



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

ECAD4017C

**Gwyddoniaeth a Thechnoleg
Darlith 1**

**ECAD4017
Science and Technology
Lecture 1**

**Lilian Martin
l.martin@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)

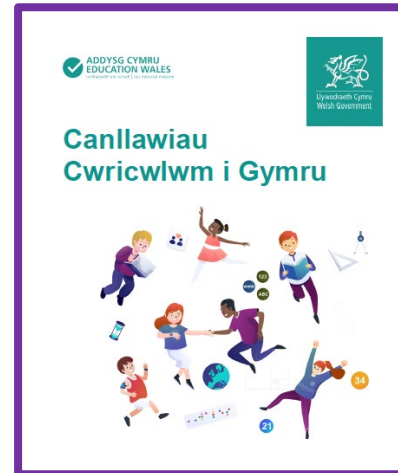
Learning Intentions

- 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)
- Identify and apply resources to support the teaching of Science and Technology in Foundation Learning.

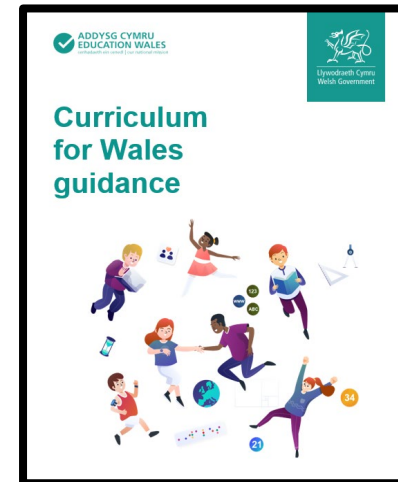


Tasg 1: 10 munud

Nid oes modd
gorbwysleisio
pwysigrwydd
gwyddoniaeth a
thechnoleg yn ein byd
modern.



tud 192



p 192

Task 1: 10 minutes

The importance of
science and
technology in our
modern world
cannot be
overstated.

4 DIBEN Cwricwlwm i Gymru

Pam bod angen 4 Diben arnom?

- * er mwyn i bob athro ac arweinydd ddilyn cenhadaeth gytûn.
- * er mwyn gosod gweledigaeth gytûn ar gyfer dyheadau ein disgyblion.

Wrth ymrwymo i'r 4 diben bydd athrawon yn deall a chydweddu â gweledigaeth gytûn ar gyfer addysg yng Nghymru.



Sut y dylem ddefnyddio'r Dibenion fel canllaw wrth ddewis cynnwys y cwricwlwm.

* fel fframwaith wrth ddewis yr addysgeg fwyaf addas

Wrth wneud dewisiadau am gynnwys, addysgeg ac asesu bydd defnydd y 4 diben yn datblygu ein system o welliant parhaus.

Ategwyd 4 Diben Cwricwlwm i Gymru gan:

Egwyddorion a gortfformydd yng nghytundeb y CENHEDLOEDD UNEDIG ar Hawliau'r Plentyn	Iaith a Diwylliant Cymreig	Egwyddorion addysg gynhwysol	Rôl gymunedol a dinesig ysgolion	Techyd a lles disgyblion
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For bespoke support to create learning driven by the 4 Purposes contact us
enquiries@impact.wales

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THE 4 PURPOSES of Curriculum for Wales

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- * Why do we need the 4 Purposes for Curriculum for Wales?
 - * to set a common mission for all teachers & leaders.
 - * to support teachers & leaders to make appropriate choices about curriculum content & pedagogy
- * How should schools be using the 4 Purposes statements?
 - * as a set of guiding principles to aid planning decisions.
 - * as an evaluation tool to identify pupils' greatest needs.
- * Create a curriculum driven by the 4 Purposes:-
 - * know which of the 4 Purposes pupils need the most
 - * create teaching & learning that addresses those needs
 - * support pupils to **progress** in those areas

The 4 Purposes of Curriculum for Wales are underpinned by:

Principles enshrined by UNITED NATIONS Convention on the Rights of the Child	Welsh Language and Culture	Principles of inclusive education	Community & civic role of schools	Health & well-being of pupils
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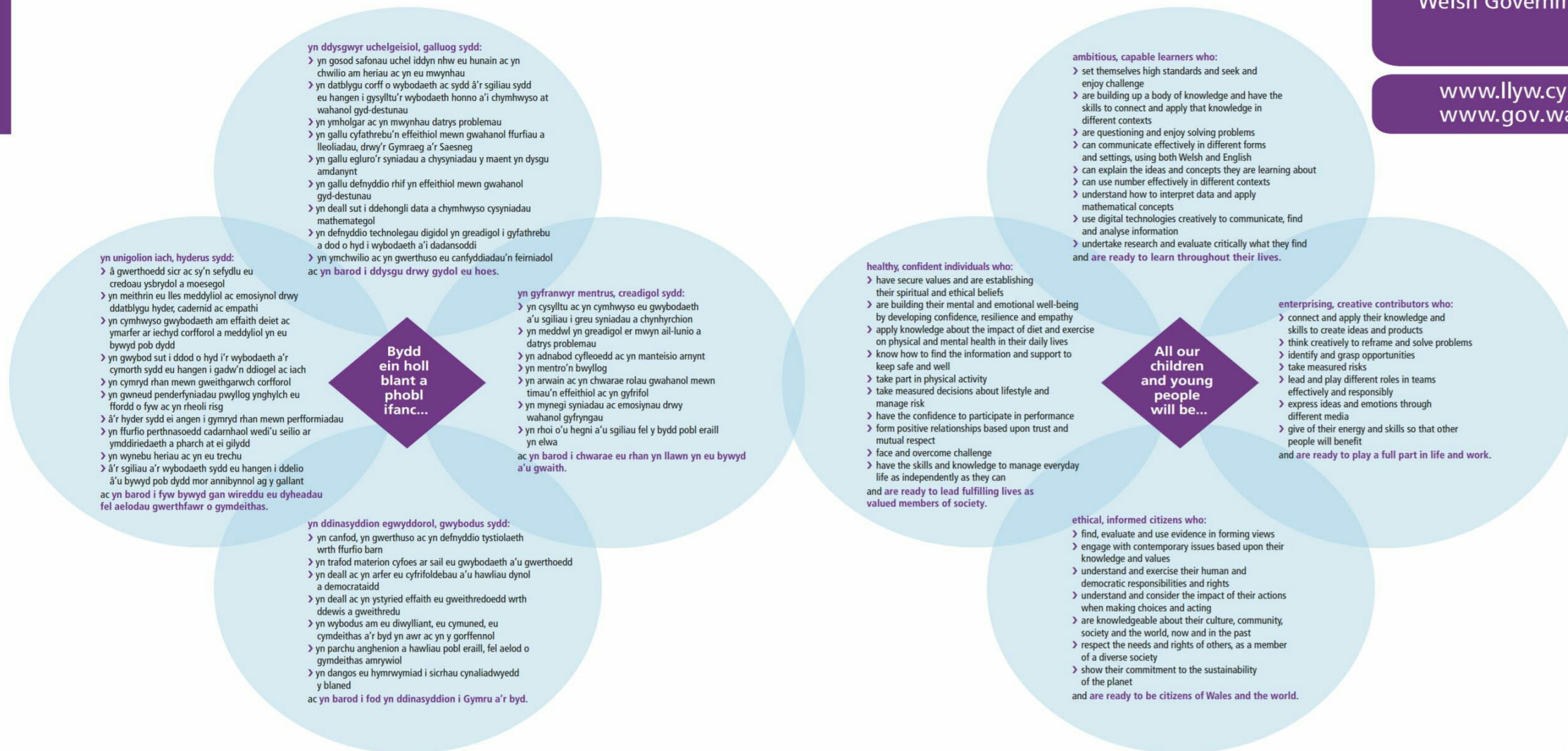
Pedwar diben y cwricwlwm i Gymru

The four purposes of the curriculum for Wales



Llywodraeth Cymru
Welsh Government

www.llyw.cymru
www.gov.wales



Cwricwlwm



<https://hwb.gov.wales/cwricwlwm-i-gymru/gwyddoniaeth-a-thechnoleg/>



<https://www.youtube.com/watch?v=Q9fhUoVLs44>

2022

Curriculum



<https://hwb.gov.wales/curriculum-for-wales/science-and-technology/>



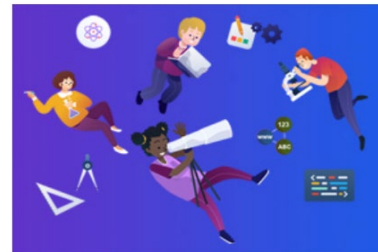
<https://www.youtube.com/watch?v=RPJcb44P4h4>

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.

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



Gwyddoniaeth a Thechnoleg

Tasg :

Treuliwch 10 munud yn dod yn gyfarwydd a'r maes dysgu a phrofiad

Beth yw'r cysyniadau allweddol?

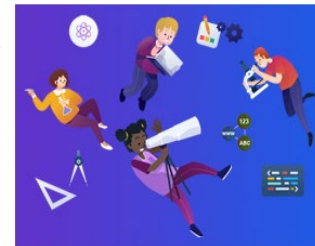
O ble mae rhain yn deillio?

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.

[Descriptions of learning - Hwb \(gov.wales\)](#)



Science and Technology

Task :

Take 10 minutes to familiarize yourself with the Area of Learning and Experience

What are the key concepts?
From where do they derive?

Fframwaith Y Cyfnod Sylfaen

Addysgeg Y Cwricwlwm

Cyfnod Sylfaen

Rhan o [Cwricwlwm Cymru 2008](#)

CYNNWYS

- Fframwaith
- Asesiad
- Canllawiau
- Adnoddau
- Gwybodaeth i rieni/gofalwyr

i Mae'r Cwricwlwm i Gymru yn cael ei weithredu mewn ysgolion a lleoliadau o fis Medi 2022. Bydd y canllawiau hyn ar gyfer cwricwlwm 2008 yn cael eu defnyddio o hyd ar gyfer rhai dysgwyr nes bod bob ysgol a lleoliad yn defnyddio'r Cwricwlwm i Gymru ar gyfer pob ddysgwr yn y flwyddyn academaidd 2026 i 2027.

Fframwaith

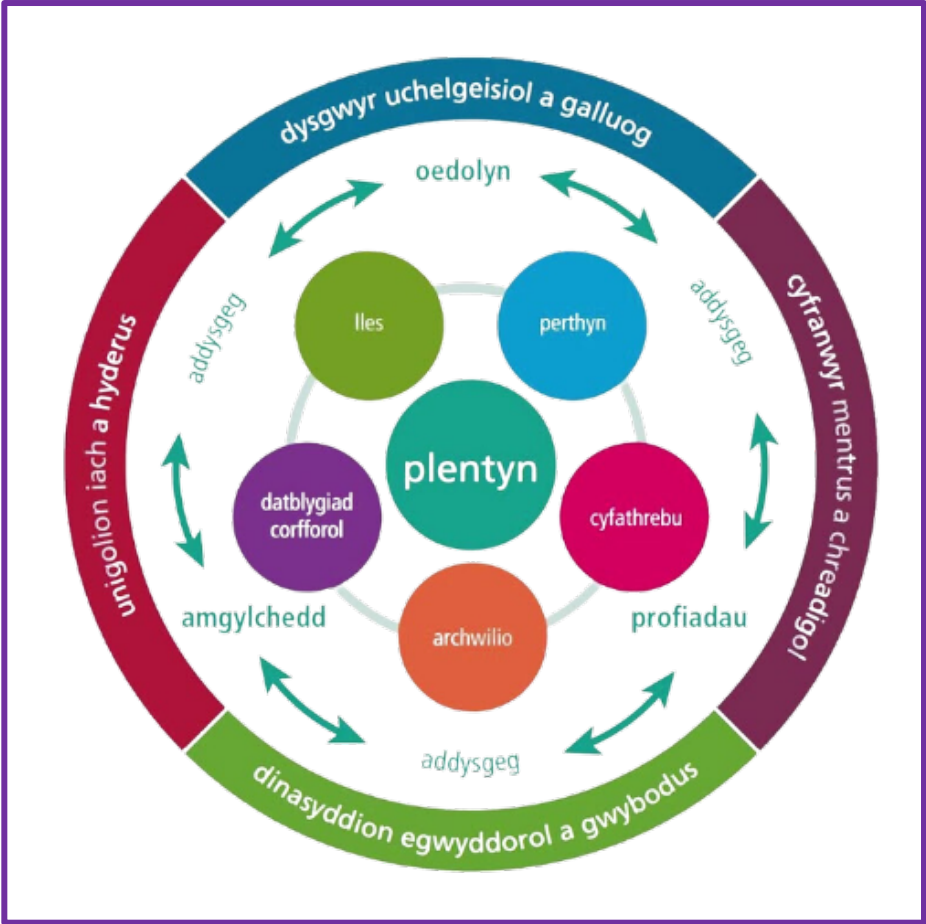
Cwricwlwm Cymru

As

Llywodraeth Cymru
Welsh Government

www.llyw.cymru

Fframwaith y Cyfnod Sylfaen
(Diwygiedig 2015)



Foundation Phase Framework

Curriculum Pedagogical Practice

Foundation Phase

Part of [Curriculum for Wales 2008](#)

- CONTENTS
- Framework
 - Assessment
 - Guidance
 - Resources
 - Information for parents/carers

i The Curriculum for Wales is being implemented in schools and settings from September 2022. This guidance for the 2008 curriculum will continue to be used for some learners until all schools and settings are using the Curriculum for Wales with all their learners in the 2026 to 2027 academic year.

Framework



Foundation Phase Framework
03 August 2015 Statutory guidance

Assessment



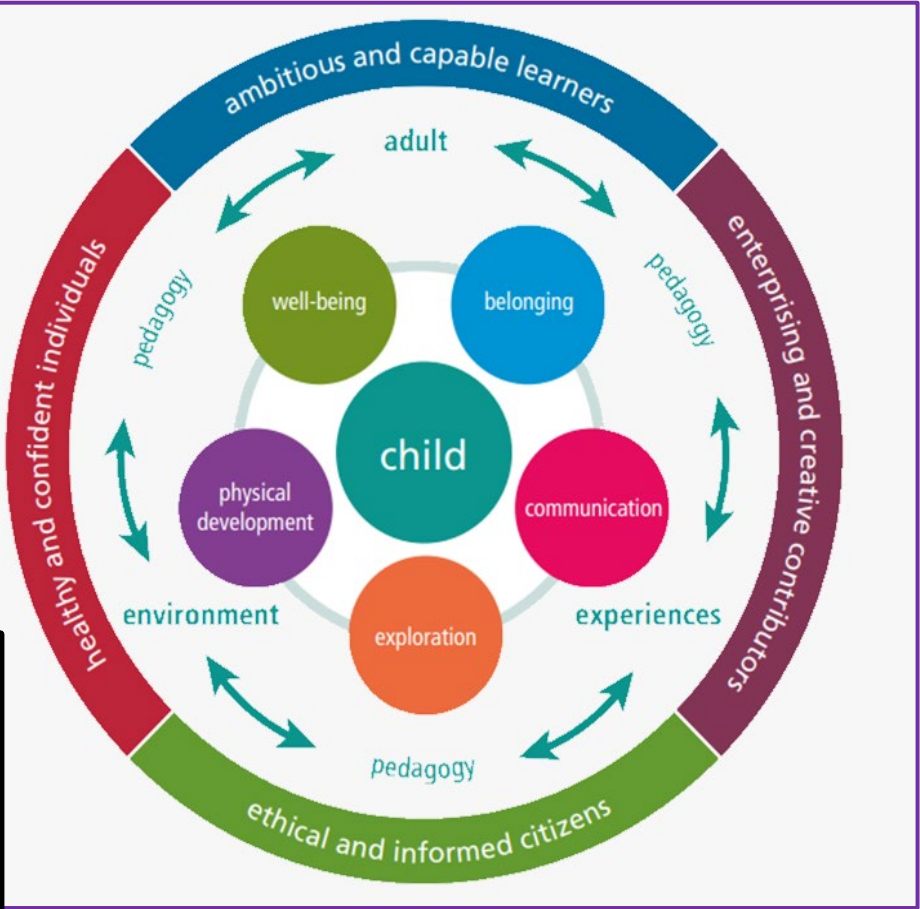
**Found
practi**

Curriculum for Wales

Llywodraeth Cymru
Welsh Government
www.gov.wales

Foundation Phase Framework

(Revised 2015)



Dysgu Sylfaen:

Datblygu sgiliau

Mae'r sgiliau canlynol yn hanfodol ar gyfer y Maes Dysgu hwn a gellir eu datblygu ar draws y cwricwlwm hefyd.

- Arsylwi
- Cymharu
- Dosbarthu
- Ymholi
- Archwilio ac arbrofi
- Gwrando
- Gwneud penderfyniadau
- Rhagfynegi a phrofi
- Myfyrio
- Disgrifio
- Didoli a grwpio
- Trefnu
- Gofyn/ateb cwestiynau
- Ymchwilio
- Meddwl
- Datrys problemau
- Cofnodi
- Cyfathrebu
- Gwerthuso



Foundation Learning:

Development of skills

The following skills are essential to this Area of Learning and can also be developed across the curriculum.

- Observing
- Comparing
- Classifying
- Enquiring
- Exploring and experimenting
- Listening
- Making decisions
- Predicting and testing
- Reflecting
- Describing
- Sorting and grouping
- Sequencing
- Asking/answering questions
- Investigating
- Thinking
- Solving problems
- Recording
- Communicating
- Evaluating



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Addysgeg Pedagogy

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Fi fy hun a phethau byw eraill

Er mwyn cefnogi datblygiad sgiliau a gwybodaeth plant ynghylch 'Fi fy hun a phethau byw eraill' mae'r meysydd a'r profiadau allweddol canlynol yn rhai y gellid cynllunio ar eu cyfer.

- Gan ddechrau â nhw eu hunain, bydd rhigymau a chaneuon actol yn galluogi'r plant i feithrin eu dealltwriaeth a'u geirfa ar gyfer disgrifio prif rannau eu cyrff.
- Dylai'r plant ddysgu am eu nodweddion trwy edrych ar eu hadlewyrchiad mewn drych, llunio cymariaethau, a siarad am y tebygrwydd a'r gwahaniaethau amlwg sydd rhyngddynt nhw a phlant eraill.
- Wrth iddyn nhw symud yn eu blaen, dylai'r plant arsylwi pobl ac anifeiliaid eraill a'u cymharu â'i gilydd. Dylen nhw ddarganfod bod anifeiliaid, gan gynnwys pobl, yn symud, bod angen bwyd a dŵr arnynt nhw, eu bod yn tyfu a'u bod yn atgynhyrchu.
- Trwy arbrofi mewn ystod o weithgareddau strwythuredig, dylai'r plant ddysgu defnyddio'u synhwyrdd i wahaniaethu rhwng gwahanol synau, blasau, arogleuon a gweadau, yn ogystal ag adnabod gwahaniaethau yn weledol.
- Gan ddefnyddio chwyddwydrau ac arsylwi pethau byw eraill megis creaduriaid bach a gasglwyd o'r amgylchedd lleol, dylai'r plant ddysgu am greaduriaid byw eraill a'u didoli a'u dosbarthu yn ôl eu meini prawf eu hunain neu feini prawf y cytunwyd arnynt nhw.
- Wrth i'w sgiliau ddatblygu, dylai'r plant fod yn gallu cofnodi'r data o'u hymchwiliadau gan ddefnyddio tablau, siartiau, graffiau, lluniau a TGCh, fel y bo'n briodol.
- O wneud gweithgareddau ymarferol megis palu, plannu, gofalu am hadau ac arsylwi'r modd maen nhw'n tyfu, bydd y plant yn dod i wybod am rannau planhigion ac yn deall bod planhigion yn bethau byw y mae angen dŵr arnynt nhw i dyfu.
- Efallai y gallai'r plant archwilio ardal neu arddangosfa synhwyrdd (gellid creu gardd synhwyrdd yn yr awyr agored i'r plant ymchwilio iddi hi). O ddysgu yn yr awyr agored, dylai'r plant fod yn meithrin gwybodaeth am gadwraeth a chynaliadwydd hefyd.

Myself and other living things

To support the development of children's skills and knowledge of 'Myself and other living things', the following are key areas and experiences that could be planned for.

- Starting with themselves, action rhymes and songs will allow children to build their understanding and vocabulary for describing the main parts of their bodies.
- Children should learn about their features by observing their reflections in mirrors, making comparisons and talking about the visible similarities and differences between themselves and other children.
- As they progress children should observe and make comparisons between humans and other animals. They should discover that animals, including humans, move, need food and water, as well as grow and reproduce.
- Through experimenting in a range of structured activities children should learn to use their senses to discriminate between different sounds, tastes, smells and textures, as well as to recognise differences visually.
- Through using magnifiers and observing other living things such as minibeasts collected in the local environment, children should learn about other living creatures and sort and classify them according to their own or agreed criteria.
- As their skills develop children should be able to record the data from their investigations using tables, charts, graphs, pictorial representations and ICT as appropriate.
- Practical activities such as digging, planting, and looking after seeds and observing their growth, will lead to knowledge of parts of a plant as well as understanding that plants are living things that need water to grow.
- Children could explore a sensory area or display (a sensory garden might be set up outdoors for them to investigate). Outdoor learning should also provide children with knowledge of conservation and sustainability.

Y Deuddeg Egwyddor Addysgeg

yn cadw ffocws cyson
ar ddibenion
cyffredinol y
cwriclewm

yn herio pob dysgwr
drwy eu hannog i
gydnabod pwysigrwydd
ymdrech barhaus i
gyrraedd disgwyliadau
sy'n uchel ond sy'n
gyraeddadwy iddynt

yn golygu defnyddio
amrywiaeth o ddulliau gan
gynnwys addysgu
uniongyrchol

yn golygu cyflogi cyfuniad o
ddulliau gan gynnwys y rhai
sy'n hyrwyddo'r gwaith o
ddatrys problemau, meddwl
creadigol a beirniadol

yn gosod tasgau ac yn
dewis adnoddau sy'n
adeiladu ar
wybodaeth a phrofiad
blaenorol ac sy'n
ennyn diddordeb

yn creu cyd-destunau
dilys ar gyfer dysgu

yn golygu defnyddio asesu
ar gyfer egwyddorion
dysgu

yn amrywio o fewn ac ar draws
Meysydd

yn atgyfnerthu'n
rheolaidd sgiliau
trawsgwricwlaidd
llythrennedd, rhifedd
a digidol

yn annog dysgwyr i
gymryd cyfrifoldeb
cynyddol am eu dysgu eu
hunain

yn cefnogi datblygiad
cymdeithasol ac emosiynol
a pherthnasoedd
cadarnhaol

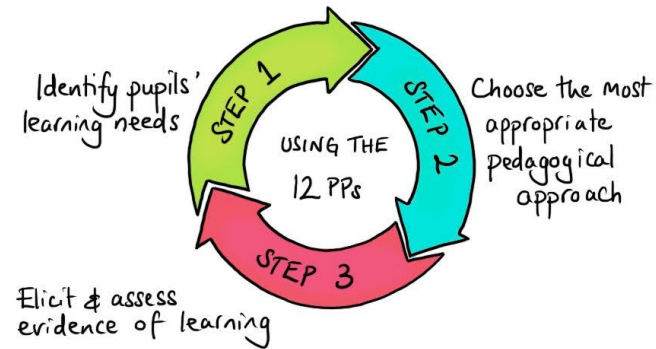
yn annog cydweithio

12 PEDAGOGICAL PRINCIPLES

UPDATED
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"The recommendations of this Review do not imply an emphasis on any particular teaching approaches: decisions about teaching and learning are best taken by teachers themselves."

Prof G. Donaldson, *Successful Futures* (2015)



Good teaching & learning...

Focuses on the 4 Purposes	Supports sustained effort to reach high but achievable expectations	Employs a range of pedagogical approaches including direct teaching	Promotes wider skills including problem solving creative & critical thinking
Builds on previous knowledge and experiences	Creates authentic contexts for learning	Uses assessment for learning	Makes connections within & between AoLEs
Reinforces cross curricular skills of LNF, DCF etc.	Supports learners to take responsibility for their own learning	Supports social and emotional development & positive relationships	Encourages collaboration

Sut i gefnogi meddwl ymchwiliol....



- Ateb cwestiwn gyda chwestiwn (Cwestiynu socratig)
- Seiliwch ar yr hyn maen nhw'n ei wybod yn barod (Piaget –Adeileddiaeth)
- Yn chwareus
- Diogel – dim atebion anghywir
- Cyd-adeiladu / Scaffaldio
- Dysgu trwy ddisgwrs

Mae hyn yn datblygu sgiliau metawybyddol sy'n hanfodol wrth ddysgu gwyddoniaeth a thechnoleg yn nes ymlaen.

[Summary_of_recommendations_poster.pdf](#)
(educationendowmentfoundation.org.uk)

Syniadau?

HOW TO SUPPORT AN ENQUIRING MIND...



- Answer questions with questions (Socratic questioning)
- Base on what they know already (Piaget –Constructivist)
- Playful
- Safe ...no wrong answers
- Co-construction / Scaffolding
- Learning through discourse (talking)

Support this by encouraging questions, creating a safe learning environment, scaffold on real world experiences, and talk about them. This develops metacognitive skills that are essential in learning science and technology later.

- IDEAS?

Gall llun fod yn sbardun i ysgogi plant gymryd rhan mewn trafodaeth effeithiol.



A picture can be a very good stimulus for children to engage in effective talk .



ASSESSMENT & PROGRESSION in Curriculum for Wales

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PROGRESSION STEPS



Age 5



Age 8



Age 11



Age 14



Age 16

At each progression step there will be **ACHIEVEMENT OUTCOMES** these are:

- * Short statements in learner friendly language
- * Reference points for each pupil's learning journey
- * Cover the AoLE What Matters Statements
- * Address the 4 Purposes of the curriculum
- * A sequence of learning across the curriculum

The cross curricular responsibilities of Literacy, Numeracy & Digital Competency will be subsumed into the new Areas of Learning & Experience.

Areas of Learning & Experience

What Matters / 4 Purposes

Knowledge, skills, experience



Achievement Outcomes



Cyfrifiadureg

- Does dim angen cyfrifiadur arnoch i addysgu sgiliau cyfrifiadureg.
- Mae sgiliau cyn-amgodio TGCh yn cynnwys:
 - Dilyniannu straeon neu weithredoedd.
 - Sut i wneud jeli? Ailadrodd stori
 - Trefnu "bygiau" i'w categoraiddi
 - Os... wedyn
 - Helfeydd trysor
 - Datrys drysfeydd (profi a methu)
 - Copïo dilyniannau.
- <https://www.yellow-door.net/blog/how-to-develop-pre-coding-skills-in-the-early-years/>

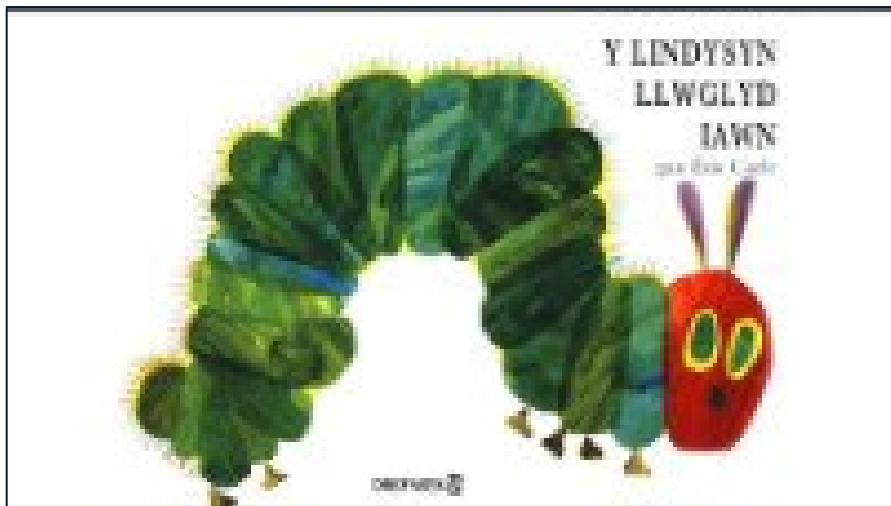


ICT Precoding skills

- You don't need a computer to teach computer science skills.
- ICT Precoding skills include:
 - Sequencing stories or actions. How to make jelly? Re-tell story
 - Sort “bugs” to categorise
 - If...then
 - Treasure hunts
 - Solve mazes (trial and error)
 - Copying sequences.
- <https://www.yellow-door.net/blog/how-to-develop-pre-coding-skills-in-the-early-years/>

Dysgu trwy straeon : Esiampl - Cam cynnydd?

<https://youtu.be/awUK9sXrCN8>



 Syniadau Cyswllt Cartref - Tymor yr Haf 2020 Dosbarth Jac Do Wythnos 04/05/20 a Wythnos 11/05/20 			
Ein thema dros y pythefnos nesaf yw trychfilod a stori'r Lindysyn Llwglyd iawn. Hoffwn i chi gyflawni'r gwaith dros y pythefnos nesaf. Isod ceir tabl ble y gallwch chi ddewis tasgau mewn unrhyw drefn. Mwynhewch! Diolch			
	Llythrennedd / Literacy	Rhifedd / Numeracy	Thema / Theme
1	Allwch chi ddefnyddio'r pupedau bysedd / lluniau neu greu pupedau er mwyn ail ddweud stori'r Lindusyn Llwglyd. Beth am newid y stori uchydig? e.e. Ar Ddudd Llun bwutaodd y Lindusyn Llwglyd drwy 1 tomato. Dydd Mawrth bwutaodd drwy 2 banana.	Beth am greu siop ffrwythau a llysiau chwarae rôl yn y tŷ neu tu allan. Rhowch pris ar bopeth (hyd at 10c i ddechrau). Sawl gwahanol ffordd allwch chi dalu?	Beth am <u>fund</u> ar helfa trychfilod? Beth <u>sudd</u> yn byw yn yr ardd? Beth am <u>creu</u> cartref i'r trychfilod?
2	Allwch chi cadw dyddiadur bwyd. Beth ydych chi'n bwyta bob dydd? Allwch chi didoli'r bwydydd i fwydydd iachus a ddim mor iachus?	Allwch chi <u>umarfer</u> dublu i 10 neu 20? Beth am <u>ddefnyddio</u> smotiau ar siâp pili pala er mwyn helpu. Beth am <u>ymchwilio</u> beth sy'n <u>gwneud</u> 10 / 20? Beth allwch chi <u>ddefnyddio</u> i'ch helpu?	<u>Defnyddiwch</u> purple Mash i <u>creu</u> llun eich hoff bwystfil bach. Beth am <u>ymchwilio</u> am <u>wahanol</u> ffurdd o <u>wneud</u> gan <u>ddefnyddio</u> Purple Mash.
3	Allwch chi gynllunio smwddi iachus? Ysgrifennwch rhestr o'r cynhwysion rydych chi'n defnyddio.	Allwch chi <u>creu</u> graff hoff ffrwythau neu llysiau eich teulu? Beth am <u>ofun</u> i <u>teulu</u> ar facetime neu What's App? Beth am <u>umarfer</u> guda'r un trychfilod? Beth am <u>creu</u> un <u>eich</u> hun?	Allwch chi <u>cynllunio</u> a <u>gwneud</u> mwgwd eich hoff fath o bwystfil bach sy'n byw yn yr ardd?

<https://www.rhyd-y-grug.cymru/jac-do-5/>

Dysgu trwy straeon

Tasg :3

<https://www.stem.org.uk/teaching-science-through-stories>

Jac a'r Goeden ffa



Yr Hugu Fach Goch



Cymerwch 30 munud i edrych ar yr adnoddau 5-7

Sut maen nhw'n cysylltu â gwyddoniaeth a thechnoleg? Mae straeon yn ffordd wych o ysgogi'r dychymyg a chreadigrwydd.

Mae'n drawsgwricwlaidd gyda llythrennedd ac mae'n darparu dolenni i'ch helpu chi i greu gwersi sy'n cyflawni'r pedwar diben.

Dewiswch 1 o'r adnoddau a rhestrwch ffyrdd y gallwch chi ddefnyddio'r stori i gysylltu â dysgu gwyddoniaeth a thechnoleg.

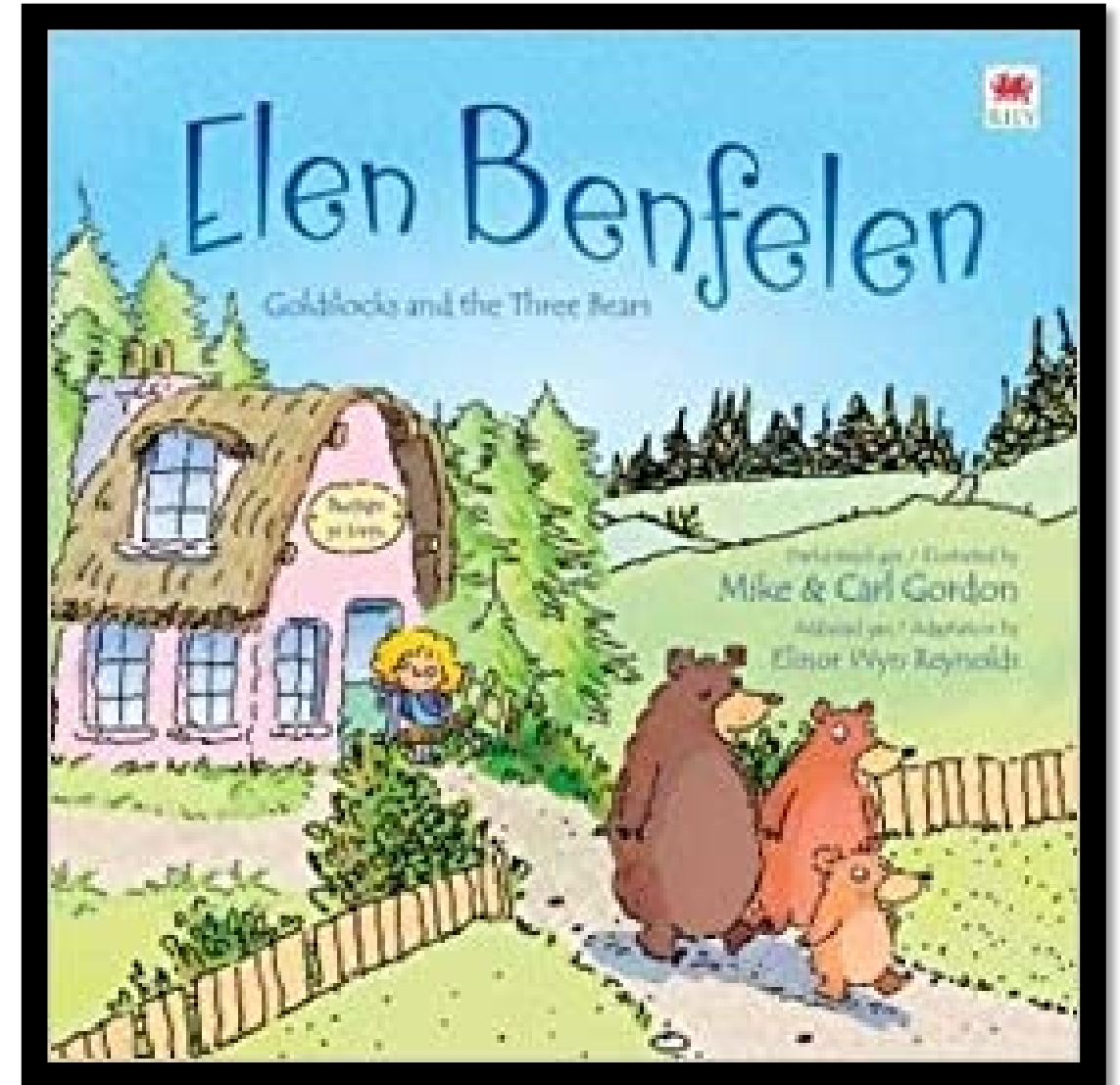
Tasg 3 :

Dysgu trwy straeon

- Elen Benfelen :

Cymerwch 30 munud i wyntyllu syniadau am sut allwch chi ddefnyddio'r stori yn sail i weithgaredd "Gwyddoniaeth a Thechnoleg"

- Adroddwch nôl yn eich grwpiau. Beth am greu sleid i rannu gydag eraill?



Teaching through stories : Example: Progression Step?

https://pstt.org.uk/resources/play-observe-ask/?_sft_age_ranges=three-five

EARLY YEARS SCIENCE PROVISION MAP



Play, Observe & Ask

Sensory Play

Learn: to name and describe a variety of everyday materials

You need: tray/box, hay/grass, straw, pine cones, shells, feathers, sensory objects (small bells), fabric pieces, stones, leaves, sticks, etc. Make a scarecrow 'sensory bin' with a variety of related materials.

Play, observe & ask

- Can you name these objects?
- Where do you think they came from?
- How would you describe the objects?
- Are they natural/not natural?
- Can you sort these objects? How?

Malleable Play

Learn: to name features of the animals in the story

You need: modelling clay (e.g. Play-Doh*), tools, feathers, fur, eyes, etc.

Play observe & ask:

- What was your favourite living thing from the story? Why?
- Can you make a model?
- What are the features of this creature?
- How is your animal different to the other animals in the story?
- How is your animal the same as the other animals in the story?

Water Play

Learn: that materials may change over time

You need: straw, tray, water, a variety of fabrics and materials (some waterproof, e.g. plastic bag), string (to make small bundles of straw) Recreate the pool from the story and make some small bundles of straw to represent scarecrows. (The children could help to do this.)

Play, observe & ask:

- What is straw? Where does it come from?
- How does it feel when it is dry?
- How does it feel when it is wet?
- What happens to a straw scarecrow if it is left in water?
- How could you keep a scarecrow dry? How can we test this? (Encourage children to wrap straw bundles in different materials).
- Which fabrics are waterproof? How do you know?

Construction

Learn: to compare the suitability of materials for a particular purpose (for building a scarecrow that will stand up)

You need: card, straw, rope, string, fabric, elastic bands, buttons etc...

Play, observe & ask:

- Where do you see scarecrows?
- What do you think they are made of?
- What materials will you use? Why?
- How will you make your scarecrow stand up?

THE SCARECROW'S WEDDING by Julia Donaldson & Alec Scheffler



Outdoors

Learn: to identify animals and plants in different habitats

You need: access to some of the habitats in the story (a tree, field, lawn, flowerbed, pond, beach), magnifiers, pictures or toy animals from the story (crows, geese, cows, crabs, mice, bees, toad, snail), pictures of possible habitats (tree, field, grass, beach, flowers, pond, stones)

Play, observe & ask:

- Who do you think might live here? Why do you think that?
- Focus on one animal - Where do think this animal might live?
- Can you describe this habitat?
- Who else might live here?
- Back in the classroom, using pictures - can you place the animal in the correct habitat?

Small World

Learn: features of animals in the story; similarities and differences between animals

You need: toy animals - crows, geese, cows, crabs, mice, bees, toad, snail

Play, observe & ask:

- Can you name the animals?
- Can you name the body parts?
- How are these animals similar?
- How are these animals different?
- Can you group the animals?
- What facts do you know about each animal?

Key Science Vocabulary

animal names - crows, geese, cows, crabs, mice, bees, toad, snail
body parts - head, body, legs, tail, whiskers, claws, feathers, beak, wings, shell, etc.

habitats - tree, field, grass/lawn, flowerbed, pond, beach
materials - fabric, cotton, plastic, paper, wood, shell, stone, straw
properties of materials - rough, smooth, hard, soft, shiny, dull, bendy, stretchy, strong, stiff, waterproof, natural, non-natural, etc.

Further Science

Flowers - name and collect 'pink' flowers.

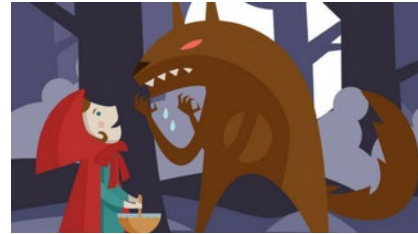
Habitats - What else lives in these habitats (farm, countryside, rock pool, etc.)?

Fire Safety - What burns easily? What should you do if you see a fire?

Teaching through stories

Task:3

<https://www.stem.org.uk/teaching-science-through-stories>



Take 30 mins to look at the resources : 5-7

How do they link with science and technology? Stories are a fantastic way of stirring up imagination and creativity.

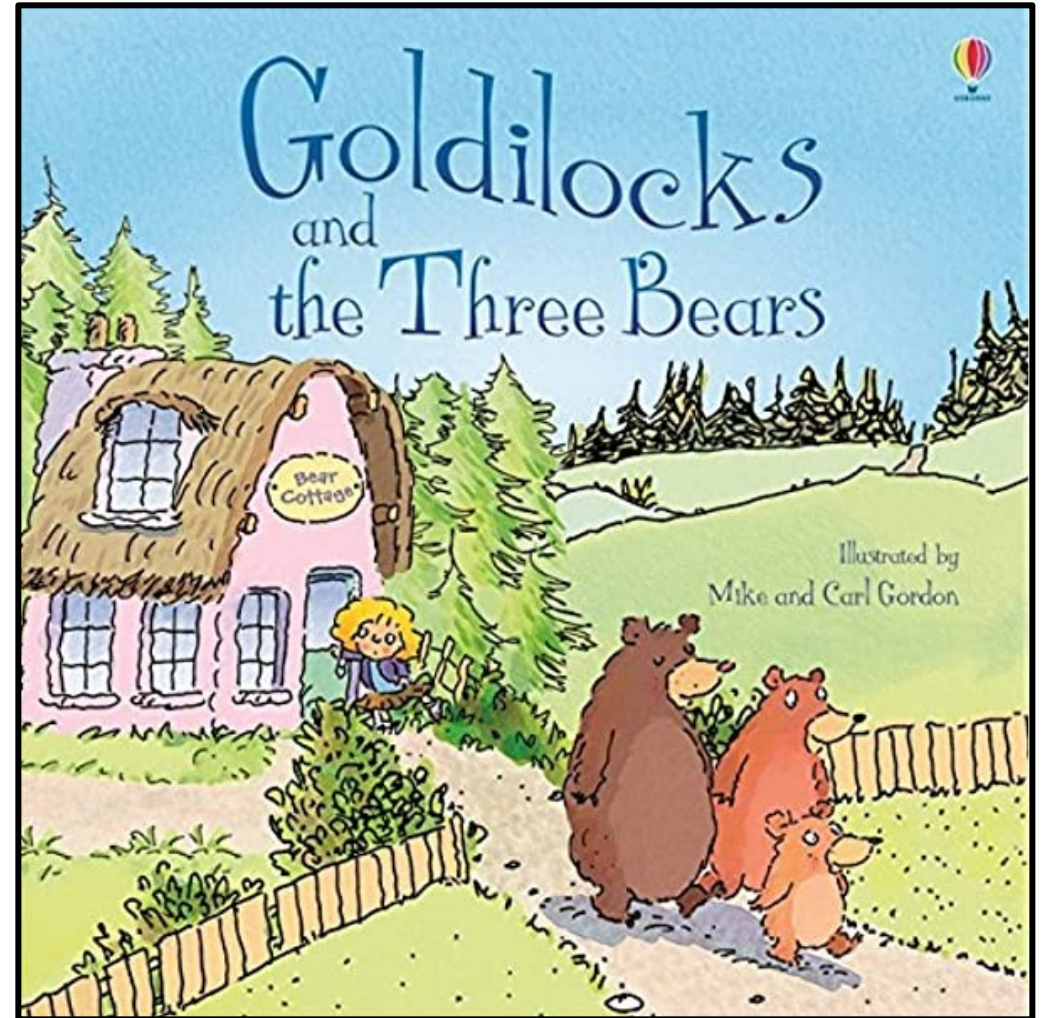
It is cross curricular with literacy and provides links helps you to create lessons that fulfil the four purposes.

Choose 1 of the resources and list ways in which you can use the story to link to learning of science and technology.

Teaching through stories

- **Goldilocks.** Take 30 mins to brainstorm how this can become a “Science & Technology” task.
- **Report back to your groups.**
- **Can you create a slide to share with other groups?**

Task 3 :



Sut?

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

How?

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

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?

Planning

Focus group task

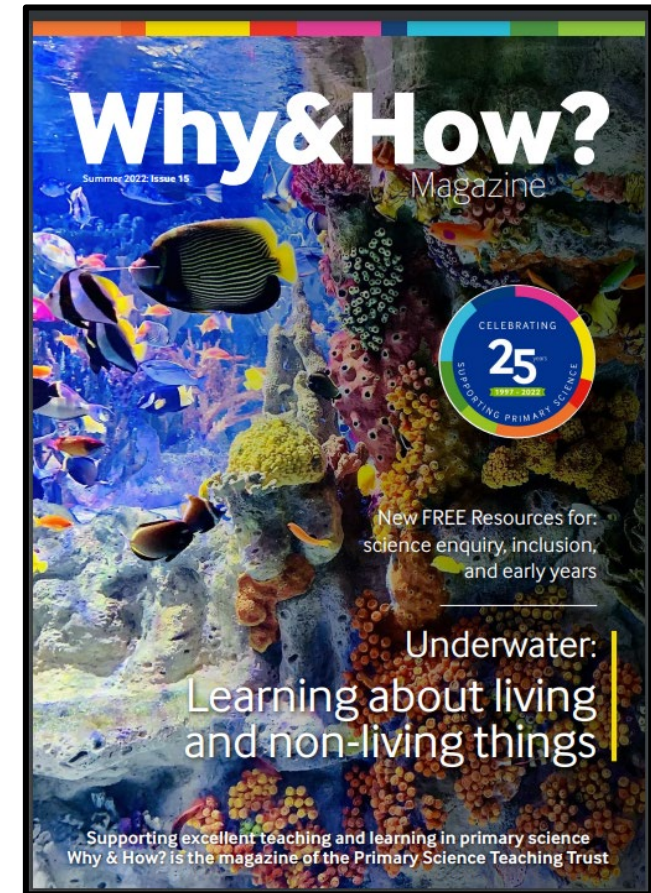
- ☐ Learning objective?
- ☐ What are the pupils learning?
- ☐ How are they learning?
- ☐ What do the pupils need to do
to succeed?



Cysylltiadau defnyddiol

Useful Links:

- <https://www.stem.org.uk/resources/collection/3485/teaching-primary-science>
- <https://www.ase.org.uk/resources/primary-science>
- <https://wowscience.co.uk/>
- <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>