

The Consolarium Code Club - Scratch 2.0 Introduction programme

Project Benefits

Young people from across Scotland are being

- Given access to a pupil designed and pupil led computer games design tutorial programme
- given the opportunity to discover how to learn to design and code a computer game using *[Scratch 2.0](#)
- empowered to share learning experiences within their peer group and through Glow
- supported to gather evidence of their learning, evaluate their learning and plan for next steps
- made aware of the support networks that can extend their learning beyond school

Education Scotland in partnership with Newburgh PS, Fife are supporting key stakeholders by

- Modelling online interdisciplinary learning
- Providing professional learning opportunities by modelling approaches to learning including interdisciplinary learning, learning through technology, collaborative learning and creativity.
- Creating learning experience resources for curriculum areas within the broad general education.
- The project is outlined using elements from the NAR Flowchart
- Providing exemplification of Glow Office 365 to support others in planning for the use of Glow Office365

Incentives/Rewards!

- Opportunity to become a join the Consolarium community as a pupil associate
- Evidence of learning shared in Glow will be recognised with digital badges or stickers for e-portfolios/learning logs.

** Please note: Scratch 2.0 goes live on May 09 2013. It is wholly web-based. If Local Authorities wish to take part in this then the Scratch website will need to be accessible in schools. The new version of Scratch gives much greater flexibility and functionality.*

Consolarium Code Club is the learning context in which learning intentions are to be explored

Learning Experience Catalogue descriptors

For learners

You may be a marvel at Mario Kart, amazing at Minecraft or fantastic at FIFA13 but can you do more than **just play** these games? Join the Scratching Scotland community in Glow to start your journey in game design where you can learn how to control the speed of Mario's kart, get under the skin of a Creeper to make it even uglier or build a 'design your own football strip interface' for a new football game!

If this is something you are interested in being able to do then join the Consolarium Code Club in Glow and get involved with our new Scratch 2.0 game making initiative. This is being designed and led by pupils from Newburgh PS in Fife so get involved with them, develop your skills, showcase your talents and even become one of our tutors!

Watch, replay and learn from a series of video tutorials to help you develop your coding skills and learn from, and sometimes help, school pupils from all over Scotland.

Meet the pupils from P.7 at Newburgh PS and ask them specific questions about the learning materials they have made available on Glow and about any other questions you have about Scratch.

Complete the weekly coding challenges and upload your designs to the Consolarium Code Club galleries in Glow.

Upload your own video tutorials to the Consolarium Code Club site.

For practitioners

Eric Schmidt, the Chairman of Google, recently highlighted the need for learners to be embedded in contexts where they are the creators of digital materials and the writers of the web. In the MacTaggart Lecture at the Edinburgh International Television Festival in August 2012. He argued that the learner experience with computer science in school as one that lacked challenge, demand and appeal and said, "*Your IT curriculum focuses on teaching how*

to use software, but gives no insight in to how its made. That is just throwing away your great computing heritage.” The Consolarium community in Glow is planning a series of learning opportunities that will be embedded in a culture of creation and not just consumption of digital materials and games design is one that we intend to have a major focus on.

This learning experience will encourage learners to join a pupil led and pupil managed learning community in Glow where they can gradually build the skills necessary to make a computer game using Scratch. They will be actively encouraged to access the community at school and at home (where access permits). They will be encouraged to become an active participant in the community and to ask questions when necessary, respond to the weekly challenges and upload their creations to the community. Learning experiences will focus on developing their skills and confidence in creating the digital resources such as images, animations and sounds and to learn to control how these behave by using code.

Main Curricular area

Technologies

TCH 2-04b I can create, capture and manipulate sounds, text and images to communicate experiences, ideas and information in creative and engaging ways.

TCH 2-09a - Using appropriate software I can work collaboratively to design an interesting and entertaining game

Broad general education – Second level		
Learning across the curriculum - Interdisciplinary Learning		
<p>Principles and practice:</p> <p>My learning in, through and about the Technologies</p> <ul style="list-style-type: none"> • Enables me to develop the skills and confidence to embrace and use technologies now and in the future, at home, at work and in the wider community • Enables me to broaden my awareness of how ideas in mathematics and science are used in engineering and the technologies <p>Children and young people participating in the experiences and outcomes in the Technologies will:</p> <ul style="list-style-type: none"> • Develop a curiosity and understanding of and enthusiasm for creating their own digital materials that others can play, modify and evaluate <p>I develop and extend my literacy skills when I have opportunities to</p> <ul style="list-style-type: none"> • Communicate, collaborate and build relationships • Extend and enrich my vocabulary through listening, talking, watching and reading. 		
Main Curriculum Area(s) Focus	Responsibility of all practitioners	Approaches to learning
<p>Technologies</p> <p>TCH 2-04b I can create, capture and manipulate sounds, text and images to communicate experiences, ideas and information in creative and engaging ways.</p> <p>TCH 2-09a - Using appropriate software I can work collaboratively to design an interesting and entertaining game</p>	<p>Literacy across learning –</p> <p>LIT 2-10a – I am developing confidence when engaging with others within and beyond my place of learning. I can communicate in a clear, expressive way and I am learning to select and organise resources independently.</p> <p>LIT 2-14a – Using what I know about the features of different types of texts, I can find, select and sort information from a variety of sources and use this for different purposes.</p>	<ul style="list-style-type: none"> • Active • Creativity • Co-operative and collaborative learning • Learning through technology
<p>Other Curriculum Areas</p> <p>Art & Design</p> <p>EXA 2-02a – I have the opportunity to choose and explore an extended range of media and technologies to create images and objects, comparing and combining them for specific tasks.</p> <p>Mathematics</p>		

<p>MTH 2-18a – I can use my knowledge of the co-ordinate system to plot and describe the location of a point on a grid.</p> <p>MTH 4-18a - I can use my knowledge of the co-ordinate system to plot and describe the location of a point on a grid.</p>		
<p>Planning with learners</p>		
<ul style="list-style-type: none"> • Share the catalogue descriptor to introduce the context in which learning intentions are to be explored • Talk about the games that they play and what it is about those games that make them so appealing. You might wish to discuss the characters, the plot, the collaboration required or even the game mechanics (the way the game works) or even if it playing with others • Respond to the discussion questions to determine prior learning/knowledge. <p>Discussion questions:</p> <ol style="list-style-type: none"> 1. What computer games are most popular with children these days? 2. Who are your favourite computer game goodies and baddies? 3. Who are the most popular computer game characters at the moment? What is it about their design that makes them appealing? 4. What do you consider you are learning when you play computer games? 5. What skills do you think are required in order to make a computer game? Do you think this is a creative thing? 		

Week 1: Experience and Outcomes		
Learning intentions (Success criteria should be generated with learners)	Learning Experiences	Evidence
<p>I am learning to:</p> <ul style="list-style-type: none"> Understand terminology such as sprite and vector graphic Use the vector graphic tool to create my own sprites Use the range of resources to manage my own learning Become an active member of an online community Save my work in Scratch and share it within Glow 	<p>Glow TV 1: Introduction to Consolarium Code Club Venue: Glasgow Glow TV studio Time: 1.00pm Date: 02nd September 2013 Purpose: In this Glow TV broadcast Derek Robertson will introduce the Consolarium Code Club and our first community games design programme. He will introduce the newly developed site and demonstrate how to navigate the resources within this and how to contribute to the collaborative elements of site. He will:</p> <ul style="list-style-type: none"> Introduce the Scratch 2.0 interface Explore the Vector Graphic interface Introduce the vector graphics video tutorials made by the pupils of Newburgh PS Introduce the concept of the 'goodie' character Showcase the sprites of 'goodie' already made by the pupils of Newburgh PS Set the first challenge of using the vector graphic tool to create their own goodie character Show how to upload newly created sprite to the 3C gallery 	<p>Learners will save their own work to their Scratch backpack.</p> <p>Learners will upload the sprite of their goodie computer games character that they made with the vector graphic creation tool in Scratch 2.0 to the Consolarium Code Club gallery in the Glow.</p>
<p>Evaluation, Feedback and Next Steps</p> <p>Learners reflect on their own learning to understand what they have achieved, what they can do to improve and how to go about it.</p> <p>Responses to discussion forum evaluation</p> <ul style="list-style-type: none"> How challenging was the learning experience? How enjoyable was the learning experience? 	<p>Recognition of achievement</p> <p>Their goodie sprite will be published in the Consolarium Code Club Goodie sprite gallery</p> <p>A selection of these will be published on our outward facing blog</p> <p>Each contributor will receive their first 3C creator digital badge</p>	

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| <ul style="list-style-type: none">• Please share the progress you have made – what you know, understand and can do?• Please share your next steps in learning. | |
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Week 2: Experiences and Outcomes		
Learning intentions (Success criteria should be generated with learners)	Learning Experiences	Evidence
<p>I am learning to</p> <ul style="list-style-type: none"> Understand the terminology that is used when creating sprites and making them appear in a game Create different instances (versions) of my sprite so that I can create an animated sprite. Manage my sprites so that they can be combined to make an animated sprite How to add the sprite to the 'stage' in Scratch 2.0 Save my work in Scratch and share it within Glow 	<p>Consolarium Coding Club Glow video tutorials Available from: 1:00pm Sunday 08th September Video Tutorial: How to animate sprites</p> <p>Pupil created tutorials that will demonstrate the processes and procedures one must follow to create an animated version of the previously created goodie sprite from Week 1.</p> <p>Video tutorials will be supplemented by community support on the Consolarium Code Club help forum.</p>	<p>Learners will save their own work to their Scratch backpack.</p> <p>Learners will upload the sprite of their animated goodie computer games character that they made to the Consolarium Code Club gallery in the Glow.</p>
<p>Evaluation, Feedback and Next Steps</p> <p>Learners reflect on their own learning to understand what they have achieved, what they can do to improve and how to go about it.</p> <p>Responses to discussion forum evaluation</p> <ul style="list-style-type: none"> How challenging was the learning experience? How enjoyable was the learning experience? Please share the progress you have made – what you know, understand and can do? Please share your next steps in learning. 		<p>Recognition of achievement</p> <p>Their animated goodie sprite will be published in the Consolarium Code Club Goodie sprite gallery</p> <p>A selection of these will be published on our outward facing blog</p>

Week 3		
Learning intentions (Success criteria should be generated with learners)	Learning Experiences	Evidence
<p>I am learning to</p> <ul style="list-style-type: none"> Understand the terminology that is used when creating sprites and making them appear in a game Understand a script is what is created within Scratch to control how sprites behave (movement in this case) Write a script that will control how my sprite moves when I press the arrow keys on the keyboard Understand and use the four quadrant coordinates on the Scratch stage 	<p>3C Glow video tutorials Available from: 1:00pm Sunday 15th September Video Tutorial: How to animate sprites</p> <p>Pupil created tutorials that will demonstrate the processes and procedures one must follow to make an animated sprite move about the screen.</p> <p>Video tutorials will be supplemented by community support on the Consolarium Code Club help forum.</p>	<p>Learners will save their own work to their Scratch backpack.</p> <p>Learners will upload the script of their developing game featuring their animated Goodie sprite to the Consolarium Code Club gallery.</p>
<p>Evaluation, Feedback and Next Steps</p> <p>Learners reflect on their own learning to understand what they have achieved, what they can do to improve and how to go about it.</p> <p>Responses to discussion forum evaluation</p> <ul style="list-style-type: none"> How challenging was the learning experience? How enjoyable was the learning experience? Please share the progress you have made – what you know, understand and can do? Please share your next steps in learning. 	<p>Recognition of achievement</p> <p>Their Goodie script will be published in the Consolarium Code Club Goodie sprite gallery</p> <p>A selection of these will be published on our outward facing blog</p>	

Week 4		
Learning intentions (Success criteria should be generated with learners)	Learning Experiences	Evidence
<p>I am learning to</p> <ul style="list-style-type: none"> Combine the skills I have developed in weeks 1,2 and 3 to design, animate and then write a script to control a 'baddie' sprite. 	<p>Glow TV 2: Meet the Newburgh PS 3C tutorial team and Challenge 4! Venue: Newburgh PS, Fife Time: 1.00 pm Date: 22nd September 2013</p> <p>Purpose: In this Glow TV broadcast Derek Robertson will introduce the team from Newburgh PS who will be available to answer any questions that the Consolarium Coding Club community has. They will then introduce the final challenge for this block of the Consolarium Code Club Scratch game design programme. The Newburgh PS team will explain that in order to move on to the next level with them in the Autumn term that members of the Consolarium Code Club group will need to have completed the challenges from Week 3 and week 4.</p>	<p>Learners will save their own work to their Scratch backpack.</p> <p>Learners will upload the script of their developing game featuring their animated Baddie sprite to the Consolarium Code Club gallery.</p>
<p>Evaluation, Feedback and Next Steps</p> <p>Learners reflect on their own learning to understand what they have achieved, what they can do to improve and how to go about it.</p> <p>Responses to discussion forum evaluation</p> <ul style="list-style-type: none"> How challenging was the learning experience? How enjoyable was the learning experience? Please share the progress you have made – what you know, understand and can do? Please share your next steps in learning. 	<p>Recognition of achievement</p> <p>Their animated baddie sprite will be published in the Consolarium Code Club Goodie sprite gallery</p> <p>A selection of these will be published on our outward facing blog</p>	

Commitment to and completion of the week 4 challenge will be recognised with the award of Consolarium Code Club Scratch Starter badge.

Professional Learning Resources:

Community	Professional learning opportunity
Interdisciplinary learning	3C Consolarium Code Club interdisciplinary learning plan 3C Consolarium Code Club Glow Group
Creativity	Weekly challenges overview Game design tutorial videos within Consolarium Code Club
Literacy	Consolarium Code Club tutorial videos - using texts Consolarium Code Club help forums – effective communication
Glow Learning spaces	Development and use of an Office365 site to support interdisciplinary learning – follow newsfeed and Consolarium blog Using an Office365 blog site to create an interdisciplinary learning experience Using an Office365 blog to create an online exhibition Using Lync to access partners in learning
Technologies	Consolarium Code Club newsfeeds in Glow Consolarium Code Club video tutorials Consolarium Code Club Glow Meets
Expressive Arts	Glow TV 1 – How to use the vector graphic tool in Scratch
Maths	Challenge 3 – video tutorials that shows how four quadrant coordinates are used in Scratch