>
<td><strong>Cybersmart Resources</strong></td>
<td></td>
<td>GoAnimate – schools can create accounts&lt;br&gt;Fluxtime&lt;br&gt;DomoAnimate&lt;br&gt;With a webcam – JellyCam is a free download&lt;br&gt;Excel/Number Magic/Textease Spreadsheet&lt;br&gt;<a href="http://www.flowol.com/">Resources for ALL titles in Textease Studio</a></td>
</tr>
</tbody>
</table>

### Apps

<table>
<thead>
<tr>
<th></th>
<th>Programming</th>
<th>Skills and Technology in the World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RoboLogic</strong>&lt;br&gt;CargoBot</td>
<td>I Can Animate&lt;br&gt;Numbers</td>
<td></td>
</tr>
</tbody>
</table>
# E-Safety and Digital Literacy
Hyperlinks are provided to resources and materials from Common Sense Media

## Year 6
- **Talking Safely Online**
  - Keeping personal information private
- **Super Digital Citizen**
  - Working together
- **Privacy Rules**
  - What are secure websites?
- **What’s Cyberbullying?**
  - What is it and how to deal with it?
- **Selling Stereotypes**
  - How the media sells ideas

## Other e-safety resources to consider
- **Think You Know Resources**
- **CEOP Jigsaw Assembly**
- **Cybersmart Resources**

## Resources

<table>
<thead>
<tr>
<th><strong>E-Safety and Digital Literacy</strong></th>
<th><strong>Programming</strong></th>
<th><strong>Skills and Technology in the World</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperlinks to resources and materials from Common Sense Media</td>
<td>Refer to Entrust Progressing in Programming scheme for full detail</td>
<td>Refer to Entrust Units or QCA Units for full detail</td>
</tr>
</tbody>
</table>

## Starting from Scratch

- **Scratch** – free to use online – no download needed
- **Scratch Tutorials and lesson plans**

## Projects
- **PROJECT**
  - Entrust It’s a Dog’s Life
  - QCA 6B Spreadsheet Modelling
  - Entrust Where the Internet lives

## Other e-safety resources to consider
- **Think You Know Resources**
- **CEOP Jigsaw Assembly**
- **Cybersmart Resources**

## Apps
- **Daisy the Dino**
- **Hopscotch**
  - both are good introductions to Scratch

## Skills and Technology in the World

- **Excel/Textease Spreadsheet Resources** for ALL titles in Textease Studio
- **Excel/Textease Spreadsheet Resources**
- **Numbers**
Other links and suggestions

Image Collections
http://gallery.e2bn.net/index.php
http://www.nationalgeographic.com/index.html
http://www.ltscotland.org.uk/5to14/resources/illustrations/index.asp
http://www.geograph.org.uk/

Online image manipulation
http://bighugelabs.com
www.phixr.com
http://pixenate.com/
http://ipiccy.com/

Sound recording and effects
Audio networks for music tracks - http://audio.lgfl.org.uk
Sound effects – www.findsounds.com
Download Audacity Software - http://audacity.sourceforge.net/

Keyboard skills
2Type software from 2Simple
BBC Dance Mat Typing – online practice
(http://www.bbc.co.uk/schools/typing/flash/stage1.shtml)

Computational thinking
http://games.thinkingmyself.com/

Computer Science Unplugged
Some useful non computer based activities which will help your understanding of computer science and computational thinking. They also make great activities to use during maths lessons.

Collaborative problem solving

Digital Video
Links to sites that contain stock videos to use for presentations/video editing activities.
Premium Beat

If you would like any support or training in school to develop any of these activities further, then please contact:

vikki.bardon@entrust-ed.co.uk