

ECAD6051

Sgiliau Digidol / Digital Skills



Sgiliau Digidol mewn Gwyddoniaeth a Thechnoleg

Digital Skills in Science & Technology



Amcanion:

- ❖ Archwilio sut mae sgiliau digidol yn cefnogi Gwyddoniaeth a Thechnoleg
- ❖ Cysylltu â Chamau Cynnydd 1-3
- ❖ Profiadau ymarferol gyda Beebots, J2E, Blooket a dulliau arbrofi
- ❖ Myfyrio ar addysgeg ddigidol

Objectives:

- ❖ Explore how digital skills support Science & Technology
- ❖ Link to Progression Steps 1-3
- ❖ Practical experiences with Beebots, J2E, Blooket & experiment design
- ❖ Reflect on digital pedagogy

Meysydd Dysgu a Phrofiad:

- Gwyddoniaeth a Thechnoleg
- Cymhwysedd Digidol (trawsgwricwlaidd)

Camau Cynnydd 1-3 (enghreifftiau):

- Casglu a rhannu gwybodaeth (Cam 1)
- Defnyddio offer digidol syml i fesur / archwilio (Cam 2)
- Rhaglennu a defnyddio dulliau systematig i ddatrys problemau (Cam 3)

Computation is the foundation for our digital world.

Progression step 1	Progression step 2	Progression step 3
I can identify, follow and begin to create sequences and patterns in everyday activities. I am beginning to follow a sequence of instructions . I can experiment with and identify uses of a range of computing technology in the world around me.	I can safely use a range of tools, materials and equipment to construct for a variety of reasons. I can use computational thinking techniques, through unplugged or offline activities. I can create simple algorithms and am beginning to explain errors. I can follow algorithms to determine their purpose and predict outcomes. I am beginning to explain the importance of accurate and reliable data to ensure a desired outcome. I can follow instructions to build and control a physical device.	I can use conditional statements to add control and decision-making to algorithms . I can identify repeating patterns and use loops to make my algorithms more concise. I can explain and debug algorithms . I can use sensors and actuators in systems that gather and process data about the systems' environment. I can identify positive and negative design elements that affect user interactions.

Overview

Literacy and Numeracy Framework

Digital Competence Framework

Digital Competence Framework

Digital Competence Framework >

Alternative formats



Digital Competence Framework

XLSX 77 KB

This file may not be accessible. [Request a different format](#)



Digital Competence Framework: Routes for Learning and ABC steps

PDF 57 KB

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Digital Competence Framework: progression steps

PDF 82 KB

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Areas of Learning & Experience:

- Science & Technology
- Digital Competence (cross-curricular)

Progression Steps 1-3 (examples):

- Collect and share information (Step 1)
- Use simple digital tools to measure / explore (Step 2)
- Program & use systematic methods to solve problems (Step 3)

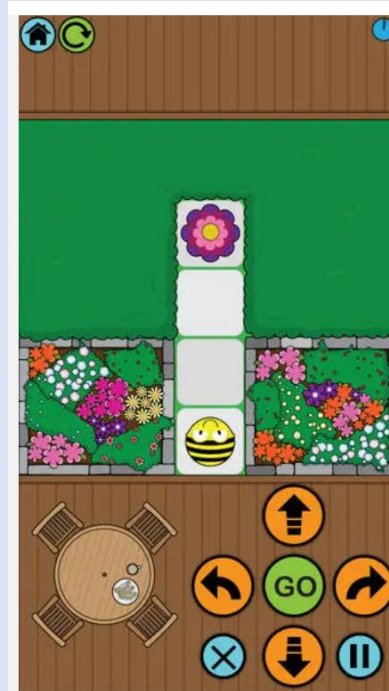


BEEBOT



Her Beebot:

- Defnyddio'r ap Beebot i lywio robot i gyrraedd targed
- Ystyried camau, rhaglennu a datrys problemau
- Trafod sut mae hyn yn cefnogi Camau Cynnydd 1-3



Beebot Challenge:

- Use the Beebot app to program a route to a target
- Consider steps, sequencing & problem solving
- Discuss links to Progression Steps 1-3

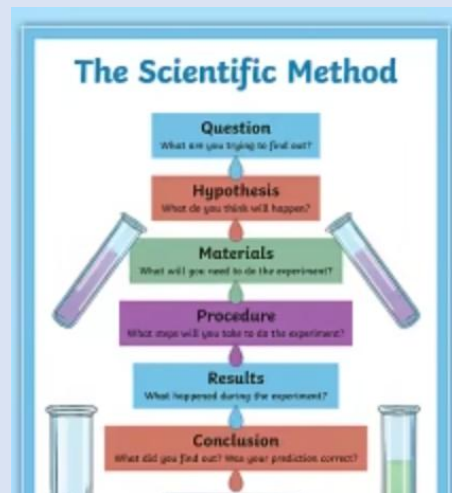
PLANNING IS KEY!

Arbrofion syml:

- Cynllunio arbrawf (e.e. pa ddeunydd sy'n toddi'n gyflymaf mewn dŵr cynnes?)

- Cofnodi canlyniadau gan ddefnyddio offer digidol (camera, taenlen J2E, ap mesur)

- Myfyrio ar sut mae hyn yn cefnogi llythrennedd gwyddonol



Simple Experiments:

- Plan an investigation (e.g. which material dissolves fastest in warm water?)

- Record results using digital tools (camera, J2E spreadsheet, measuring app)

- Reflect on how this supports scientific literacy

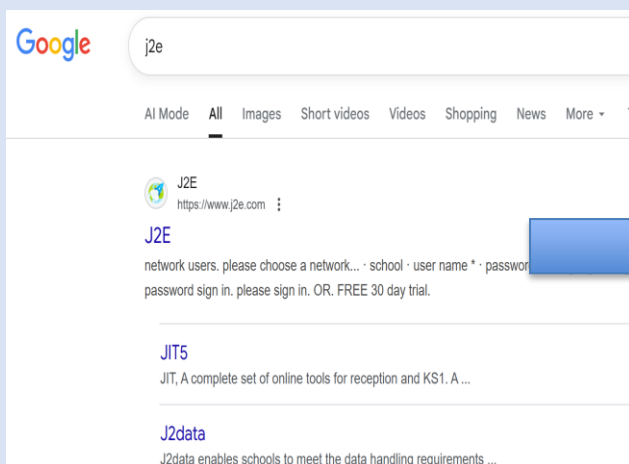
Lliwiau Llygaid?

Defnyddio J2E:

- Creu taenlen syml i gofnodi data
- Cynhyrchu graff

Using J2E:

- Create a simple spreadsheet to record data
- Generate graph





Chatterpix App



Gallwch bersonoli negeseuon i'ch dosbarth gan ddefnyddio'r ap hwn, gadewch i ni roi cynnig arno!!

1. lawrlwythwch Chatterpix (duck duck moose) neu debyg
2. tynnwch lun sgrin o gymeriad hoffus oddi ar y rhynggrwyd
3. dilynwch y cyfarwyddiadau yn yr ap i uwchlwytho'r llun, 'agor' y geg a chynnwys eich llais.

Heddiw, byddwn yn gwneud un i'n partneriaid ond dychmygwch ddweud wrth eich dosbarth "Bore da, Blwyddyn Tri! Rwy'n clywed mai hwn yw'r dosbarth gorau yn Ysgol Trinity!!! Capten Pugwash yma! Gwrandewch yn ofalus ar fy nghyfarwyddiadau ar gyfer heddiw..."

You can personalise messages to your class using this app, let's try!!

1. download Chatterpix (duck duck moose) or similar
2. take a screenshot of a favourite character from the internet
3. follow the instructions in the app to upload the picture, 'open' the mouth and add your voice.

Today we will make one for our partners but imagine saying to your class "bore da, blwyddyn tri! I hear this is the best class in Trinity School!!! Captain Pugwash here! Listen carefully to my instructions for today..."

UWTSD



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

 [UWTSD_DEE_IR_Catalogue for Education Students.pptx](#)

Crynodeb:

- Cysylltu damcaniaeth a gwaith ymarferol
- Cymhwysedd digidol yn rhan o'r Cwricwlwm i Gymru
- Camau Cynnydd 1–3 yn arwain y daith
- Sgiliau i'w haddysgu trwy brofiad a hwyl

Camau nesaf i chi:

- Ymgorffori Beebots, J2E neu apiau eraill mewn cynlluniau gwersi
- Myfyrio ar sut mae sgiliau digidol yn cefnogi llythrennedd gwyddonol
- Rhannu syniadau gyda chyd-fyfyrwyr

Cwestiynau:

- Sut mae'r sgiliau digidol hyn yn cefnogi gwyddoniaeth a thechnoleg?
- Pa heriau a all godi mewn dosbarthiadau cynradd?
- Sut fydddech chi'n sicrhau hygyrchedd i bob disgybl?

Summary:

- Linking theory and practical application
- Digital competence as part of Curriculum for Wales
- Progression Steps 1–3 guide the journey
- Skills best taught through experience and fun

Your Next Steps:

- Incorporate Beebots, J2E or other apps into lesson planning
- Reflect on how digital skills support scientific literacy
- Share ideas with peers

Questions:

- How do these digital skills support science & technology?
- What challenges might arise in primary classrooms?
- How would you ensure accessibility for all learners?