

Clyde In The Classroom



Science Project Term2
Primary 6/7
Miss Graham/Mrs Gracie

Clyde In The Classroom

CfE Experiences and Outcomes Overview



Health and Well-being:

HWB 2-12a
HWB 2-16a

Sciences:

SCN 2-01a
SCN 2-02a
SCN 2-14a

Religious Education:

Literacy and English:

Reading: LIT 2-14a	Writing: LIT 2-24a LIT 2-25a LIT 2-28a	Talking/listening LIT 2-02a LIT 2-05a LIT 2-06a LIT 2-09a LIT 2-10a
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Technologies:

TCH 2-02a
TCH 2-03b
TCH 2-04a
TCH 2-04b

Expressive Arts:

EXA 2-03a
EXA 2-04a
EXA 2-13a
EXA 2-14a
EXA 2-15a

Maths and Numeracy:

MNU 2-10a
MNU 2-11b
MNU 2-20a
MNU 2-20b
MTH 2-21a

Social Studies:

SOC 2-07a
SOC 2-08a
SOC 2-13a
SOC 2-14a

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CfE Experiences and Outcomes

Sciences

Learning in the sciences will enable me to:

- develop curiosity and understanding of the environment and my place in the living, material and physical world
- develop skills for learning, life and work
- develop the skills of scientific inquiry and investigation using practical techniques
- apply safety measures and take necessary actions to control risk and hazards
- recognise the impact the sciences make on my life, the lives of others, the environment and on society
- develop an understanding of the Earth's resources and the need for responsible use of them
- express opinions and make decisions on social, moral, ethical, economic and environmental issues based upon sound understanding

Planet Earth:

- I can identify and classify examples of living things, past and present, to help me appreciate their diversity. I can relate physical and behavioural characteristics to their survival or extinction. SCN 2-01a
- I can use my knowledge of the interactions and energy flow between plants and animals in ecosystems, food chains and webs. I have contributed to the design or conservation of a wildlife area. SCN 2-02a

Biological systems:

- By investigating the lifecycles of plants and animals, I can recognise the different stages of their development. SCN 2-14a

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CfE Experiences and Outcomes

Health and Well-being

I can expect my learning environment to support me to:

- meet challenges, manage change and build relationships
- experience personal achievement and build my resilience and confidence

Social Well-being:

- Representing my class, school and/or wider community encourages my self-worth and confidence and allows me to contribute to and participate in society. HWB 2-12a

Physical Well-being:

- I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible. HWB 2-16a

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CfE Experiences and Outcomes

Literacy and English

I develop and extend my literacy skills when I have opportunities to:

- communicate, collaborate and build relationships
- reflect on and explain my literacy and thinking skills, using feedback to help me improve and sensitively provide useful feedback for others
- engage with and create a wide range of texts in different media, taking advantage of the opportunities offered by ICT

Listening and Talking:

- When I engage with others, I can respond in ways appropriate to my role, show that I value others' contributions and use these to build on thinking. LIT 2-02a
- As I listen or watch, I can make notes, organise these under suitable headings and use these to understand ideas and information and create new texts, using my own words as appropriate. LIT 2-05a
- I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience. LIT 2-06a
- When listening and talking with others for different purposes, I can:
 - share information, experiences and opinions
 - explain processes and ideas
 - identify issues raised and summarise main points or findings
 - clarify points by asking questions or by asking others to say more. LIT 2-09a
- 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. LIT 2-10a

Reading:

- 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. LIT 2-14a

Writing:

- I consider the impact that layout and presentation will have and can combine lettering, graphics and other features to engage my reader. LIT 2-24a
- I can use my notes and other types of writing to help me understand information and ideas, explore problems, make decisions, generate and develop ideas or create new text. I recognise the need to acknowledge my sources and can do this appropriately. LIT 2-25a
- I can convey information, describe events, explain processes or combine ideas in different ways. LIT 2-28a

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CfE Experiences and Outcomes

Maths and Numeracy

My learning in mathematics enables me to:

- develop a secure understanding of the concepts, principles and processes of mathematics and apply these in different contexts, including the world of work
- develop essential numeracy skills which will allow me to participate fully in society
- interpret numerical information appropriately and use it to draw conclusions, assess risk, and make reasoned evaluations and informed decisions

Number, Money and Measure:

- I can use and interpret electronic and paper-based timetables and schedules to plan events and activities, and make time calculations as part of my planning. MNU 2-10a
- I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems. MNU 2-11b

Information Handling:

- Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading. MNU 2-20a
- I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way. MNU 2-20b
- I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology. MTH 2-21a

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CfE Experiences and Outcomes

Technologies

Learning in the technologies enables me to:

- develop an understanding of the role and impact of technologies in changing and influencing societies
- contribute to building a better world by taking responsible, ethical actions to improve my life, the lives of others and the environment
- gain the confidence and skills to embrace and use technologies now and in the future, at home, at work and in the wider community
- become an informed consumer and producer who has an appreciation of the merits and impacts of products and services
- be capable of making reasoned choices relating to the environment, sustainable development and ethical, economic and cultural issues

Technological Developments in Society:

- Having analysed how lifestyle can impact on the environment and Earth's resources, I can make suggestions about how to live in a more sustainable way. TCH 2-02a

ICT to Enhance Learning:

- Throughout all my learning, I can use search facilities of electronic sources to access and retrieve information, recognising the importance this has in my place of learning, at home and in the workplace. TCH 2-03b
- I explore and experiment with the features and functions of computer technology and I can use what I learn to support and enhance my learning in different contexts. TCH 2-04a
- I can create, capture and manipulate sounds, text and images to communicate experiences, ideas and information in creative and engaging ways. TCH 2-04b

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CfE Experiences and Outcomes

Expressive Arts

My learning in, through and about the expressive arts:

- enables me to experience the inspiration and power of the arts
- recognises and nurtures my creative and aesthetic talents
- allows me to develop skills and techniques that are relevant to specific art forms and across the four capacities

Art and Design:

- I can create and present work that shows developing skill in using the visual elements and concepts. EXA 2-03a
- Through observing and recording from my experiences across the curriculum, I can create images and objects which show my awareness and recognition of detail. EXA 2-04a

Drama:

- Inspired by a range of stimuli, I can express and communicate my ideas, thoughts and feelings through drama. EXA 2-13a
- I have created and presented scripted or improvised drama, beginning to take account of audience and atmosphere. EXA 2-14a
- I can respond to the experience of drama by discussing my thoughts and feelings. I can give and accept constructive comment on my own and others' work. EXA 2-15a

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CfE Experiences and Outcomes

Social Studies

Learning in the social studies will enable me to:

- develop my understanding of the history, heritage and culture of Scotland, and an appreciation of my local and national heritage within the world
- learn how to locate, explore and link features and places locally and further afield
- engage in activities which encourage enterprising attitudes

People, Place and Environment:

- I can describe the major characteristic features of Scotland's landscape and explain how these were formed. SOC 2-07a
- I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally-responsible way. SOC 2-08a
- I can explain how the physical environment influences the ways in which people use land by comparing my local area with a contrasting area. SOC 2-13a
- To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world. SOC 2-14a

Clyde In The Classroom

Weekly Planner

Week 1: Tank Engineering: **Preparation of Hatchery for fish arrival**

Learning Objectives	Comment	Linked Curricular Activities	
Identify the key developmental stages of the fish and what 4 things Alevin need to survive in the wild and how we will provide this in class.		Literacy/English	Writing: Using notes create a class charter where children accept responsibility for the care of the fish and rules for the monitoring and care of the hatchery. Listening and Talking: What skills do you have that will help us? What skills do you have and what responsibilities do you face?
		Maths/ Numeracy	Use paper based timetables, or electronic equivalents to assign pupil roles for the project. Use the Fishy Maths chart to monitor the temperatures in the tank to help create an ice-pack schedule for use in class.
Understand what each part of the tank equipment does and what each pupil's responsibilities will be using this equipment.		Health & Wellbeing	Assess risks of handling the hatchery equipment and create rules to manage these risks.
		Expressive Arts	Art: Create a detailed visual representation of our hatchery and include annotations to inform other of what each part of the equipment does.
		Technologies	
Design and create detailed timetables to highlight each pupil's role from week to week in caring for our fish, including a risk assessment.		Social Studies	
		Science	Create a trout life cycle for the class display to inform visitors of the developmental stage our fish have reached as they grow.
		RERC	

Clyde In The Classroom

Weekly Planner

Week 2: River Conditions: Arrival of the fish eggs

Learning Objectives	Comment	Linked Curricular Activities	
Recognise key vocabulary relating to river geography including mouth, source, estuary, tributary, migration etc.		Literacy/English	Writing: Create glossary for wall display to help others understand our work.
		Maths/ Numeracy	Use the Fishy Maths chart to monitor the temperatures in the tank to help create an ice-pack schedule for use in class.
Understand the water cycle and relate it to the geography of the Clyde.		Health & Wellbeing	
		Expressive Arts	Art: Create visual display of the water cycle. Drama: Debate; conservation vs. development of the Clyde.
		Technologies	
Investigate the adverse effect that humans can have on river eco-systems and how it can affect the 4 key needs of the Alevin.		Social Studies	Identify and locate on a map key features along the length of the Clyde. Enterprise: design and set up our 'Adopt a Fish' scheme.
		Science	Explore river eco-systems and how fragile they can be and how humans can impact on them.
		RERC	

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Weekly Planner

Week 3: Fish Biology		
Learning Objectives	Comment	Linked Curricular Activities
Identify the key features of fish biology using the correct scientific vocabulary.		Literacy/English Writing (linked to ICT): Create your own PowerPoint presentation in groups to present your learning to the class or other children within the school. Use appropriate images and text in an appealing way, remembering who you will be presenting to.
		Maths/ Numeracy Use the Fishy Maths chart to monitor the temperatures in the tank to help create an ice-pack schedule for use in class. Monitor the size of the fish. Monitor the PH levels of the water.
Understand the breeding and migration of trout, including how and when spawning takes place.		Health & Wellbeing
		Expressive Arts Art: Using paint or other media, create your own representation of a male or female trout, either Brown Trout or Sea Trout.
		Technologies Creating PowerPoint presentation (see Lit/Eng above)
Identify the key threats to Alevin survival in the wild and compare it with the threats in our hatchery.		Social Studies
		Science Create a detailed representation of an adult trout labelling all key body parts.
		RERC

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Weekly Planner

Week 4: Interdependence			
Learning Objectives	Comment	Linked Curricular Activities	
Recognise and identify key fish species found in the river Clyde. Compare fish to other species to identify their distinguishing features.		Literacy/English	Continue to develop PowerPoint presentations and rehearse delivery of talk to be given to other classes, considering your audience.
		Maths/ Numeracy	Use the Fishy Maths chart to monitor the temperatures in the tank to help create an ice-pack schedule for use in class. Monitor the size of the fish. Monitor the PH levels of the water.
Identify aquatic insects that make up the diet of growing fish.		Health & Wellbeing	
		Expressive Arts	Art: Create drawing/paintings of other fish found in the Clyde.
		Technologies	
Understand that living things within a river habitat are dependent on each other.		Social Studies	
		Science	Identify aquatic insects as either larvae or adult. Report on the distinguishing features of other Clyde dwelling fish. Create food web/ chain; energy coming from the sun.
		RERC	

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Weekly Planner

Week 5: Water World			
Learning Objectives	Comment	Linked Curricular Activities	
Understand that the Earth's water is distributed in different locations and identify where water can be found.		Literacy/English	Writing: Create news report to be sent to local newspapers inviting them to attend our Release Day next week. Include information about what we have learned and how we have worked to ensure the survival of our fish.
		Maths/ Numeracy	Use the Fishy Maths chart to monitor the temperatures in the tank to help create an ice-pack schedule for use in class. Monitor the size of the fish. Monitor the PH levels of the water.
Identify ways in which we use water and understand that water can often be wasted/polluted by human activities.		Health & Wellbeing	
		Expressive Arts	
		Technologies	Use RM programmes to create different graphs of world water supplies including percentages and persuade others why your chosen graph is the most effective for displaying this info.
Find ways of conserving water and consult with our eco-committee to see how we as a school are trying to use water effectively.		Social Studies	Identify and locate on a map key water sources that are significant to Scotland and to the world for economical and biological reasons. Identify our impact on the world and create action plan to conserve water.
		Science	
		RERC	

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Weekly Planner

Week 6: Release Day

Learning Objectives	Comment	Linked Curricular Activities	
Summarise your work throughout the project and prepare yourself to share your learning with others.		Literacy/English	Writing: Create correspondence for our 'Adopt a Fish' scheme members with a letter to summarise our project and relevant photographs or drawings to complement your work. Produce class report for Mrs Tompkins to read Contact staff at Clyde River Foundation to thank them for their support.
		Maths/ Numeracy	Record all temperatures, ph levels and sizes in an engaging way that can be easily interpreted by visitors to our class.
Share your learning in an engaging way with those in our school community and beyond.		Health & Wellbeing	
		Expressive Arts	Drama: Present your work to the other classes in the school in an engaging and interesting way, being considerate of your audience.
		Technologies	Use email and fax (where appropriate) to contact partners from the Clyde River Foundation to thank them for their support. Record your Release Day experiences in your own way using digital media.
Complete our project in a professional manner by returning borrowed equipment and contacting our partners to thank them for their support.		Social Studies	
		Science	
		RERC	

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Evaluation

Evaluate the children's learning:

Next steps:

Evaluate your teaching:

Next steps: