



Microsoft Ireland Dream Space™

Unleashing future-ready skills
with Dream Space

ETBI Conference

#MSDreamSpace



Introductions



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#MSDreamSpace

Find out more at www.DreamSpace.ie

Microsoft Dream Space™

Dream Space provides immersive, research-based **STEM experiences** for students and teachers to enhance their STEM skills alongside crucial social-emotional skills such as empathy, creativity, ethical decision making, critical thinking and collaboration.

Dream Space TV

Dream Space Digital Academy

Dream Space LIVE

Dream Space Field Trips

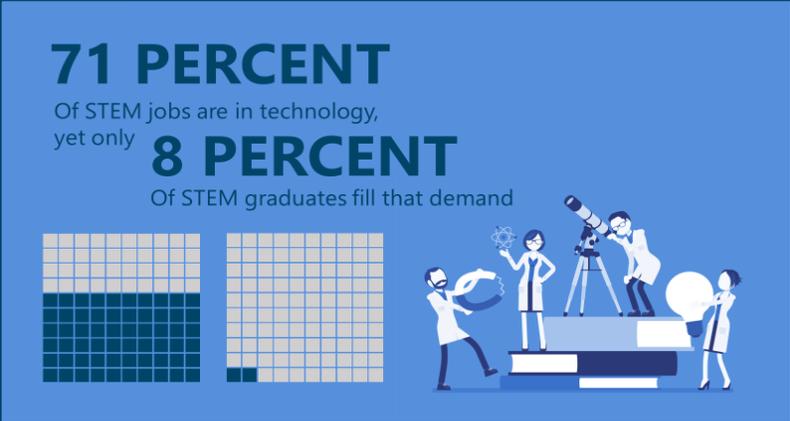
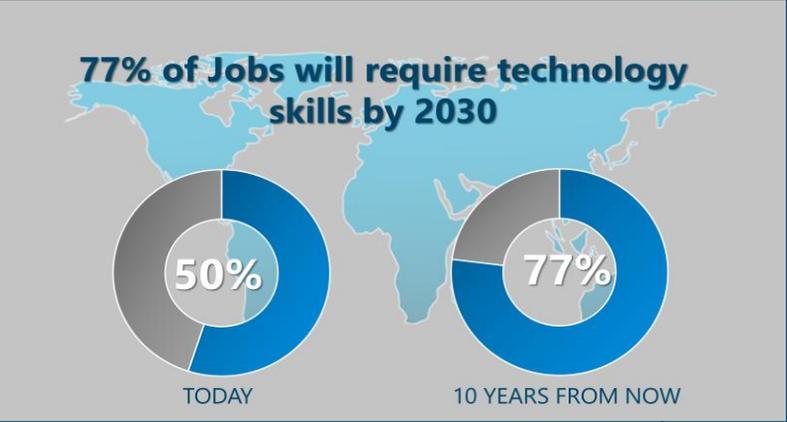
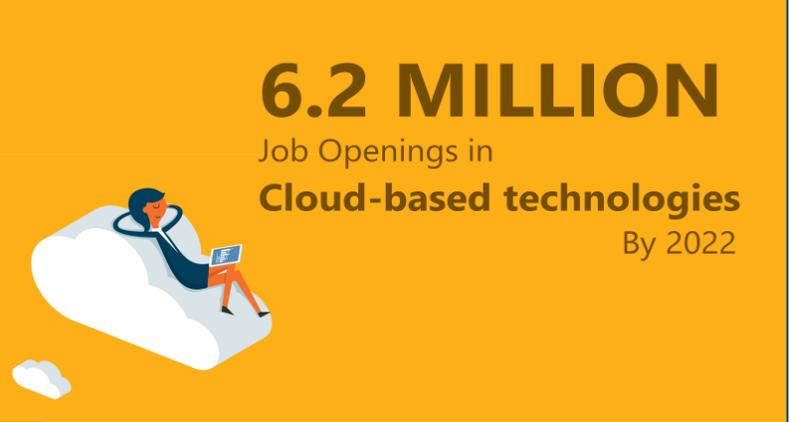
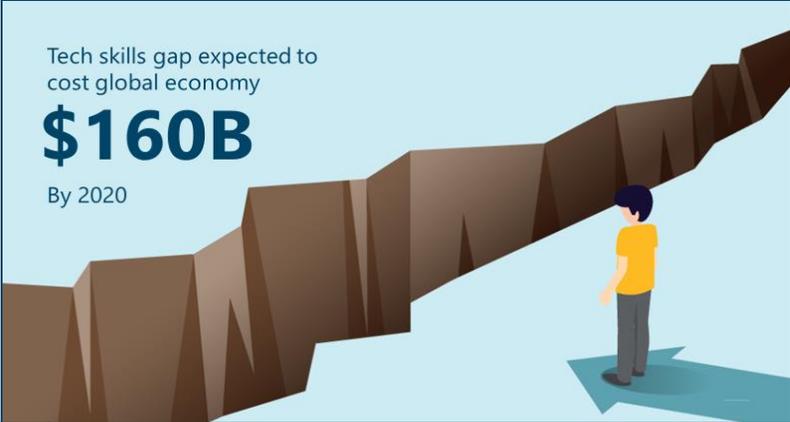
Dream Space Ambassadors

Dream Space in the Community

Dream Space Teacher



DIGITAL TRANSFORMATION REQUIRES NEW SKILLS



The role of industry

“In terms of industry engagement directly with schools, guidelines developed by the Department in conjunction with business/industry are available to advise on partnerships whereby schools and business/industry can form quality, inclusive and relevant educational links, to improve STEM/digital learning experience.”



An Roinn Oideachais
Department of Education

Digital Strategy for Schools

to 2027



Curriculum & Policy Links



Looking at Our School 2022:
A Quality Framework for
Post-Primary Schools

Inspectorate
Updated January 2024

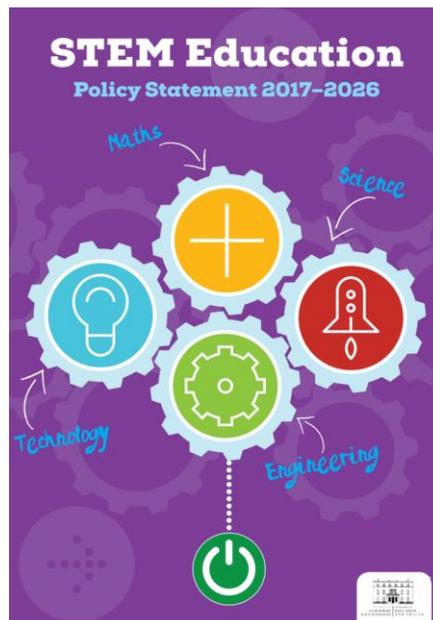


Looking at Our School 2022:
A Quality Framework for
Primary Schools and
Special Schools

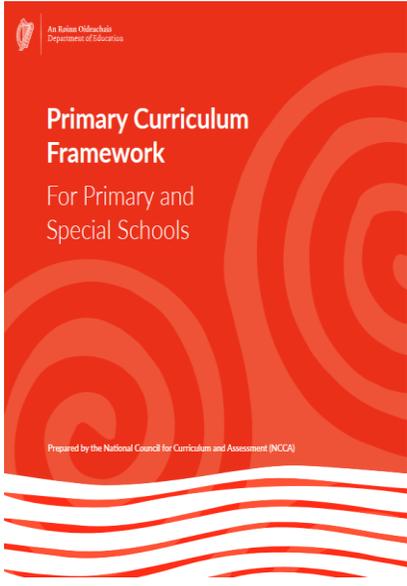
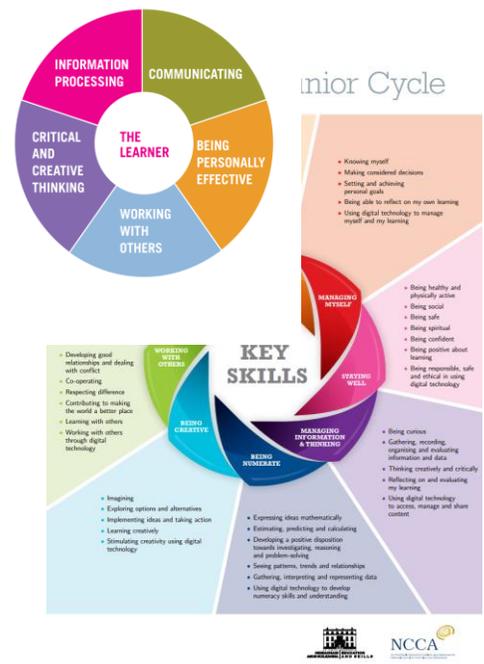
Inspectorate
August 2022



Digital Strategy
for Schools
to 2027



FIVE KEY SKILLS



Looking at Our School 2022

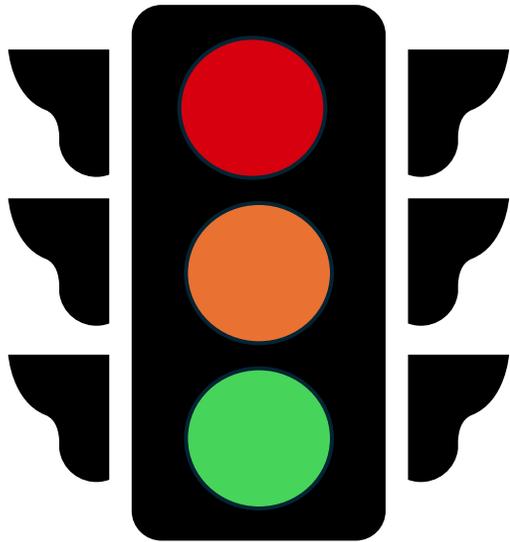
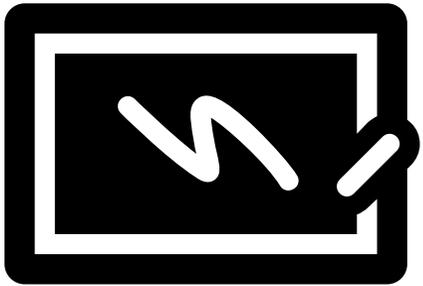
Digital Strategy for Schools to 2027

STEM Education Policy Statement 2017-2026

Junior Cycle & Senior Cycle

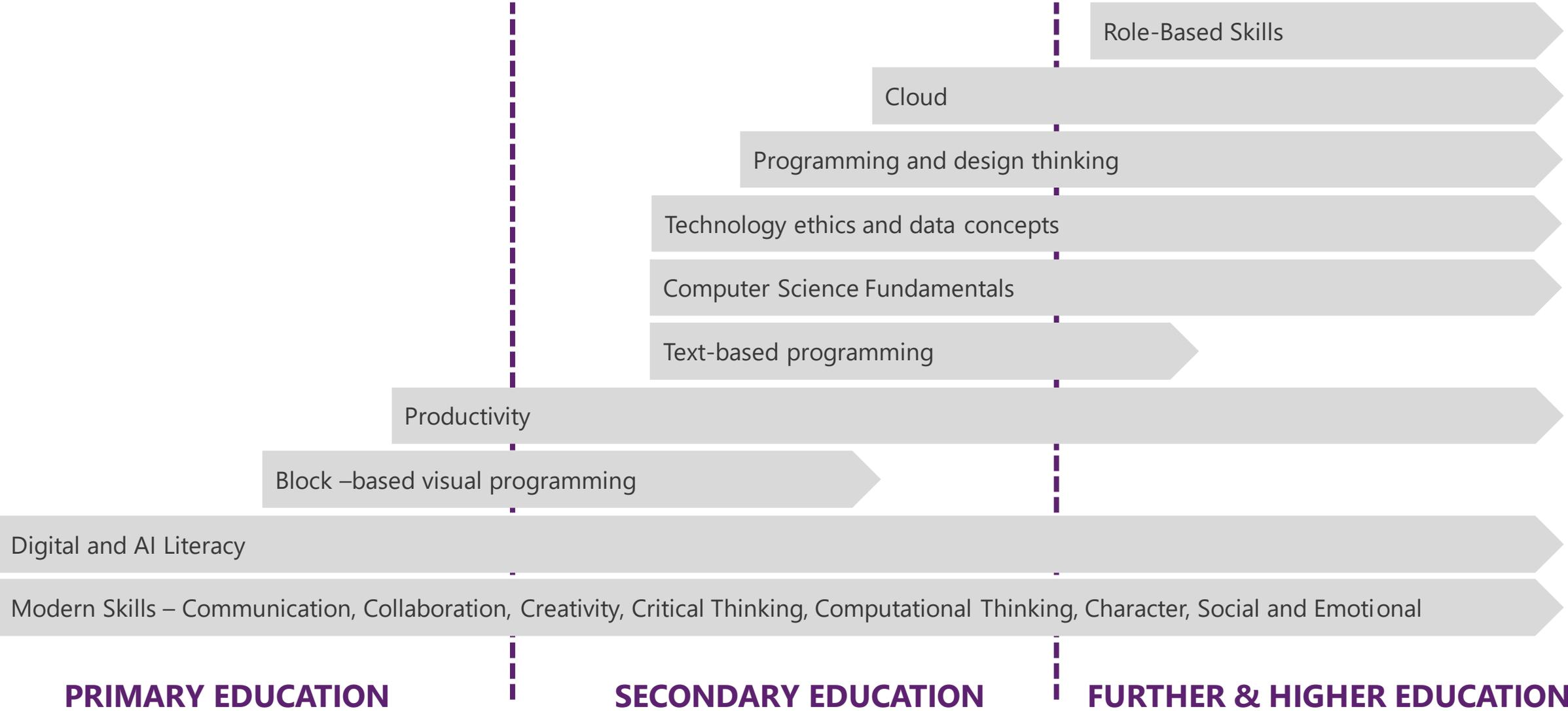
New Primary Curriculum Framework

What do we mean by future-ready skills



Analytical thinking	Active learning	Complex problem solving
Communication and interpersonal skills	Cognitive flexibility	Critical thinking and analysis
Creativity and Innovation	Emotional intelligence	Digital and AI literacy

Future-ready skills by sector



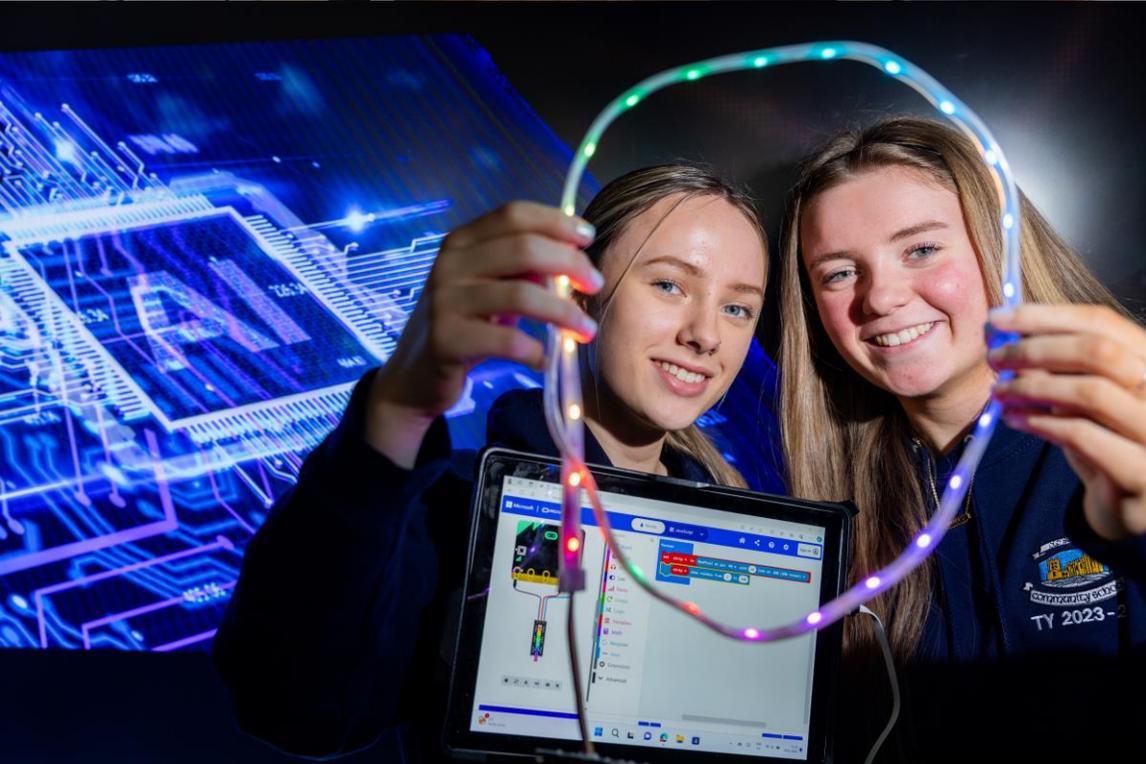
Source: Microsoft



Why we want young people to be digitally skilled and AI literate...

As highlighted by the 'AI Skills Report'¹ for Ireland:

1. AI will impact the labour market
2. Digital skills related challenges already exist (and need addressing)
3. Different people, different skills, different levels are expected and needed



1. AI Skills: A preliminary assessment of the skills needed for the deployment, management and regulation of artificial intelligence, Department of Business, Enterprise and Innovation, 2022

What is Artificial Intelligence?

Artificial Intelligence (AI) is when a machine/technology can imitate some features of human intelligence.



HUMAN

**Language
(speaking and listening)**

Vision

Learning

Reasoning

Creativity

ARTIFICIAL INTELLIGENCE

**Voice Assistants &
Translation Tools**

**Facial/Image/Object
Recognition**

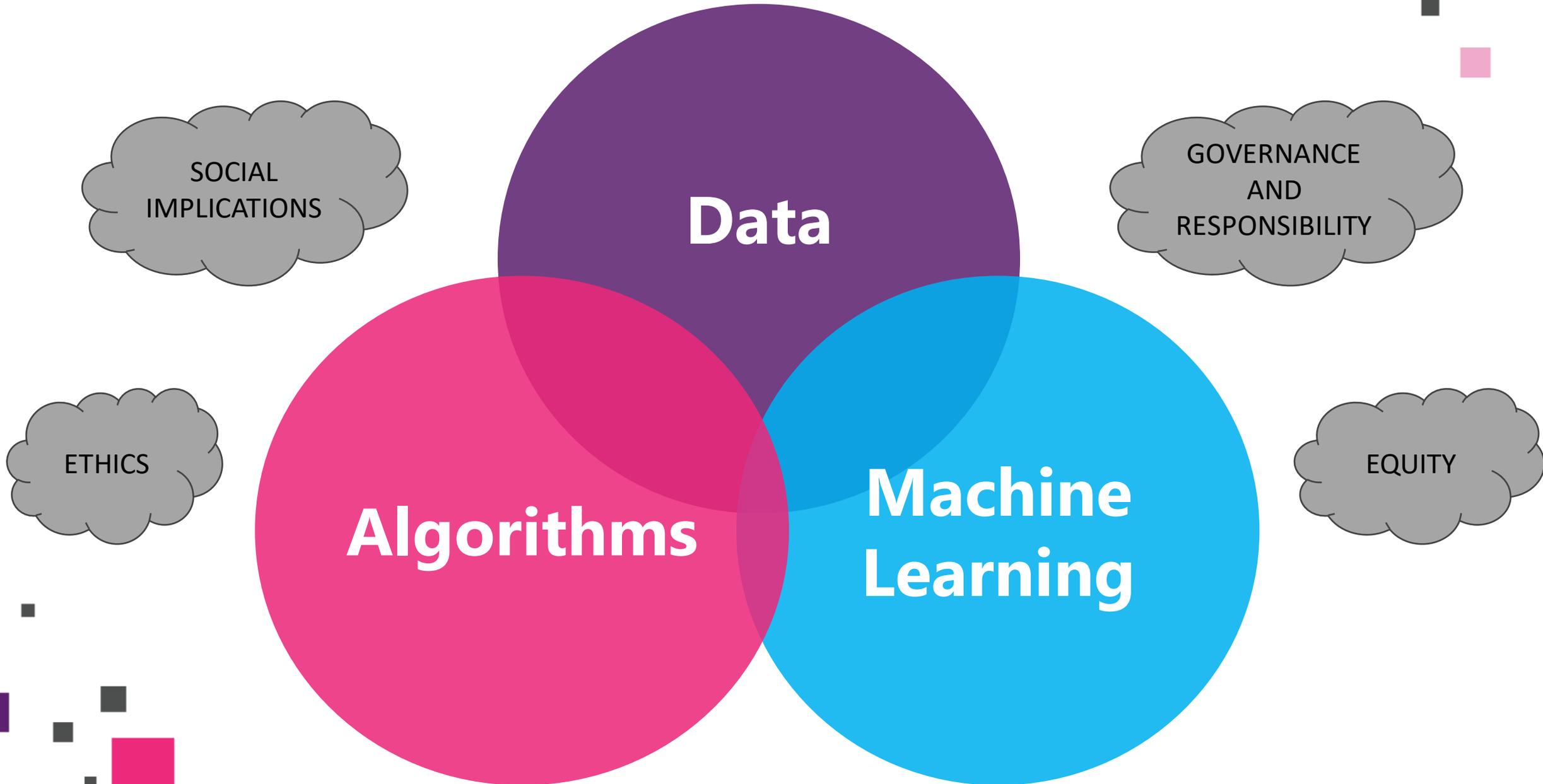
**Social Media &
Streaming Services**

**Navigation &
Scheduling tools**

**Chat GPT &
DALL-E**



Components of AI



Artificial Intelligence

Machine Learning

Deep Learning

Generative AI



Artificial Intelligence

The field of computer science that seeks to create intelligent machines that can replicate or exceed human intelligence



Machine Learning

Subset of AI that enables machines to learn from existing data and improve upon that data to make decisions or predictions



Deep Learning

A machine learning technique in which layers of neural networks are used to process data and make decisions



Generative AI

Generates new, original data that is similar to, but not exactly the same as, the data it was trained on based on prompts or existing data



Activity: Utilising Bing Chat in your role

Microsoft Bing SEARCH Work Web amjolli@mic... Protected

You are a personal assistant who is highly organised and knows how I can utilise rules and automation to assist in managing my emails. I am a school principal using Outlook and would like you to provide clear details on the steps I can follow to support me in managing this.

✓ Searching for: **how to manage emails in Outlook using rules and automation**

✓ Generating answers for you...

Your personal and company data are protected in this chat

Sure, I can guide you on how to manage your emails in Outlook using rules and automation. Here are the steps:

Creating a Rule from a Message:

1. Right-click a message in your inbox or another email folder and select Rules.
2. Select one of the options. Outlook automatically suggests creating a rule based on the sender and the recipients.
3. To view more options, select Create Rule.

Your personal and company data are protected in this chat

Ask me anything...

0/4000

le to assume

do with your prompt

your prompt

Generative AI in professional settings (e.g. school leaders)....

AutoSave On | DreamSpace TV | General - Saved | Search | Amanda Jolliffe

File Home Insert Draw Page Layout Formulas Data Review View Automate Help Table Design

Comments Share Catch up

PivotTable Recommended PivotTables | Tables | Pictures | Shapes | SmartArt | Illustrations | Recommended Charts | Charts | Maps | PivotChart | Tours | 3D Map | Line Column Win/Loss | Sparklines | Slicer Timeline | Filters | Link | Comment | Text | Equation | Symbol

H1: How would you rate the learning experience from this episode (1- poor, 2- average 3- good, 4- very good, 5- excellent)

	B	C	D	E	F	G	H	I
1	Start time	Completion time	Name	I am watching Dream	I am watching Dream	I/We just watched..	How would you rate	What county
2	9/29/20 10:31:13	9/29/20 10:32:03	Episode One	Yes	No	Episode One	4	Meath
3	9/29/20 11:27:14	9/29/20 11:27:37	Episode One	Yes	No	Episode One	5	Mayo
4	9/29/20 12:39:26	9/29/20 12:39:55	Episode One	Yes	No	Episode One	5	Kildare
5	9/29/20 14:21:48	9/29/20 14:23:19	Episode One	Yes	No	Episode One	5	Kildare
6	9/30/20 8:57:42	9/30/20 8:58:08	Episode One	Yes	No	Episode One	4	Westmeath
7	9/30/20 9:23:26	9/30/20 9:23:55	Episode One	Yes	No	Episode One	4	Limerick
8	9/30/20 11:56:00	9/30/20 11:56:41	Episode One	Yes	No	Episode One	4	Ireland
9	9/30/20 11:56:14	9/30/20 11:56:50	Episode One	Yes	No	Episode One	4	Tipperary
10	9/30/20 11:56:23	9/30/20 11:56:59	Episode One	Yes	No	Episode One	5	Tipperary
11	9/30/20 11:55:52	9/30/20 11:57:06	Episode One	Yes	No	Episode One	4	Ireland
12	9/30/20 11:55:49	9/30/20 11:57:10	Episode One	Yes	No	Episode One	4	Tipperary
13	9/30/20 11:56:15	9/30/20 11:57:19	Episode One	Yes	No	Episode One	5	Ireland
14	9/30/20 11:56:54	9/30/20 11:57:36	Episode One	Yes	No	Episode One	4	Tipperary
15	9/30/20 11:55:54	9/30/20 11:57:39	Episode One	Yes	No	Episode One	5	Tipperary
16	9/30/20 11:56:26	9/30/20 11:57:39	Episode One	Yes	No	Episode One	2	Tipperary
17	9/30/20 11:57:01	9/30/20 11:57:40	Episode One	Yes	No	Episode One	4	Ireland
18	9/30/20 11:56:56	9/30/20 11:57:44	Episode One	Yes	No	Episode One	4	Tipperary
19	9/30/20 11:57:13	9/30/20 11:57:50	Episode One	Yes	No	Episode One	5	Ireland
20	9/30/20 11:57:23	9/30/20 11:57:55	Episode One	Yes	No	Episode One	5	Tipperary
21	9/30/20 11:56:55	9/30/20 11:58:00	Episode One	Yes	No	Episode One	3	Ireland
22	9/30/20 11:57:09	9/30/20 11:58:05	Episode One	Yes	No	Episode One	4	Ireland
23	9/30/20 11:56:03	9/30/20 11:58:16	Episode One	Yes	No	Episode One	4	Ireland
24	9/30/20 11:56:55	9/30/20 11:58:20	Episode One	Yes	No	Episode One	4	Tipperary
25	9/30/20 11:56:15	9/30/20 11:58:23	Episode One	Yes	No	Episode One	5	Tipperary
26	9/30/20 11:57:58	9/30/20 11:58:24	Episode One	Yes	No	Episode One	4	Ireland
27	9/30/20 11:57:53	9/30/20 11:58:29	Episode One	Yes	No	Episode One	4	Tipperary
28	9/30/20 11:56:06	9/30/20 11:58:40	Episode One	Yes	No	Episode One	4	Tipperary
29	9/30/20 11:57:31	9/30/20 11:58:41	Episode One	Yes	Yes	Episode One	4	Tipperary
30	9/30/20 11:58:23	9/30/20 11:58:42	Episode One	Yes	No	Episode One	4	Ireland
31	9/30/20 11:57:00	9/30/20 11:58:44	Episode One	Yes	No	Episode One	4	Tipperary
32	9/30/20 11:58:12	9/30/20 11:58:51	Episode One	Yes	No	Episode One	5	Tipperary
33	9/30/20 11:56:22	9/30/20 11:58:53	Episode One	Yes	No	Episode One	4	Tipperary
34	9/30/20 11:56:52	9/30/20 11:58:56	Episode One	Yes	No	Episode One	4	Ireland

Copilot (Preview)

How would you rate the learning experience from this episode (1- poor, 2- average 3- good, 4- very good, 5- excellent)

Average of How would you rate the learning experience from this episode (1- poor, 2- average 3- good, 4- very good, 5- excellent)

3.96

AI-generated content may be incorrect

The mean rating for the learning experience from the episode is 3.96.

AI-generated content may be incorrect

Are there any outliers in my data?

Can I see another insight?

Add all insights to grid

Ask a question or make a request about data in a table

0/2000

Generative AI in professional settings (e.g. school leaders)....

The image shows a Microsoft Word document titled "BOM-Minutes-Template (1) - Compatibility Mode" with the Copilot AI assistant open on the right. The document content is as follows:

1. Attendance
XXXXXX (Chairperson. Trustee);X XXXXX Trustee);X XXXX (Trustee);X XXX (Parent); X XXXX (Teacher);X XXXX (Teacher);X XXXX (Teacher); ; X XXXX (Sec B.O.M.);.
Apologies: X XXXX (Trustee.); X XXXX (Parent).

2. Minutes
The minutes of the last meeting were adopted. Proposed: X XXX;
Seconded: X XXX.

3. Matters Arising
X XXXX, newly appointed S N A received his first payment last Thursday. In the event of the Haddington Rd Agreement being accepted the moratorium on filling the outstanding A P. position will be lifted and it will be possible to fill it.

4. Correspondence
• Applications for personal leave were received from X XXX Sept 5th; X XXX Sept 18"; X XXX Sept 18"
• A letter from X XXX requesting unpaid sick leave for one year from 24/08/13
A thank you card from X XXXX for the board's gift to her on her recent Retirement
DES Circulars.
CEIST Correspondence.
JMB Bulletins.

5. Financial Report.
Financial Sub Committee Report given by XXXX. Checklist read out. approved & signed by

The Copilot sidebar on the right contains a summary of the document's key points:

- **Attendance:** The board members who were present and absent at the last meeting should be recorded. 1 2
- **Minutes:** The minutes of the last meeting should be adopted and any amendments should be noted. 3 4
- **Matters Arising:** The board should follow up on the status of the SNA payment, the AP position, and the Haddington Road Agreement. 5 6
- **Correspondence:** The board should acknowledge the letters received from staff and former staff, and review the DES, CEIST and JMB circulars. 7 8
- **Financial Report:** The board should approve the financial sub committee report and the checklist, and discuss the cash balances, debtors and creditors. 9 10
- **Policy Formation:** The board should review and update the policies on admissions, code of behaviour, homework and dignity in workplace. 11 12

Below the summary are buttons for "Copy", "Make the summary more casual", and "Make the summary shorter". At the bottom of the sidebar, there is a section "Using this document" with the text "Ask questions and work with this document" and a character count "0/2000".

UNESCO K-12 AI Curricula

United Nations Educational, Scientific and Cultural Organization (UNESCO), 2022. France. Available at [K-12 AI curricula: a mapping of government-endorsed AI curricula - UNESCO Digital Library](#)

Clear and useful framework that outlines knowledge, values and skills that young people in primary, middle and high school require based on mapping they completed.

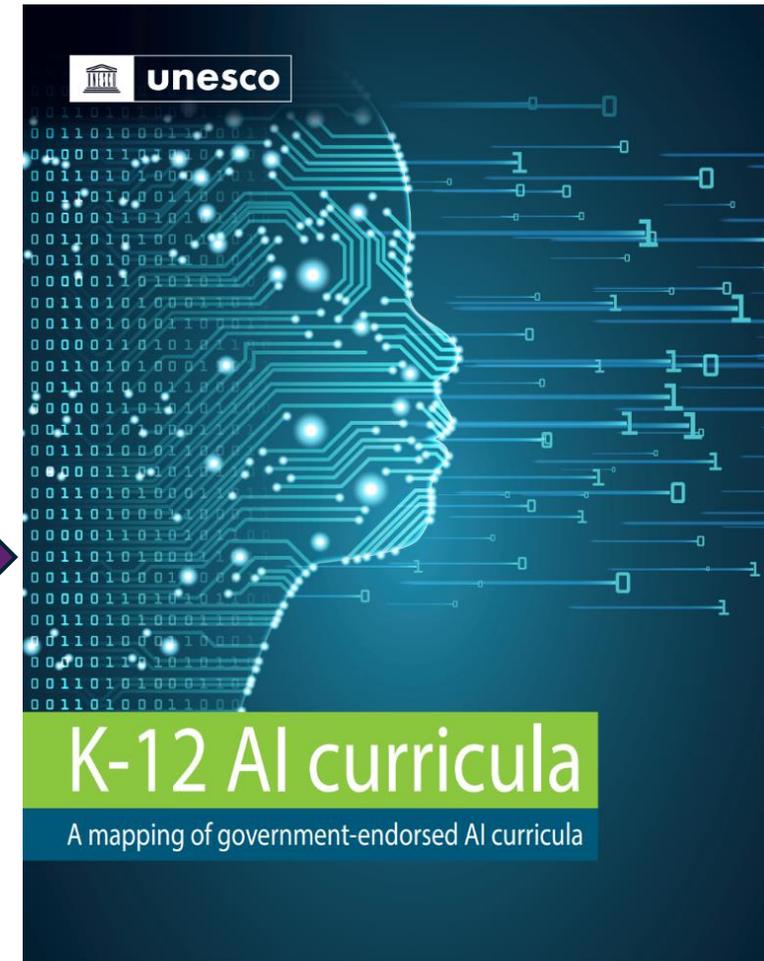
Domain	Sub-domain	Learning outcomes	Grade levels engaged		
			Primary school	Middle school	High school
Ethics of AI	Ethical terms, definitions and examples	Understands what ethical terms such as 'bias', 'fairness' and 'representation' mean in relation to AI		X	X
		Reflects on human rights and ethical issues in technology/AI use		X	X
		Describes the limitations of AI			X
		Understands the ethical considerations and dilemmas which may arise from AI			X
	Access	Understands issues of access to technology			X
	Bias	Explains how the biases of the programmers influence the fairness of the AI rules			X
		Understands the effects of information quality in decision-making			X
		Understands algorithmic bias and types/sources of bias		X	X
		Understands methods of mitigating/lessening bias in AI algorithms		X	
		Understands different types of bias (representation, selection, etc.)			X
	Intellectual property	Analyses cases where AI has been clearly fair or unfair			X
		Understands intellectual property rights	X		
		Defends a position on ownership of art generated or enhanced by AI		X	
	Privacy and security	Understands/respects basic intellectual property laws		X	
		Develops an awareness of cybersecurity	X		
		Develops deep knowledge of the concept of digital identity			X
		Understands how digital service providers inform users about how personal information is used			X
	Transparency / explainability	Understands how personally identifiable information can be used and shared			X
		Understands the mechanisms of image and data manipulation			X
	Human agency	Understands the principle of explainable AI and its tenets			X
Understands that humans control AI and machine learning			X	X	
Understands usability, security, and accessibility of computer systems as key features of their design				X	
AI's advantages and disadvantages	Understands how to ethically create and/or use AI			X	
	Understands how AI can benefit humans	X	X	X	
	Reflects on the advantages and disadvantages of new technologies	X	X	X	
		Outlines the advantages and disadvantages of AI in different social, educational, and professional contexts			X

Table 15. Values and attitudes outcome mapping

Value / attitude to be developed	Examples of related knowledge and skills outcomes	Grade levels engaged		
		Primary school	Middle school	High school
Personal				
Interest in ICT	Explores existing AI tools	X	X	X
	Creates innovative solutions through AI tools	X	X	X
Persistence / resilience	Solves problems using programming methodology Tests and redesigns artefacts and products	X	X	X
Personal empowerment	Creates a project using design thinking Researches exposed private data on the internet Identifies avenues of redress if personal rights are violated		X	X
Reflection	Reflects on how 'my personal future work' may be impacted by AI Describes the role and importance of AI and its applications Explores emerging technologies that have the potential to disrupt the way people live, learn and work		X	X
Critical thinking and reflection	Designs, develops and employs strategies for solving real-life problems using computational thinking Explains how the programmers' bias influences the fairness of AI rules Compares, analyses and critically evaluates information and digital content (e.g. to recognize manipulation)			X
Entrepreneurship	Uses design thinking methodology to produce a prototype Develops awareness of entrepreneurship principles/processes to implement innovative ideas			X
Social				
Collaboration / teamwork	Works as part of a team or group	X	X	X
	Implements a project as part of a team Collaborates online as a member of a team			
Communication	Creates a story and illustrations using GANs Writes guidance for AI developers to ensure that AI is made ethically			X
Societal				
Respect for others	Engages respectfully with others Protects personal data and own/others' privacy	X	X	X
Personal responsibility	Disposes of technology properly Understands that humans control AI and ML	X	X	X
Integrity	Understands methods of mitigating/lessening bias in AI algorithms Designs an end-to-end ML process that maximizes transparency and ensures fairness		X	X
Tolerance	Shows tolerance for different ideas/positions		X	X

Artificial Intelligence across the curriculum-some examples:

<p>Business</p> <ul style="list-style-type: none">• JC Business <i>Exploring Business</i> element or LC Business Unity 5 <i>Business in Action</i>• Development in technology- impact on consumers• Role of technology – rewards and costs• Many case studies to consider e.g. Netflix, Spotify, TikTok	<p>Geography</p> <ul style="list-style-type: none">• Role of AI across <i>Sustainability</i> now and into the future• Example case study to review: FarmBeats (data-driven farming) which was developed to address the findings from several studies which highlight the increased food production required by 2050.
<p>Science</p> <ul style="list-style-type: none">• Nature of Science- Science in society• Example case study (Earth & Space): NASA use of AI in engineering solutions + Earth Sciences	<p>Physical Education</p> <ul style="list-style-type: none">• LCPE <i>Structures & Strategies</i>• Many examples of the use of AI to now inform decisions across sports e.g. AI tools informing manager decisions/tactics based on data from their team and opponents



United Nations Educational, Scientific and Cultural Organization (UNESCO), 2022.
France. Available at [K-12 AI curricula: a mapping of government-endorsed AI curricula - UNESCO Digital Library](#)

Classroom Activity encouraging student voice – Walking Debate



AI will need to be guided by strong ethical principles and diversity of perspectives for it to serve society well.²

AI should assist human judges in criminal trials.

Self-driving vehicles should be the only vehicles on the road.

Social media sites should use data to improve user wellbeing

Facial recognition should be used by all police forces to identify criminals

A wide-angle shot of a modern school atrium. In the foreground, a group of students in maroon hoodies and dark trousers are walking away from the camera. The atrium has a light-colored tiled floor and is surrounded by multi-story glass-walled buildings. Other students and staff are visible in the background, some standing near a reception desk. The lighting is bright and even.

Sacred Heart School,
Tullamore

Microsoft Dream Space™ & RTÉ Learn presents
brAI_n_waves

**GET READY
FOR THE AI ADVENTURE**



Dream Space TV: brAI_n_waves series is a collaboration between RTÉ Learn and Microsoft Dream Space which aims to educate young people on the importance of understanding Artificial Intelligence (AI) from how it works and what is behind it, to its impact on us and why we should be learning about it. This series will provide **hands-on lessons focused on developing AI literacy³** for all schools and the youth sector across the island of Ireland and provides students with a chance to enter and win prizes as part of the **brAI_n_waves competition.**

3. United Nations Educational, Scientific and Cultural Organization (UNESCO), 2022. France. Available at [K-12 AI curricula: a mapping of government-endorsed AI curricula - UNESCO Digital Library](#)

#MSDreamSpace



What do we mean by future-ready skills

Analytical thinking	Active learning	Complex problem solving
Communication and interpersonal skills	Cognitive flexibility	Critical thinking and analysis
Creativity and Innovation	Emotional intelligence	Digital and AI literacy

Activity Sheets



On Demand



Whole Class



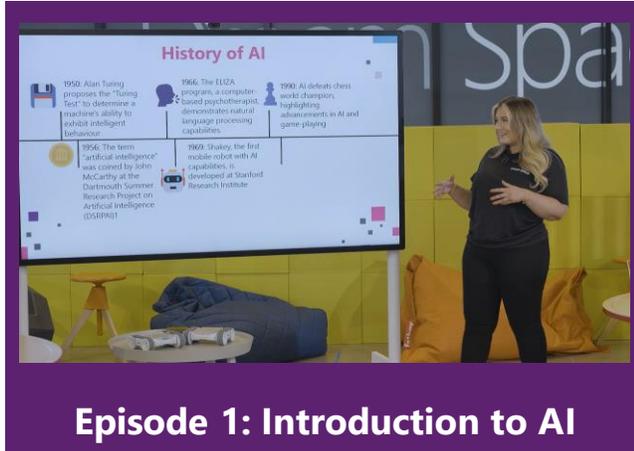
Teacher Guide



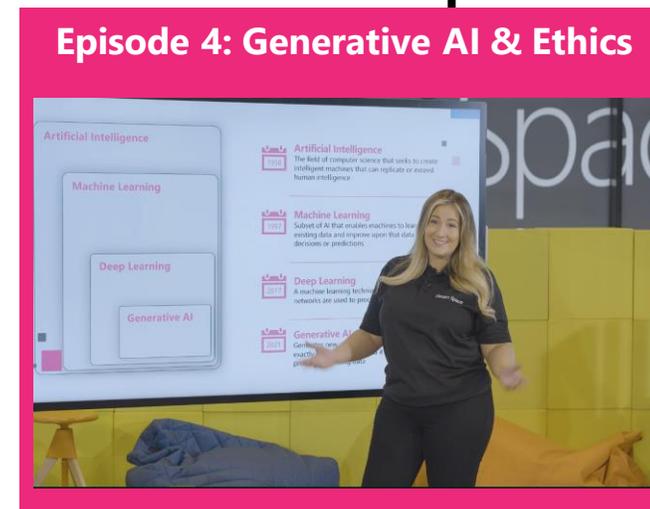
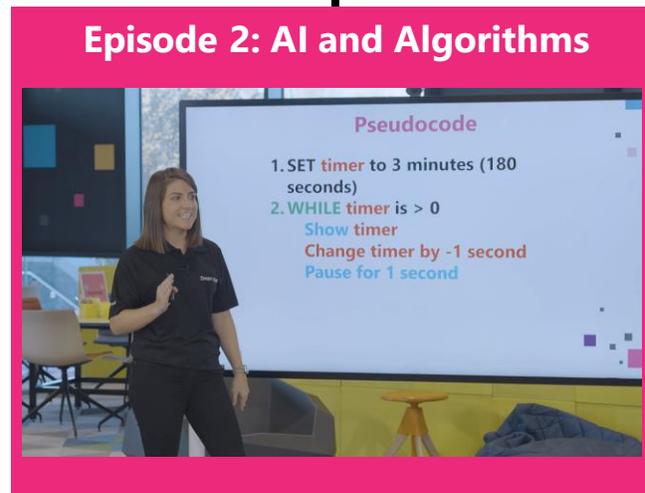
Video-Led



Develop AI literacy for students with Dream Space TV **brAI_n_waves** series for post-primary



All on RTÉ Learn at [rte.ie/learn](https://www.rte.ie/learn)



Activity Sheets



On Demand



Whole Class



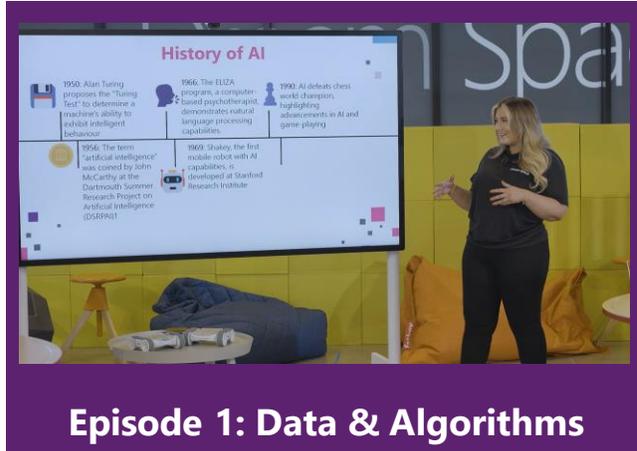
Teacher Guide



Video-Led



Develop AI literacy for students with Dream Space TV **brAI_n_waves** series for primary



Episode 1: Data & Algorithms



Episode 2: AI and Ethics

Available on RTÉ Learn in February

Continued project-based learning with Dream Space TV or Dream Space Teacher

Q&A

#MSDreamSpace

Useful Links

Dream Space Newsletter	aka.ms/dreamspaceneews	
Dream Space Website	dreamspace.ie	
Dream Space Events	aka.ms/DSUpcoming	

Email: drmspace@microsoft.com

Follow us on X: @MS_eduIRL