

Ambitious,
Capable Learners
Healthy, Confident
Individuals

Cross-Curricular Learning

An exemplification of a Cross-Curricular Learning approach to education in Wales.
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Maximise Motivation
through
Enriching Experiences
to
Create Confident Children

Ethical, Informed
Citizens
Enterprising,
Creative Contributors

(Donaldson, 2015: p.29)

THE RATIONALE:

The Education Secretary for Wales, Kirsty Williams, desires for all children to be able to develop and use **high level** literacy, numeracy and digital competence skills across the curriculum. (WG, 2017) The new curriculum for Wales therefore outlines six Areas of Learning and Experience (AOLEs) in order to achieve this goal, including:

Literacy, Language and
Communication

Mathematics and Numeracy

Science and Technology

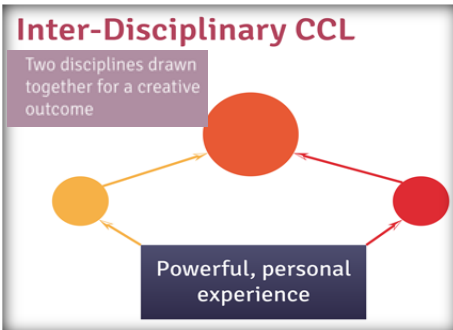
(Donaldson,
2015: p.107)

Much research argues that the purposes of a cross-curricular approach to education are to “**motivate** and **encourage**” pupils to learn new skills and apply them to various contexts and **experiences** through the child's own interests. (Savage, 2010; Csikszentmihalyi, 1990; cited by Whalen, 1999) Therefore, educators are required to provide opportunities for pupils to participate in **meaningful, real-life experiences** in order to develop skills detailed in the National Curriculum and overcome problems and challenges encountered during learning. (Pound and Lee, 2011; Plowden Report, 1967)

Barnes, 2015; cited by Jones, 2018

The Models: Although many different models have been created to support children in their learning through a cross-curricular approach, **Model 1** and **Model 2** have been selected from **Barnes’** work. (Barnes, 2015) The following schemes of work exemplify how these models can develop **literacy**, **numeracy** and **digital competence** skills in Year 5 children in Key Stage 2 through a cross-curricular approach to teaching and learning.

Model 1 Barnes, 2015; cited by Jones, 2018: Slide 28



- Skills from numerous areas of the curriculum are developed in equal measure.
- Skills from numerous areas of the curriculum are applied to meaningful, real-life experiences that further generates pupil motivation and engagement.
- Research argues “direct subject teaching” should not be abandoned in favour of simple enjoyment of learning. (Rose, 2009; cited in Grigg, 2016: p.155)
- Any misconceptions developed by children could greatly impact upon the original outcome if they are not challenged early, though this is not as easily observed as it is in Model 2.

Session 1:

- Discuss** what children already know about the Tudors and what they **wish to learn**.
- Record** information on a class mind-map.
- Children split into groups of 4 and **investigate** what products the Tudors would sell in a market and how much the items would have **cost in Tudor currency**.
- What items are rare?

Session 5:

- Each group must **purchase** 6 items, with at least 1 item being from each category and 1 being rare.
- The group with the **most profit** after three rounds of selling ‘win’ the challenge.
- Children can rotate **discount offers** after each round, if they decide this to be the **best strategy**.

Session 4:

- Children must agree upon a price to sell their items for.
- Each group will be provided with discount tags, such as **½ price and 20% off**.
- Children will be required to **calculate** the costs of each item and **decide** whether to buy that item or not.

Session 1:

- Show the children a clip about the Amazon Rainforest.
- The children can **research and locate** the Amazon Rainforest on a world map and **investigate** the climate present in Amazon Rainforest.
- Children should **record facts and figures within tables**, such as: annual rainfall, average monthly temperature and other useful information.
- The children will then go on to **represent this information in digital graphs**.

Session 2:

- Provide children with boat, plane and train departure times, times of arrival and distances needed to be travelled in order to see certain parts of the Amazon Rainforest.
- Children must **calculate** the time required for each journey, as well as how far will be travelled overall, among other **distance and time** questions.

Session 3:

- Children will be provided with a map of the Amazon Rainforest, complete with **grid references** and notable features.
- Children will use the **grid references and co-ordinates** to identify a range of features in the Rainforest and **plan a boat trip** to the Rainforest.

The Rainforest

Session 4:

- Children will use iPads to **code** an avatar to move around a digital Rainforest and visit different locations and collect various objects. **Coding skills** and the use of **co-ordinates** will be required in this session.

The Tudors

(Developed from the work of Pound and Lee, 2011: p.95)

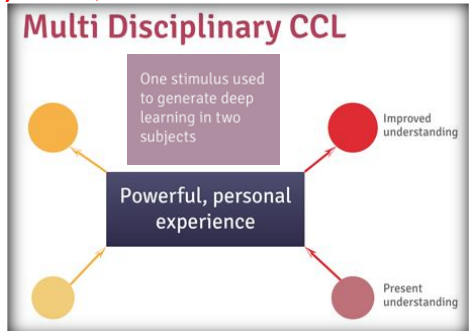
Session 2:

- Discuss** all items discovered by the children, including the prices of each item and whether certain items were rare or popular at the time.
- Children will represent the **data** found in their investigation through a class **database on J2E data**.
- Here a **digital ‘catalogue’** of items will be created where the children can compare the items and prices of various goods from the Tudor Market place.

Session 3:

- Provide each group of children with a **budget**.
- Children must agree upon which items from the **digital catalogue** on their own Market stall.
- Each group must choose at least 1 item from each category: Food, clothing and objects.

Barnes, 2015; cited by Jones, 2018: Slide 27 Model 2



- Targets and progress within ‘subjects’ are more easily observed than in Model 1, with any misconceptions formed by children within each ‘subject’ strand being identified and corrected before this misconception can spread.

- Deep learning can occur in more than one ‘subject’ area through this Model of Cross-curricular learning. (Barnes, 2015)

- Learning must not be seen as being separate and detached. Links between the topic and the learning needs to be clearly made.

- Opportunities to link knowledge and skills to different contexts may not be provided as clearly in M2 as they are in M1.

Learners are able to: explain information and ideas, exploring and using ways to be convincing, e.g. use of vocabulary, gesture, visual aids Learners are able to: write with a clear purpose, showing consideration for the reader, e.g. by choosing appropriate vocabulary and presentational devices listen to others, asking questions and responding to both the content and the speakers' viewpoints. Literacy	Learners are able to: use understanding of simple fraction and decimal equivalences when measuring and calculating, e.g. $\frac{1}{2} = 0.5$, $\frac{1}{10} = 0.1$ View exemplification materials calculate fractional quantities, e.g. $\frac{1}{8}$ of $24 = 3$, so $\frac{5}{8}$ of $24 = 15$ order and compare the cost of items up to £1 000 add and subtract totals less than £100 using correct notation, e.g. £28.18 + £33.45 Numeracy	Learners are able to: represent data using: – lists, tally charts, tables, diagrams and frequency tables – bar charts, grouped data charts, line graphs and conversion graphs extract and interpret information from an increasing range of diagrams, timetables and graphs (including pie charts) Digital Competence	Year 5 Learners are able to: combine a range of multimedia components to produce an appropriate outcome in one or more languages create, collect and combine a range of text, image, sound, animation and video for selected purposes. Digital Competence	Historical enquiry History Pupils should be given opportunities to: 1. ask and answer relevant questions about the past 2. plan the investigative approach to be used, suggesting how to find relevant information 3. use a range of sources, including ICT, e.g. artefacts, buildings and sites, adults talking about their own past, visual sources, data and appropriate written sources the daily life of people living either in the Age of the Princes or in the time of the Tudors or the time of the Stuarts	Locating places, environments and patterns Geography Pupils should be given opportunities to: 1. identify and locate places and environments using globes, atlases, and maps, e.g. use co-ordinates and four-figure references 2. follow directions, estimate and calculate distances, e.g. follow map and ground routes, calculate map-to-ground distances 3. use maps, imagery and ICT to find and present locational information, e.g. draw sketch maps using symbols and keys. Interpret maps, and photographs including oblique, aerial and satellite images – living in my world: caring for places and environments and the importance of being a global citizen (WG, 2014; WG, 2016; WG, 2008a: p.12-14; WG, 2008b: p.12-14)
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