



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales

**Trawsnewid Addysg,
Trawsnewid Bywydau**

**Transforming Education,
Transforming Lives**

*Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives*

www.uwtsd.ac.uk

ECAD4017/C

**Gwyddoniaeth a Thechnoleg
Darlith 3**

**ECAD4017
Science and Technology
Lecture 3**

**Lilian Martin
l.martin@uwtsd.ac.uk**

Join the Vevox session

Go to **vevox.app**

Enter the session ID: **136-780-477**

Or scan the QR code





Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg,
Trawsnewid Bywydau

Transforming Education,
Transforming Lives

www.uwtsd.ac.uk

Bwriadau Dysgu:

- Ystyried Gwyddoniaeth a Thechnoleg o fewn Dysgu Sylfaen Cwricwlwm i Gymru 2022. (h.y. Beth ydw i'n ei addysgu?)
- Ystyriaethau addysgeg wrth addysgu Gwyddoniaeth a Thechnoleg (syniadau am sut ydw i'n addysgu)
- Cynllunio gweithgaredd



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg,
Trawsnewid Bywydau

Transforming Education,
Transforming Lives

www.uwtsd.ac.uk

Aims:

Considering Science and Technology within
Foundation Learning - Curriculum for Wales
2022. (i.e., What am I teaching?)

Pedagogical considerations in the teaching of
Science and Technology (Ideas about how I
teach)

Planning an engaging activity

Cwricwlwm i Gymru 2022

- MDaPh Gwyddoniaeth a Thechnoleg - Yr Hyn sy'n Bwysig

- Mae bod yn chwilfrydig a chwilio am atebion yn hanfodol i ddeall a rhagfynegi ffenomenau.
- Mae meddylfryd dylunio a pheirianeg yn cynnig ffyrdd technegol a chreadigol i ddiwallu anghenion a dymuniadau cymdeithas.
- Mae'r byd o'n cwmpas yn llawn pethau byw sy'n dibynnu ar ei gilydd i oroesi.
- Mae mater, a'r ffordd y mae'n ymddwyn, yn diffinio ein bydysawd ac yn ffurfio ein bywydau.
- Mae grymoedd ac egni yn gosod sail i ddeall ein bydysawd.
- Mae cyfrifiaduraeth yn gosod sail i'n byd digidol.



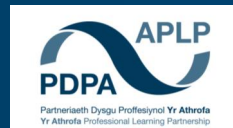
Gwyddoniaeth a Thechnoleg

[Disgrifiadau dysgu - Hwb \(gov.wales\)](https://gov.wales)

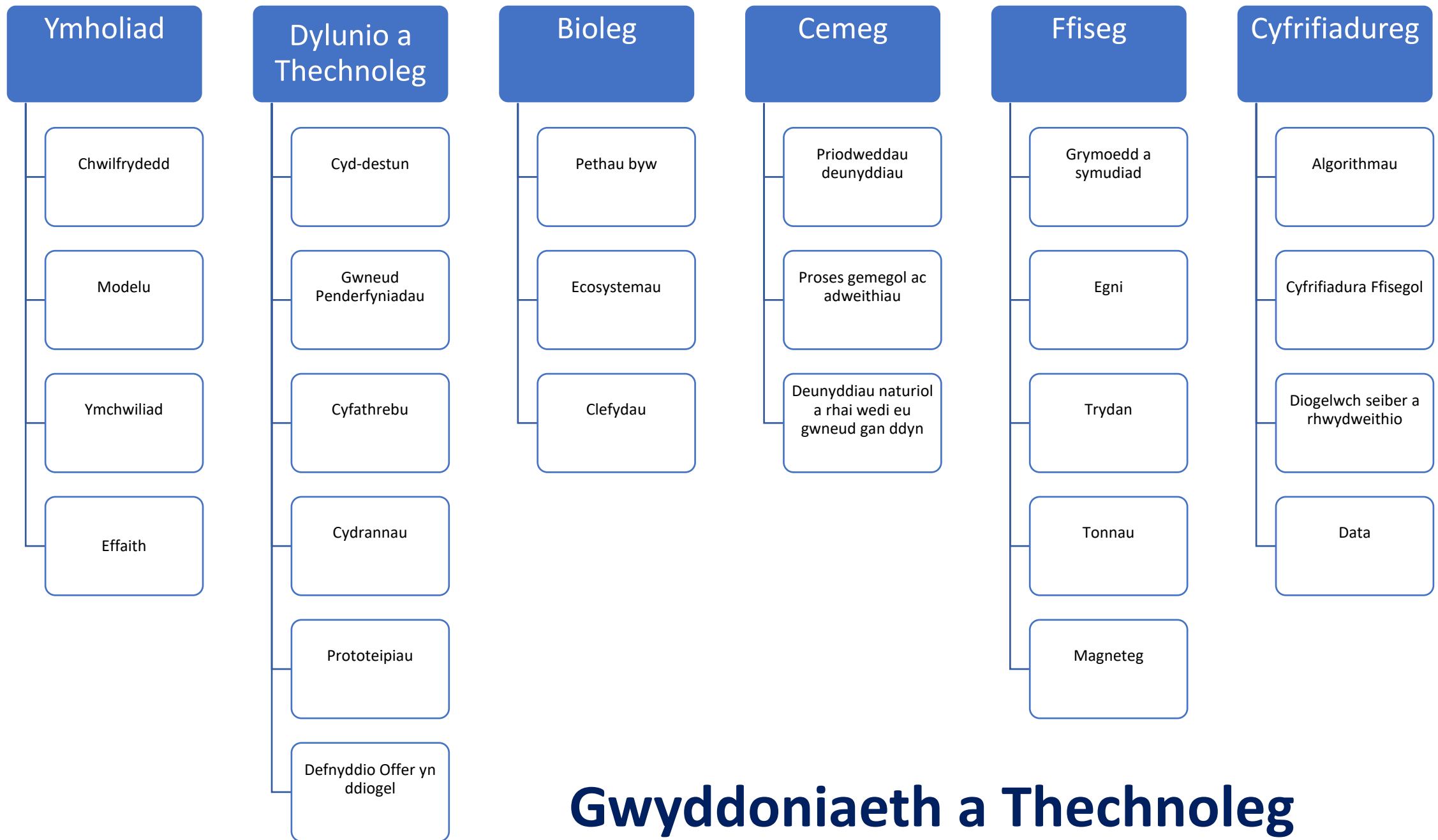


Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives



Curriculum for Wales 2022

- AoLE Science and Technology - What Matters

- Being curious and searching for answers is essential to understanding and predicting phenomena.
- Design thinking and engineering offer technical and creative ways to meet society's needs and wants.
- The world around us is full of living things which depend on each other for survival.
- Matter and the way it behaves defines our universe and shapes our lives.
- Forces and energy provide a foundation for understanding our universe.
- Computation is the foundation for our digital world.



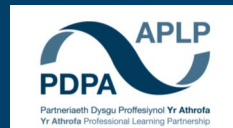
Science and Technology

[Descriptions of learning - Hwb \(gov.wales\)](https://gov.wales)

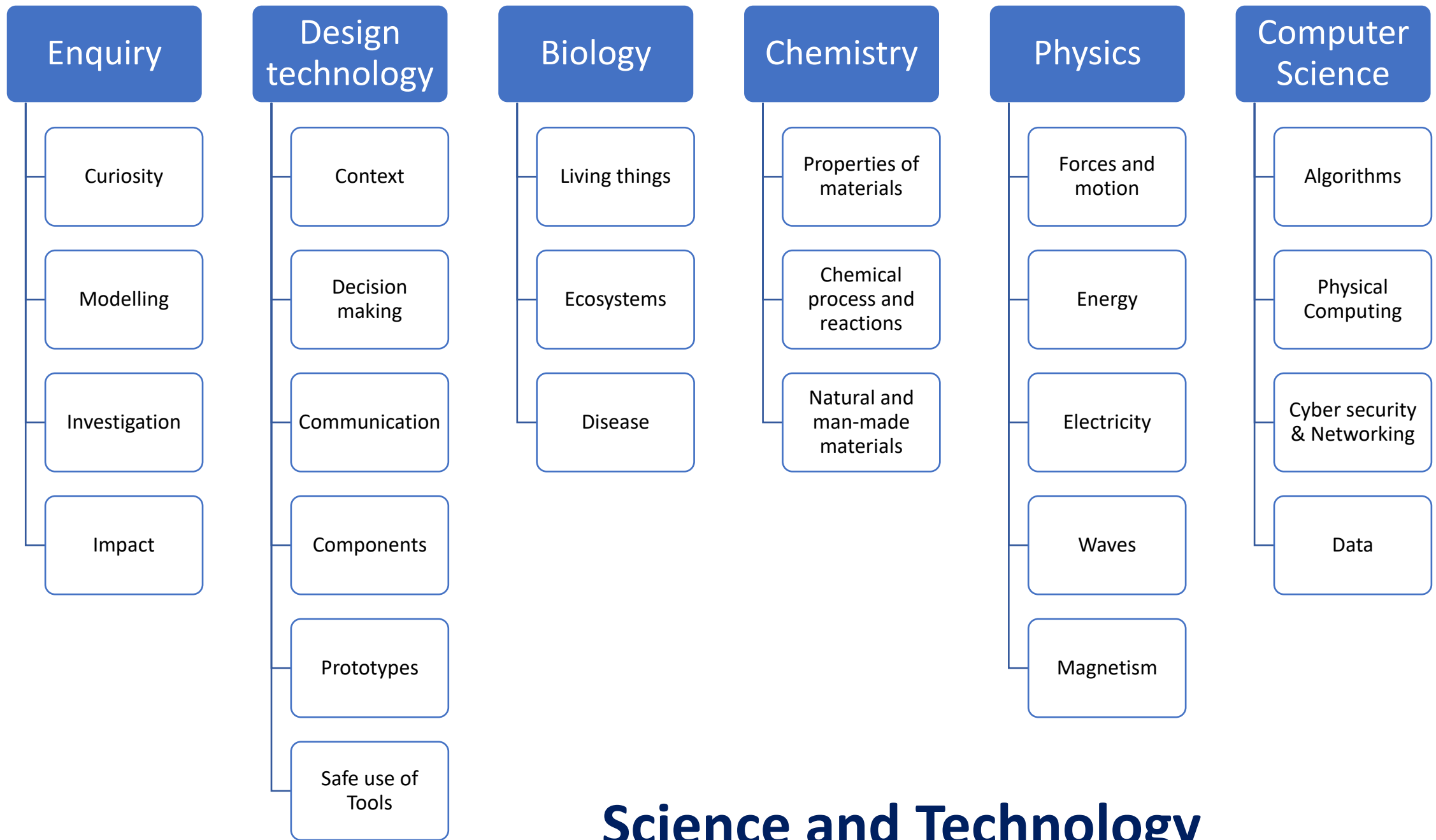


Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives



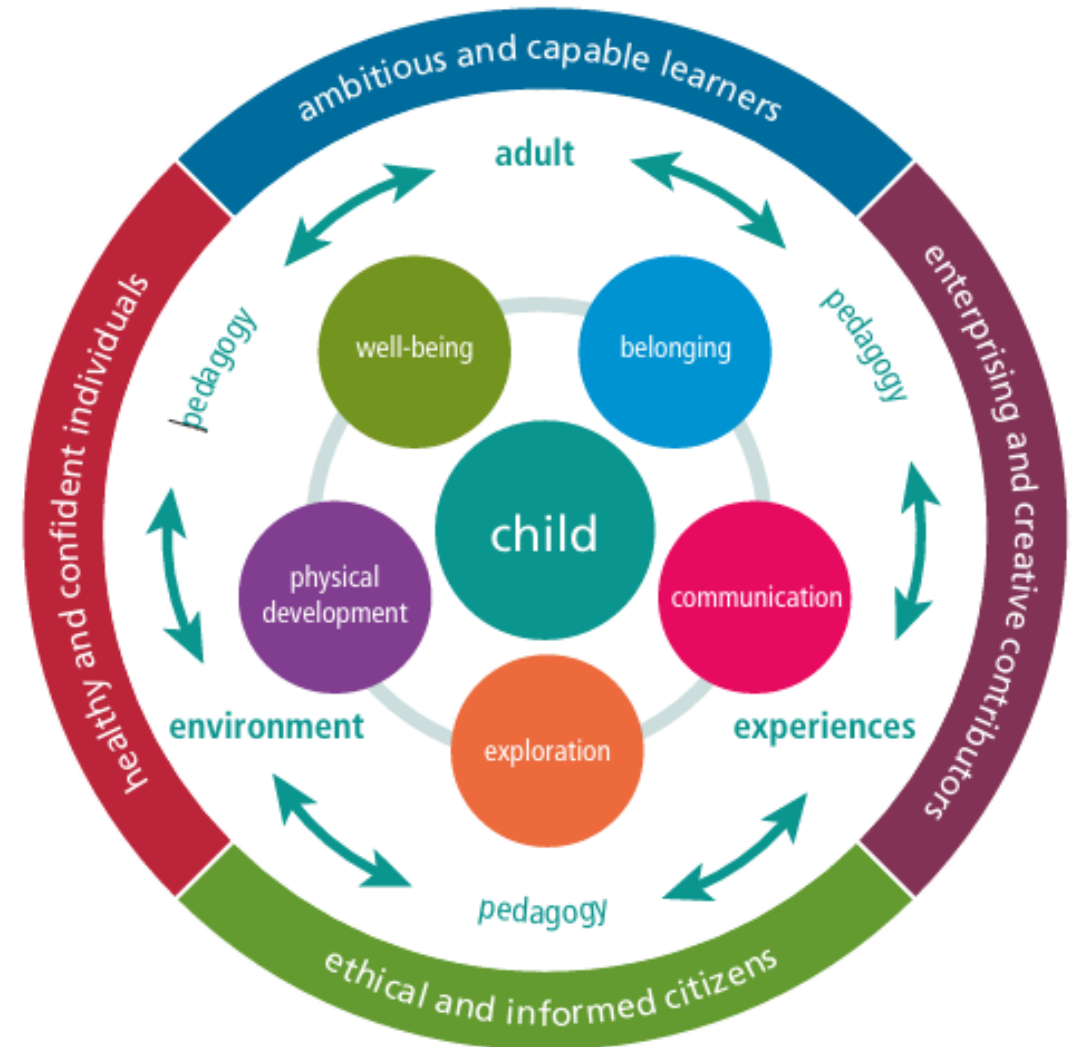
Science and Technology

Curriculum for funded non-maintained nursery settings - Hwb

ambitious, capable learners who:	enterprising, creative contributors who:	ethical, informed citizens who:	healthy, confident individuals who:
• set themselves high standards and seek and enjoy challenge • are building up a body of knowledge and have the skills to connect and apply that knowledge in different contexts • are questioning and enjoy solving problems • can communicate effectively in different forms and settings, using both Welsh and English • can explain the ideas and concepts they are learning about • can use number effectively in different contexts • understand how to interpret data and apply mathematical concepts • use digital technologies creatively to communicate, find and analyse information • undertake research and evaluate critically what they find	• connect and apply their knowledge and skills to create ideas and products • think creatively to reframe and solve problems • identify and grasp opportunities • take measured risks • lead and play different roles in teams effectively and responsibly • express ideas and emotions through different media • give of their energy and skills so that other people will benefit	• find, evaluate and use evidence in forming views • engage with contemporary issues based upon their knowledge and values • understand and exercise their human and democratic responsibilities and rights • understand and consider the impact of their actions when making choices and acting • are knowledgeable about their culture, community, society and the world, now and in the past • respect the needs and rights of others, as a member of a diverse society • show their commitment to the sustainability of the planet	• have secure values and are establishing their spiritual and ethical beliefs • are building their mental and emotional well-being by developing confidence, resilience and empathy • apply knowledge about the impact of diet and exercise on physical and mental health in their daily lives • know how to find the information and support to keep safe and well • take part in physical activity • take measured decisions about lifestyle and manage risk • have the confidence to participate in performance • form positive relationships based upon trust and mutual respect • face and overcome challenge • have the skills and knowledge to manage everyday life as independently as they can
and are ready to learn throughout their lives.	and are ready to play a full part in life and work.	and are ready to be citizens of Wales and the world.	and are ready to lead fulfilling lives as valued members of society.

The five developmental pathways are:

- belonging
- communication
- exploration
- physical development
- well-being.



Exploration

Children's natural curiosity about the world around them is a strong motivator for exploration. Children are endlessly curious problem solvers who often find delight, awe and wonder in everyday occurrences. They enjoy exploring and investigating by themselves and with others. They are often keen to share their delight in new knowledge or skills and learn from each other. Young children actively seek knowledge and skills that are both within and beyond their current capabilities. When supported and enabled, they can focus attention for extended periods of time on things that are of interest to them. As their exploration develops, they rehearse and practise skills and test **emerging theories**, both alone and with others.

Learning involves the gradual development of skills, knowledge and competencies in increasingly complex ways. Inclusive environments, both indoors and outdoors, that provide time and opportunity to play, explore and investigate, with adults attuned to children's interests, can support positive dispositions to learning as well as increasing knowledge and improving skills.

I need to:	I am learning to:	My exploration is enhanced by adults who:
• explore, investigate and discover • share my curiosity with others • make connections • develop my imagination in a variety of ways • compare, sort and classify • create, communicate and express myself • explore movement and direction, and develop my spatial awareness • experiment with cause and effect.	• focus my attention on things that interest me • develop my understanding of how things work • use my mistakes to further my understanding, with support • share my experiences and what I am thinking • communicate my ideas through mark-making or the use of appropriate technology • explore the properties of materials • develop my creative and critical thinking through my explorations • notice shape, symmetry and pattern in the natural and built environment	• provide authentic opportunities to play and experiment with a variety of materials, textures and tools, indoors and outdoors • understand the diversity of Welsh culture and provide opportunities for me to become curious about, and explore aspects of, Wales and Welsh culture • observe, notice and use my fascinations to deepen learning • support me in constructing understanding through skillful interactions • share in my joy and enthusiasm • view me as confident, capable and curious • support, celebrate and encourage my curiosity • enrich the environment with open-ended resources that enliven my curiosity • use outdoors as a learning space

Knowledge and Understanding of the World

Range

Throughout the Foundation Phase children should be given opportunities to:

- explore a wide range of stimuli
- engage with resources from a variety of contexts including interactive forms
- investigate indoor and outdoor learning environments, as well as including natural conditions as they arise
- participate in different types of play and a range of planned activities, including those that are child initiated and those that build on previous experiences
- work on their own and in pairs and small groups.

Places and people

Children should be given opportunities to:

- learn about where their locality is
- learn about distance and how to follow directions and routes
- use and make simple maps, to find where places are and how places relate to other places
- identify natural features, e.g. *rivers, hills, beaches*, and the human features, e.g. *buildings, roads, bridges*, of their own locality
- begin to recognise differences between their own locality, localities in other parts of Wales and in different parts of the world
- learn about how and why people and places are linked, e.g. *where they work and where they go on holiday, where family and friends live*
- use atlases and globes
- investigate how places change, e.g. *the weather, the seasons, buildings, people's jobs*
- recognise how people's actions can improve or damage the environment.

Time and people

Children should be given opportunities to:

- sequence events, routines and changes, e.g. *in a journey to school, in a story*
- measure time, using simple measuring devices, clocks, watches and calendars
- recognise the changes caused by time, e.g. *to themselves and to people and places familiar to them*
- recognise that there are reasons for, and consequences of, some actions
- begin to identify differences between ways of life at different times, e.g. *by comparing a familiar place at different times in the past*
- use a range of historical sources, including artefacts and buildings, adults recalling their own past, and visual sources
- look at different representations and interpretations of the past, e.g. *different books/pictures/ICT sources about the same person or event.*

Skills

To experience the familiar world through investigating the indoor and outdoor environment, children should be encouraged to be curious and find out by:

- exploring and experimenting
- thinking about questions and then asking them and listening to the answers
- listening to others' ideas
- identifying what they want to find out and how to do it
- thinking about what might happen if...
- becoming aware of human achievements and the 'big ideas' that have shaped the world
- investigating sources and issues
- thinking about how they will know if something has worked
- making observations and measurements and keeping records
- making comparisons and identifying similarities and differences
- sorting and grouping information using ICT on some occasions
- seeing links between cause and effect
- making links within the different elements of Knowledge and Understanding of the World
- thinking creatively and imaginatively
- communicating observations and measurements
- recognising simple patterns in their findings
- describing what they have found out and offering simple explanations
- expressing their own opinions and feelings, and making decisions while considering the viewpoints of others
- using and becoming familiar with common words and phrases for their world
- reflecting on and evaluating their own and others' work.

Range

Myself and other living things

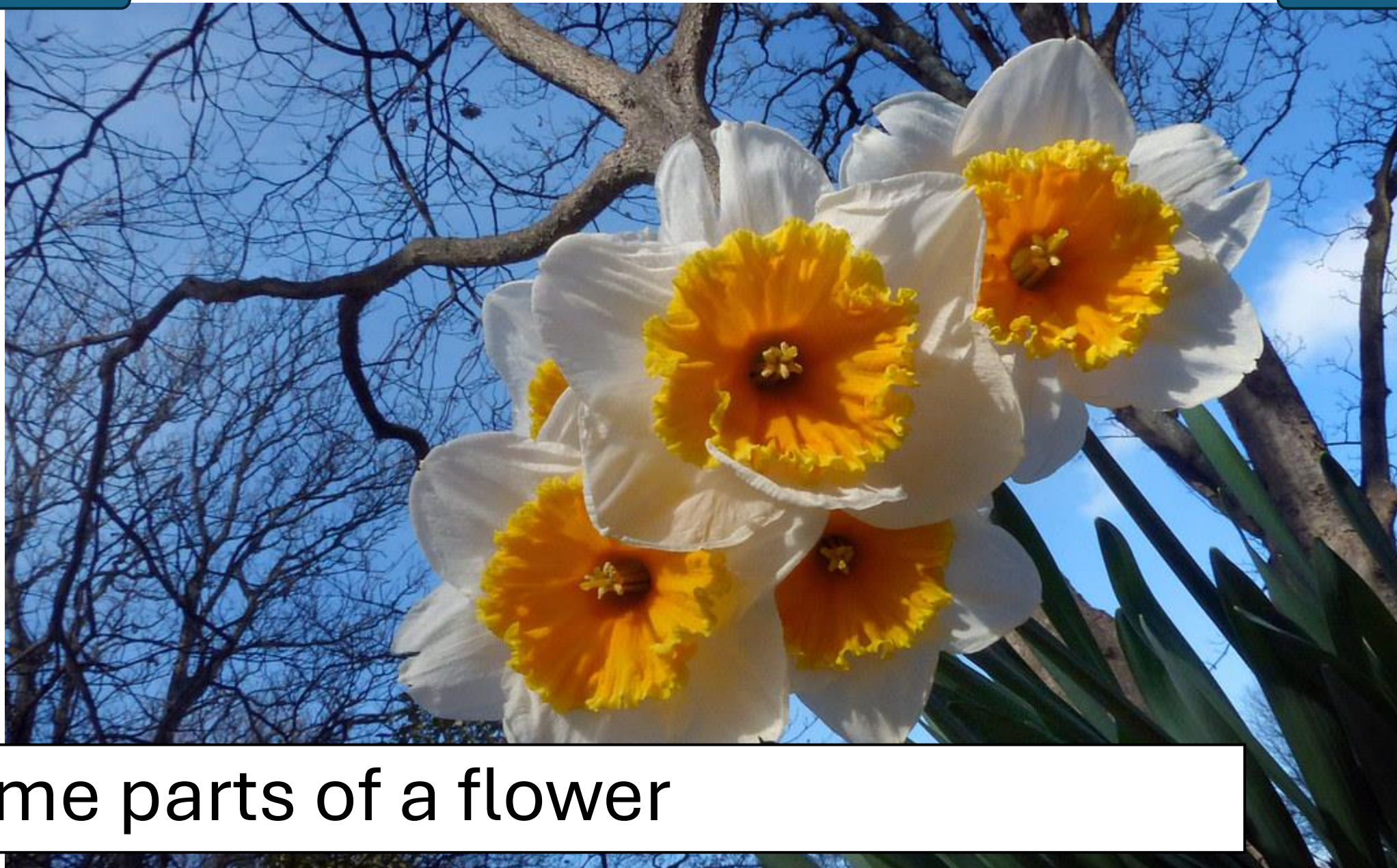
Children should be given opportunities to:

- learn the names and uses of the main external parts of the human body and plants
- observe differences between animals and plants, different animals, and different plants in order to group them
- identify the similarities and differences between themselves and other children
- learn about the senses that humans and other animals have and use to enable them to be aware of the world around them
- identify some animals and plants that live in the outdoor environment
- identify the effects the different seasons have on some animals and plants.

Myself and non-living things

Children should be given opportunities to:

- experiment with different everyday objects and use their senses to sort them into groups according to simple features
- experiment with different everyday materials and use their senses to sort them into groups according to simple properties
- develop an awareness of, and be able to distinguish between, made and natural materials
- understand how some everyday materials change in shape when stretched, squashed, bent and twisted, and when heated or cooled
- understand that light comes from a variety of sources, such as the Sun, and that darkness is the absence of light
- understand that there are many kinds and sources of sound, that sounds travel away from sources and that they are heard when they enter the ear.



Name parts of a flower



10

Join at: vevox.app

ID: 136-780-477

Preparing Results

Name parts of a flower

petals
petal
leaf
stem
bud
pollen
bulb
seed sack
roots
petals, stem
root
pollen pods



Worthwhileness

- Why should children care about flowers?

For Teachers | LEAF (Linking Environment and Farming)

<https://www.farmvention.com/>

Tools and templates for curriculum design - Hwb

5 mins

- A world without flowers

For Teachers | LEAF (Linking Environment and Farming)

<https://www.farmvention.com/>

Tools and templates for curriculum design - Hwb

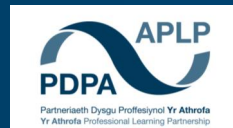


www.Literacyshed.com



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives



##/##

Join at: **vevox.app**

ID: **136-780-477**

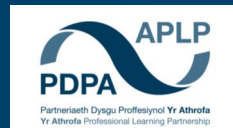
Question slide

Pictures for talk - What would you ask?



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives



Pictures for talk - What would you ask?

how old is the building?
where is it?
what happened to it?

how is the tree inside

How old is the house?
What type of tree is it?
Where is the house?
Is it fenced off?

What do you think was
there before ?

What can you see?
What's happened ?
How do you think this
has happened?

What has happened to
the building

What has nature done

How would you have fun
if you were here

What is the building?

why are there no flowers



Ymholiad Gwyddonol : Scientific Enquiry

Felly sut?

- ☐ gofyn cwestiynau
- ☐ gwneud rhagfynegiadau
- ☐ sefydlu profion
- ☐ arsylwi a mesur
- ☐ cofnodi data
- ☐ dehongli a chyfleu canlyniadau
- ☐ Gwerthuso



So how?

- ☐ asking questions
- ☐ making predictions
- ☐ setting up tests
- ☐ observing and measuring
- ☐ recording data
- ☐ interpreting and communicating results
- ☐ Evaluating



seven science skills which children develop from ages 4 to 11 years

<https://pstt.org.uk/resources/curriculum-materials/enquiry-skills>

Ymholiad Gwyddonol - Sut? : Scientific Enquiry - How?

EARLY YEARS SCIENCE PROVISION MAP

Play, Observe & Ask



Sensory Play



Learn: how biscuits change in different liquids
You need: bowls, mini gingerbread man biscuits, milk, vinegar, oil, juice, timers
Play, observe & ask:

- What does the (solid) biscuit feel /look/smell like?
- What might happen if the gingerbread man falls into puddles of different liquids? Can you make predictions and test out your ideas? How long shall we leave them?
- Was your prediction about the [liquid] correct? Can you describe how they look, feel, smell now? Are you surprised? Why?

Construction

Learn: some objects float and some sink.
You need: junk modelling resources, tape, glue, scissors, gingerbread men biscuits, pebbles, cubes
Play, observe & ask:

- Can you make a floating boat for the gingerbread man? Which materials will you use? Why?
- Does it matter what shape or size your boat is?
- How many gingerbread men/pebbles/cubes can it hold before it sinks?

Role Play

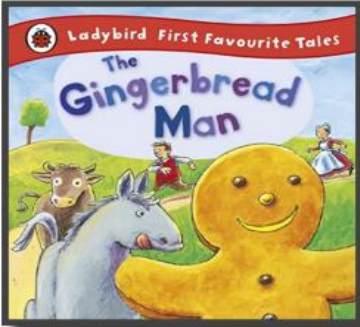
Learn: common features of different animals
You need: pictures/masks/costumes of different animals from the story
Play, observe & ask:

- How are the animals the same/different?
- Do they all have four legs/a tail/fur/teeth?
- Can you show me how they move?

Malleable Play

Learn: that some materials are stretchy
You need: gingerbread dough, pastry, Curly Wurly®, marshmallows, spaghetti
Play observe & ask:

- Can we stretch all these foods?
- Which can be stretched the longest?
- Can they go back to their original shape? Why / why not?



Water/Sand Play

Learn: waterproof materials
You need: gingerbread man biscuits, a selection of materials e.g. kitchen roll, foil, cling film, tissue paper, bin bag, fabric, plastic containers, tape, watering cans
Encourage children to put the gingerbread man in a container and use different materials to make a 'roof'.
Play, observe & ask:

- Which material will keep him dry from the (watering can) rain?
- Which material would make the worst roof? Why?

Outdoors

Learn: that some materials absorb liquids.
You need: trays containing cornflour, rice, rice crispies/corn flakes, pasta, oats, grapes, raisins, lentils, jugs of water, spoons to stir, cloths to wipe messy hands
Invite children to use their hands to explore the different trays of dry food before adding water.
Play, observe & ask:

- How do they feel/look/smell?
- What do you predict will happen to each tray if we pour on water? Which might change? Will any stay the same? Why?
- What would you like to find out next? E.g. what happens when changing the temperature of water, leaving raisins overnight. Encourage the children to test out their ideas and use their senses and lots of descriptive language to explain what happens.

Key Science Vocabulary

material, solid, liquid, absorb
properties of materials - dry, wet, soggy, waterproof, float, sink, strong, stretchy
animal body parts - legs, body, head, ears, tail, mane, fur, udder, etc.

Small World



Learn: how to build strong bridges
You need: lolly sticks, variety of clothes pegs, toy animals from the story, gingerbread man
Play, observe & ask:

- Can you use the different lolly sticks and pegs to make a bridge for the gingerbread man to cross the river?
- Which types of clothes pegs work best?
- Can you improve your design to make it stronger? How many toy animals can it hold?

Further Science

Exploring how heat/cooking changes materials, e.g. malleable gingerbread dough to hard biscuit, jelly dissolving, eggs becoming opaque, chocolate melting, popcorn exploding!
Tasting experiments, e.g. sweet gingerbread, sour lemon slices, salty crisps. Can children guess which flavour (even if they hold their nose)?
Comparing types of animal teeth, e.g. fox, cow, mouse. What do they eat?

© Primary Science Teaching Trust 2021

<https://pstt.org.uk/resources/curriculum-materials/eyfs-science>



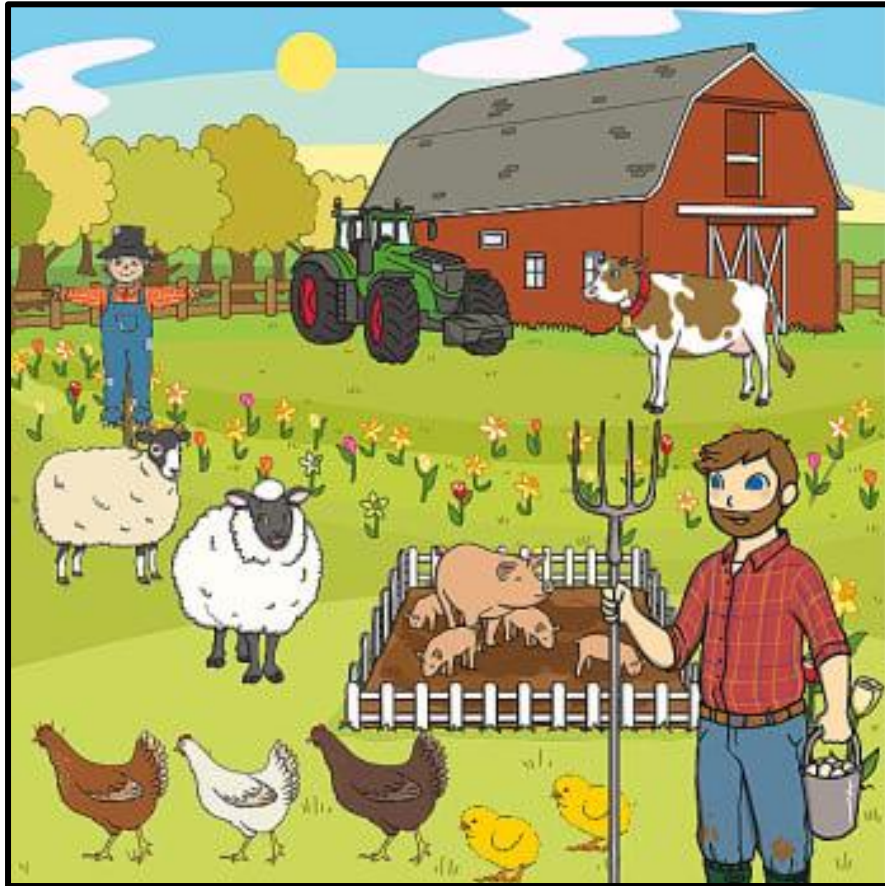
Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

Tasg:

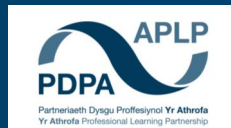


Task:



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

Planning a Lesson/Group Task

SOWM 1

➤ Being curious and searching for answers is essential to understanding and predicting phenomena.

Progression step 1

I can explore the environment, make observations and communicate my ideas.

[Descriptions of learning - Hwb \(gov.wales\)](https://gov.wales/hwb)

YHSB 3 – Camau cynnydd 1-2



Adnoddau Dysgu yn yr Awyr Agored -
Lleihau Gwastraff

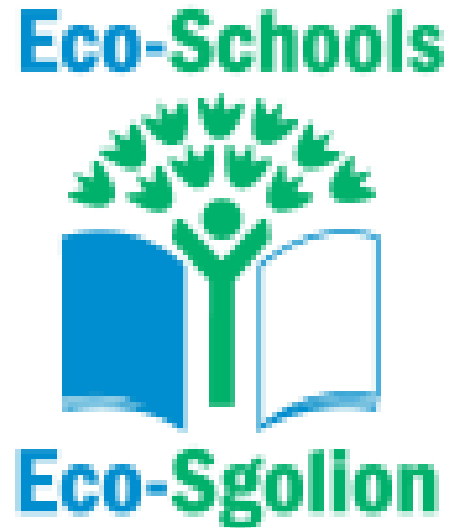
<https://hwb.gov.wales/repository/resource/2b591435-5fd1-40d1-8d8c-8cf3ad370d77>



Adnoddau Dysgu yn yr Awyr Agored - Tir
yr Ysgol

<https://hwb.gov.wales/repository/resource/656686a2-386c-4b66-87e6-fec940db4241>

SOWM 3 – Progression steps 1-2



Eco-Schools Outdoor Learning Resources - Waste Minimisation

[Repository - Hwb \(gov.wales\)](https://gov.wales/hwb)



Eco-Schools Outdoor Learning Resource - School Grounds

[Repository - Hwb \(gov.wales\)](https://gov.wales/hwb)

YHSB/SOWM 4 & 5 : Camau cynnydd/Progression steps 1-2



[Repository - Hwb \(gov.wales\)](https://gov.wales/hwb)



[Repository - Hwb \(gov.wales\)](https://gov.wales/hwb)



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

Datblygu Gwyddoniaeth a Thechnoleg Cam cynnydd 1 & 2



Weavers, G., Keogh, B., & Naylor, S.
(2008). Dewch i edrych. Dewch i feddwl,
Dewch i siarad. Sandbach: Millgate House

MYL_Welsh_Chap_Worksheets.p
df

Yn ffeil Adnoddau - moodle

GADEWCH FI'N RHYDD! 6



Beth yw hwn?

Mae plant yn mynd i'r afael â gwrthrych sydd wedi'i lapio mewn ffoil yn y gweithgaredd cyffrous hwn. Maen nhw'n cael eu hannog i feddwl am beth allai fod y tu mewn. Maen nhw'n trafod y posibiladau gyda'i gilydd a'r athro/athrawes. Ar ôl ei agor, maen nhw'n canfod mai ffigur bach, fel cymeriad Lego® sydd yno wedi'i gau mewn blocyn o rew! Sut gallen nhw ei helpu i ddianc o'i garchar o rew?

Gallech hyd yn oed droi hyn yn adroddiad newyddion a rhagolygon y tywydd gyda dynion gofod yn cyrraedd y Ddaear mewn cenillys enfawr!

Cychwyn arni

- ☐ Rhowch ychydig bach o ddŵr mewn pot iogwrt neu rywbeth tebyg a rhowch y cymeriad plastig y tu mewn. Rhowch hwn yn y rhewgell. Defnyddiwch gymeriadau Siôn Corn adeg y Nadolig!
- ☐ Ar ôl ei rewi, ychwanegwch ddŵr a'i rewi eto fel bod y cymeriad y tu mewn i'r rhew yn hytrach nag yn arnofio yn y rhan uchaf.
- ☐ Lapiwch y rhew mewn ffoil.
- ☐ Casglwch bowlenni ac unrhyw adnoddau eraill y gallen nhw ofyn amdanynt nhw i geisio rhyddhau'r cymeriad, fel morthwylion bach.



Cymerwch ofal os yw'r plant yn ceisio taro'r cymeriad allan o'r rhew â morthwyl. Gall rhew a morthwylion fynd i bobman!

Developing Science and Technology Progression step 1 & 2



MYL_Chap_Worksheets.pdf
In resources file on Moodle .

LET ME OUT! 6



What it is

In this exciting activity children handle a foil-wrapped object. They are encouraged to think about what might be inside. They discuss the possibilities with each other and their teacher. When it's opened up, they find a small figure, such as a Lego® person, trapped inside a block of ice! How can they get him out of his icy prison?

You could even turn this into a news report and weather forecast with spacemen arriving on Earth in giant hailstones!

Getting started

- Put a small amount of water in a yoghurt pot or similar and add a plastic figure. Put this in the freezer. Try little Santa figures at Christmas time!
- When it is frozen, top up the water and freeze again so that the figure will be inside the ice, not floating on top.
- Wrap the ice in foil.
- Collect some bowls and any other resources that they may request to release the figure, such as little hammers.

 Take care if children do try to hammer the person out. Ice and hammers can both be very mobile!

© Gaynor Weavers 2008 LET ME OUT! 53



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

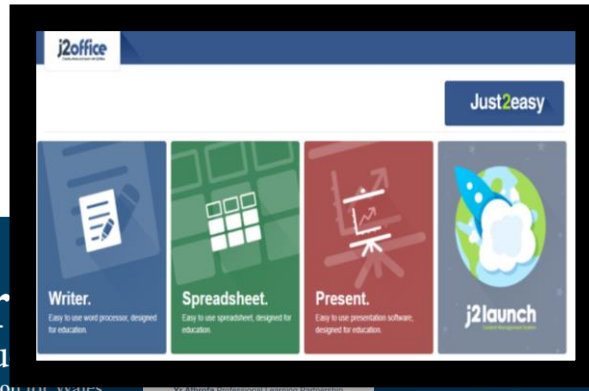
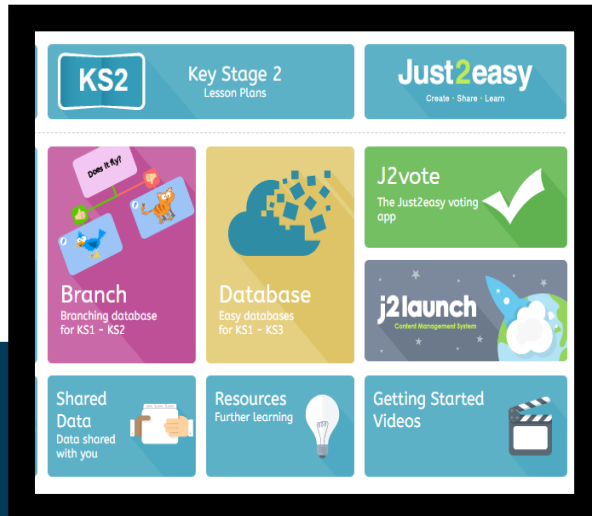
Weavers, G., Keogh, B., & Naylor, S.
(2008). Made you look, made you
think, made you talk. Sandbach:
Millgate House

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

Cynrychioli Data : Representing Data



<https://www.j2e.com/>



Diogelwch : Safety

CLEAPSS

<https://www.cleapss.org.uk/>

Supporting practical work in science,
D&T and art

CLEAPSS
primary

Always check [CLEAPSS](https://www.cleapss.org.uk/) before you do anything with risky with your class. Be wary of taking anything off social media without a risk assessment. All LEAs sign up to CLEAPSS as a way of insurance. If you do something risky and it is not covered in CLEAPSS, then you are not covered.

Username - trainee
Password – cleapss26

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

Sut :

- ❑ Gweithgareddau hwylus
- ❑ Cwestiynu pwrpasol
- ❑ Ei wneud yn gyffyrddadwy
- ❑ Annog gwaith grwp
- ❑ Creu amgylchedd diogel i alluogi chwilfrydedd
- ❑ Peidio ac ofni mentro

Cynllunio:

Y wers / Y dasg ffocws :

- ❑ Amcan y dysgu?
- ❑ Beth mae'r plant yn dysgu?
- ❑ Sut maent yn dysgu?
- ❑ Beth sydd angen i'r plant wneud er mwyn llwyddo?



How?

- ❑ Keep it fun
- ❑ Increase demand through questioning
- ❑ Make it tactile
- ❑ Encourage group work
- ❑ Create a safe environment to be curious
- ❑ Don't be afraid to try

Planning:

Focus group task:

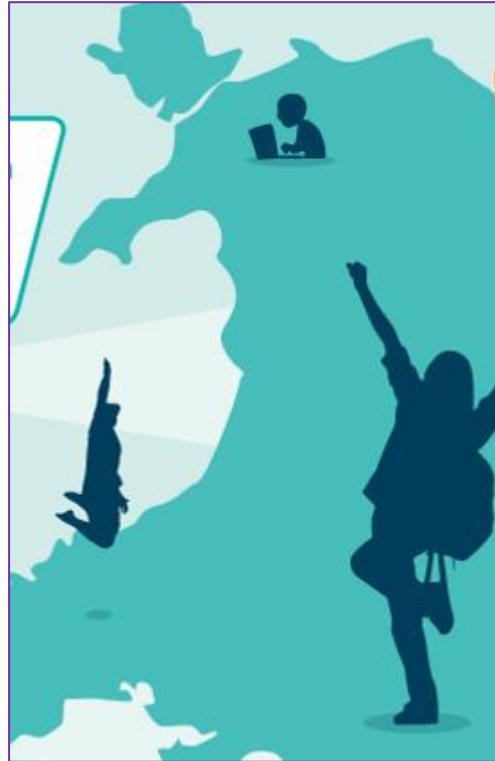
- ❑ Learning objective?
- ❑ What are the pupils learning?
- ❑ How are they learning?
- ❑ What do the pupils need to do to succeed?

3 Egwyddor Addysgegol

Mae addysgu a dysgu da yn galw am ddefnyddio cymysgedd o ddulliau sy'n cynnwys addysgu uniongyrchol.

Mae addysgu a dysgu da yn golygu gosod tasgau a dewis adnoddau sy'n adeiladu ar wybodaeth a phrofiad blaenorol ac yn ennyn diddordeb.

Mae addysgu a dysgu da yn ymestyn oddi mewn ac ar draws Meysydd Dysgu a Phrofiad.



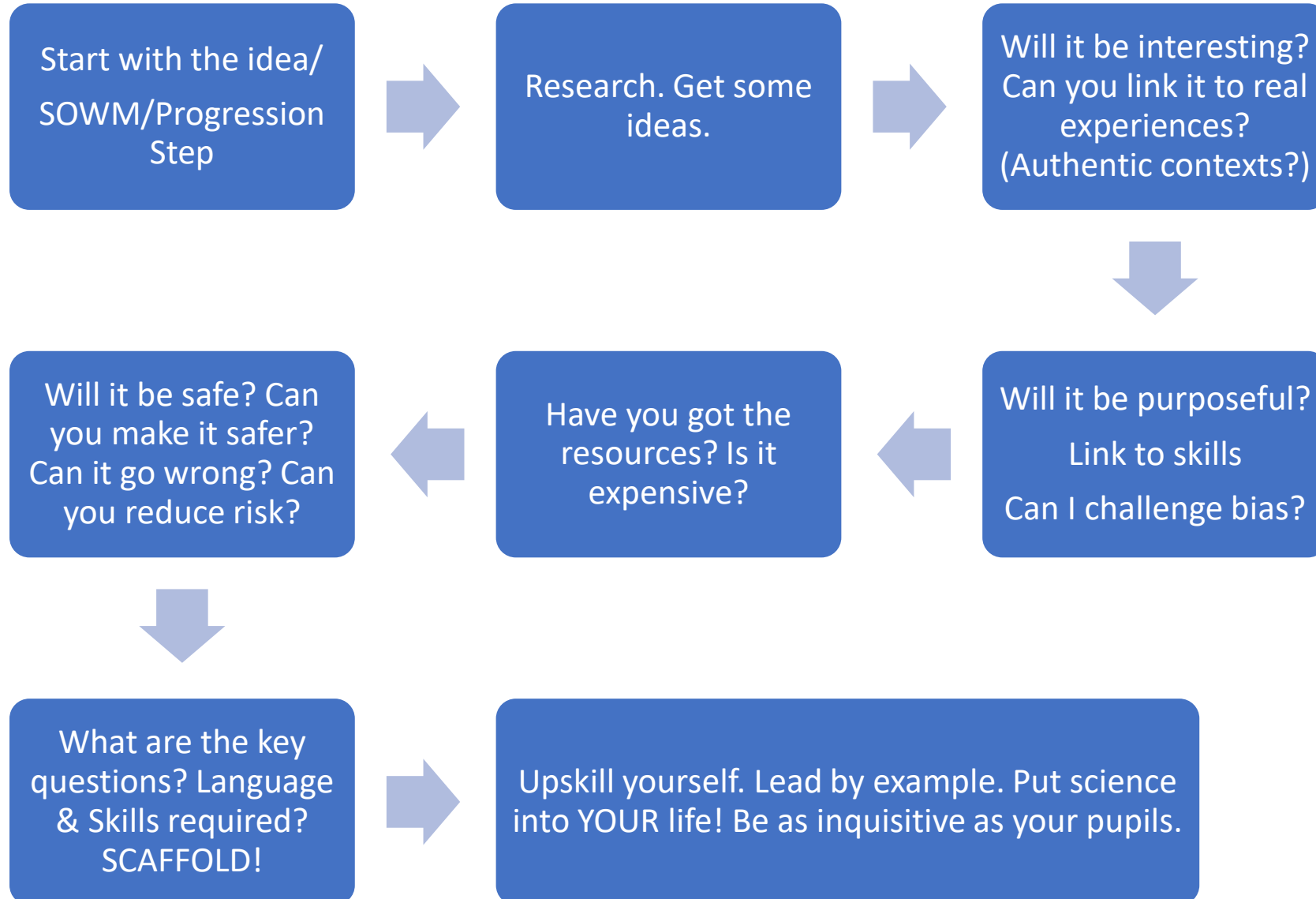
3 Pedagogical Principles

Good teaching and learning means employing a blend of approaches including direct teaching.

Good teaching and learning sets tasks and selects resources that build on previous knowledge and experience and engage interest.

Good teaching and learning ranges within and across Areas of Learning and experience.

Group Task – Planning an activity - You will be teaching us



Cysylltiadau allweddol gyda MDaPh eraill?

Key links to other AoLE's?



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Centre for Education
Addysg i Gymru | Education for Wales



Partneriaeth Dysgu Proffesiynol Yr Athrofa
Yr Athrofa Professional Learning Partnership

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

Make meaningful links across the curriculum

Literacy, numeracy and digital competence are mandatory cross-curricular skills within Curriculum for Wales. It will be the responsibility of all practitioners, across all curriculum areas, to develop and ensure progression in these skills.

To develop, extend and apply these skills, the frameworks have been updated and continue to be available as non-statutory supporting guidance.

Literacy Framework (gov.wales)

Where does your lesson plan fit into the Literacy Framework? What progression step are you working towards?

Numeracy Framework (gov.wales)

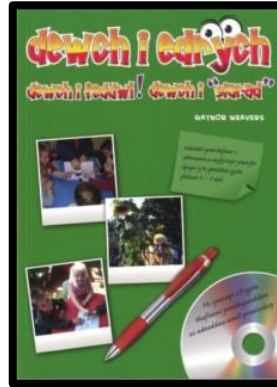
Where does your lesson plan fit into the Numeracy Framework? What progression step are you working towards?

Digital Competence Framework (gov.wales)

Where does your lesson plan fit into the DC Framework? What progression step are you working towards?

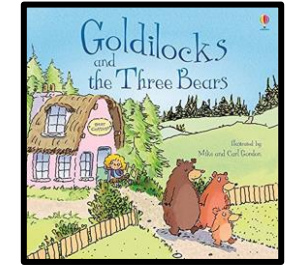
Tasg Grŵp: 4-5 aelod

- YHSB ?
- Cam Cynnydd – Grŵp oedran
- Cyflwyniad
- Gweithgaredd
- Diweddsglo



GroupTask: 4-5 members

- SOWM ?
- Progression step – Age group
- Introduction
- Activity
- Plenary



Cysylltiadau defnyddiol:

Useful links:

- <https://www.stem.org.uk/resources/collection/3485/teaching-primary-science>
- <https://www.ase.org.uk/resources/primary-science>
- <https://www.tes.com/teaching-resources>
- <https://www.farmvention.com/>
- <https://explorify.wellcome.ac.uk/>
- <https://pstt.org.uk/>



<https://pstt.org.uk/what-we-do/why-how-magazine>