

Multi- disciplinary

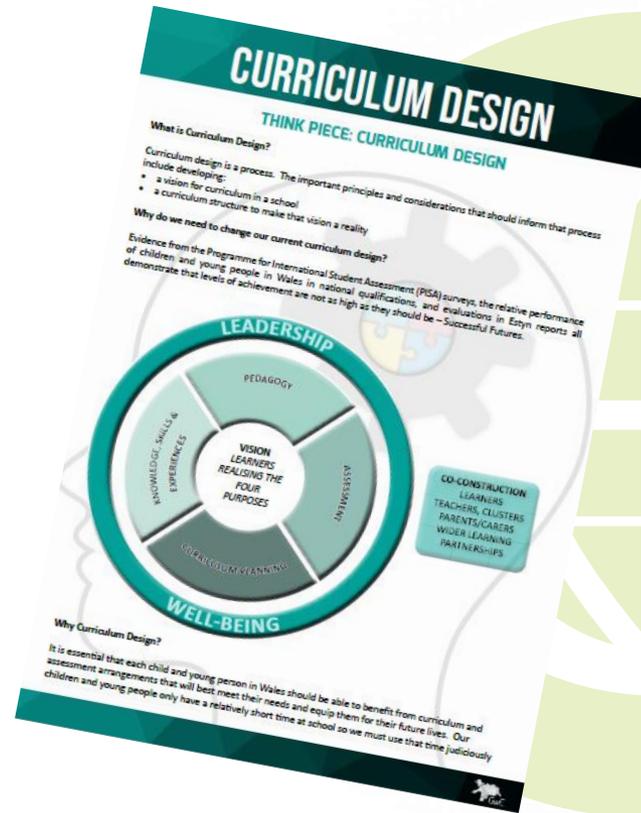
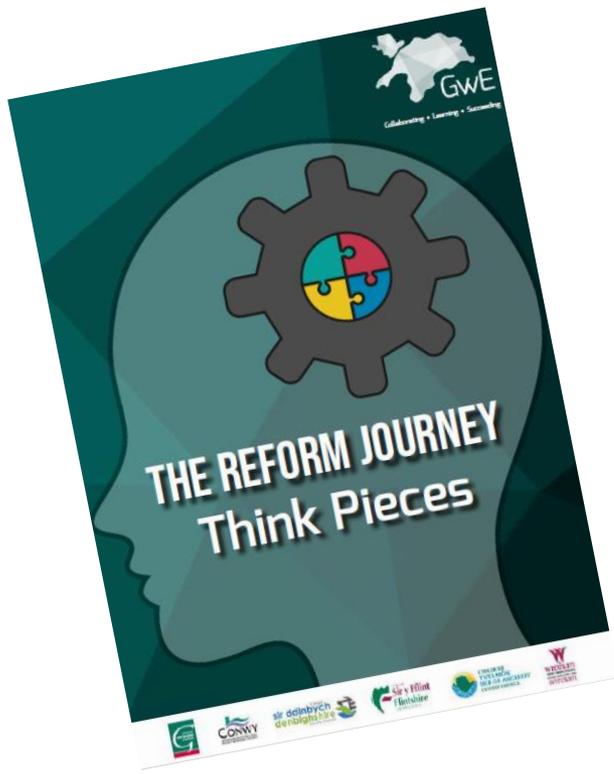
Interdisciplinary

Disciplinary

Integrated

Curriculum design models





Model	Definition
Disciplinary	Specialist teaching within disciplines or subjects
Multidisciplinary	A multidisciplinary curriculum is one in which the same topic is studied from the viewpoint of more than one discipline.
Interdisciplinary	Combines several school subjects into one active project or is organized to cut across subject-matter lines, bringing together various aspects of the curriculum into meaningful association. Draws knowledge and skills from two or more disciplines in a more connected way Addresses a complex problem or focus question that cannot be resolved by using a single disciplinary approach e.g. a Global Pandemic
Integrated	Largely an interdisciplinary organisational approach, which breaks down traditional subject boundaries – either partially (e.g. hybrid subjects) or fully (e.g. the US middle school approach)

A worked example of each model



Disciplinary curriculum model

AREA OF LEARNING AND EXPERIENCE - Science and Technology

What matters – The world around us is full of living things which depend on each other for survival

What resources do living things compete for?

Progression step 3

I can describe how living things compete for specific resources and depend on each other for survival.

I can describe the features of organisms and recognise how they allow them to live, grow and reproduce for survival in their environment.

FOOD

What do we need it for?

What are the important digestive organs?

Where does it come from?

Feeding relationships

Predator/prey

What are the features that make them successful?

Contextualising the learning – making it real

Food waste: Amount thrown away totals 900 million tonnes

By Victoria Gill
Science correspondent, BBC News

5 days ago

5th March 2021



More than 900 million tonnes of food is thrown away every year, according to a global report.

REGENERATION: FOOD

Roughly one third of the food produced around the world is wasted. That's 1.3 billion tonnes of food every year. Why is food waste so bad for the planet?

The facts

- Roughly 1/3 of all food produced around the world is wasted, that's 1.3 billion tonnes.
- If food waste was a country, it would be the 3rd largest greenhouse gas emitter behind China and the United States.
- 420,000 tonnes of meals are thrown into the bin every year in the UK.
- 90,000 tonnes of perfectly drinkable milk is wasted every year in the UK.
- Each glass of wasted milk took 300 litres of water to produce.
- 4.4 million potatoes got to waste every year in the UK.

Interdisciplinary curriculum model

Science & Technology

Progression step 3

I can understand how my actions and the actions of others impact on the environment and living things.

Food waste disposal

recycling

landfill

What happens to food waste in landfill sites?

Food miles

Sustainability

Health & well-being

Progression step 3

I can explain the importance of a balanced diet and nutrition and the impact my choices have on my physical health and well-being. I can plan and prepare basic, nutritious meals.

Meal planning

Budgeting



Humanities

Progression step 3

I have planned and taken an active role in response to challenges and opportunities in my local community, or in Wales or the wider world, and I have done so individually or as part of a team.

Homelessness

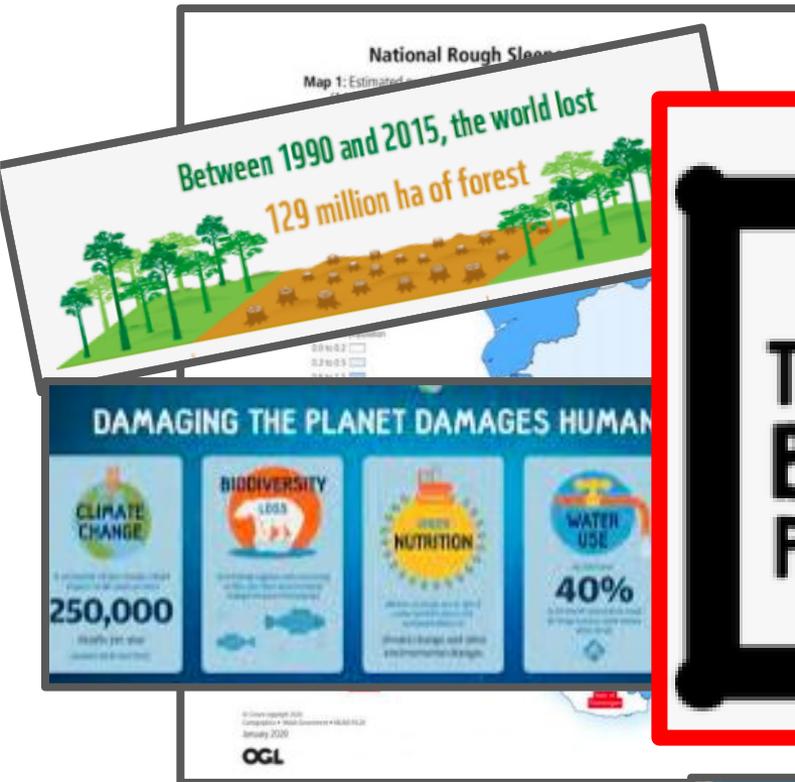
Food banks

Learning connects, builds further understanding, solves problems and is purposeful

Across the curriculum

Collaborative planning

Contextualising the learning - making it real



THE BIGGER PICTURE



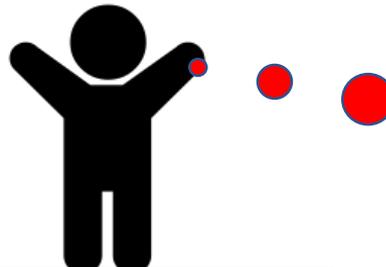
Ethically informed citizens of Wales and the World

Healthy, confident individuals

I consider how to dispose of waste food and what the alternatives are

I use my knowledge and understanding to make choices about the food I eat

I consider how my choices impact on others and the environment



A curriculum for me

I CAN MAKE A DIFFERENCE



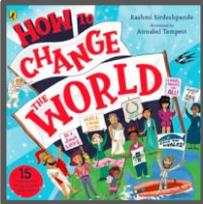
Integrated curriculum model

WHAT can we do?

Curriculum area – How can we change the world?

“If we want to get serious about tackling climate change, nature and biodiversity loss, and pollution and waste, businesses, governments and citizens around the world have to do their part to reduce food waste”

Unep executive director Inger Anderse



Food waste

Farming & food production

Food poverty

Local, national & global issues

Climate change

Meal planning

Composting

What can we do about it?

Food packaging

Materials

Role of Technology

Decision making

Reduce, reuse, recycle

Flooding

The amazon

Food miles

Across the curriculum

Collaborative planning

Summary – curriculum modes

Model	Definition	Advantages	Questions for consideration
<i>Disciplinary</i>	Specialist teaching within disciplines or subjects	<ul style="list-style-type: none"> • Subjects provide guarantees, through their links with disciplines and the production of new knowledge, that students have access to the most reliable knowledge that is available in different fields • Subjects provide breadth and depth • Teachers can use their expertise and passion most effectively 	<ul style="list-style-type: none"> • How effective is this approach at making connections within and between AoLES etc.? • How does this approach develop the cross curricular and integral skills? • How does this approach support the development of transferrable skills and knowledge?
<i>Multidisciplinary</i>	A multidisciplinary curriculum is one in which the same topic is studied from the viewpoint of more than one discipline.	<ul style="list-style-type: none"> • This retains the advantages and challenges of a disciplinary approach. • Moves towards enabling the learners to connect the learning more effectively and supports the development of transferable skills, • Learners gain a more holistic understanding of the world 	<ul style="list-style-type: none"> • How does this approach develop the cross curricular and integral skills? • How can the themes be routed in progression? • How can we prevent the application of thematic approaches that fail to provide rich, rigorous, and logical learning in all the connected subjects?



Model	Definition	Advantages	Questions for consideration
<i>Interdisciplinary</i>	Combines several school subjects into one active project or is organized to cut across subject-matter lines, bringing together various aspects of the curriculum into meaningful association.	<ul style="list-style-type: none"> • This approach allows the students to learn by making connections between ideas and concepts across different disciplinary boundaries. • Students learning in this way can apply the knowledge gained in one discipline to another different discipline to deepen the learning experience • It enables students to produce an interdisciplinary understanding of the problem or question (looking through a variety of lenses) 	<ul style="list-style-type: none"> • How can we provide the time and space for teachers to undertake collaborative planning? • How could we map across the whole curriculum? • How may it impact sequencing of learning within the different disciplines? • Is this model appropriate for curriculum design across AoLEs? • Is this model appropriate for curriculum design across the curriculum? • What does this approach look like over the 3-16 continuum?
<i>Integrated</i>	An interdisciplinary organisational approach, which breaks down traditional subject boundaries	<ul style="list-style-type: none"> • Broad, balanced, and authentic curriculum • Where well-planned this approach can: • Reduce the duplication of skills and concepts in different subject areas • Increase relevance for the learner through real-life context. • Allow for the learner to see the big picture, rather than just the fragmented parts. • Develops the skills that can be transferred to other disciplines, contexts and to life. 	<ul style="list-style-type: none"> • How can we provide the time and space for teachers to undertake collaborative planning? • Is this integrated approach more suitable to some areas of learning more than others? • How could we sequence the learning to ensure that key concepts are not missed? • How do we prevent superficial coverage? • How do we ensure depth and breadth of knowledge and understanding? • What does this approach look like over the 3-16 continuum?



How might this impact on planning the school day?

- Is the curriculum to be arranged in subjects or in integrated blocks or somewhere in between?
- Is this to be the same for all year groups?
- Will students be always grouped by year?
- Are allocated sessions all to be the same length? (If so, will they vary in multiples of the same session e.g. doubles / triples?).
- Is every week to be the same as every other throughout the year?
- Will all days start and finish at the same time? Will breaks be at the same time?
- Will all students and staff start and finish at the same time?

(Waters and Male, 2013 – The Secondary Curriculum Design Handbook)

- Reflecting on what we have learnt during the Covid-19 pandemic – could we modify the school day to provide a more coherent learning experience for our learners?



Curriculum Models – Whole School?

Model 1	Single subject/disciplinary approach across the whole setting
Model 2	Single subject approach with drop down days to focus on integrated/cross disciplinary work.
Model 3	Interdisciplinary approach in some AoLEs, disciplinary in others
Model 4	Interdisciplinary approach across the whole curriculum.
Model 5	Integrated approach within each AoLE
Model 6	Integrated Year 7, followed by interdisciplinary or single subject approach in Year 8 and 9
Model 7	Integrated Year 7 and 8 followed by interdisciplinary or single subject approach in 9
Model 8	Integrated in Years 7, 8 and 9



Curriculum Models – Whole School?

What are the benefits and challenges of asking your middle leaders and teachers to contribute to the process of curriculum design?

- **What would be the best approach for teaching in a variety of different areas?**
- **Is there an alternative way of thinking and planning learning? Rather than set number of lessons on a timetable?**

