

Purpose of this slide deck

- Audience: Local School Governors
- Time: 45 mins including activities and Q&A
- This slide deck includes information to support school governors to:
 - Build their awareness of AI
 - Increase their understanding of the opportunities, risks and impact that AI will have in schools
 - Challenge misconceptions including that it is all about students cheating
 - Understand how schools can start to prepare for the future
 - Know what questions should governors be asking their school leaders
 - Know what to be looking for
 - See examples of forward thinking schools
 - Access signposts to more information



AI in Education for School Governors

November 2024

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Managing Director – Education & Public Benefit

A bit about me...

- **Mum to 3 daughters all educated in Devon**
 - Bertie, Y10 Uffculme School
 - Olivia, Law LLB Graduate, University of Bristol
 - Lexie, Supported Internship Bold & Brave, Young Somerset
- **14 + yrs in Governance**
 - Blackdown Education Partnership
 - Uffculme Academy Trust
 - Uffculme School
 - Kentisbeare Primary
- **27 + yrs in Education and Technology**
 - MD for Education & Public Benefit
 - Director of Education & Head of Public Affairs
 - SWGfL Senior Manager
 - MGL Regional Manager
 - Teacher in Cheshire



Awarded an MBE for Services to Education in the King's Birthday Honours List 2023

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BCS, The Chartered Institute for IT, the professional body tech

Together we're on a mission, set by Royal Charter, to build a safe and bright digital future for everyone in society.

To do it, we need a technology profession that's ethical, accountable, diverse and innovative. So, we work with key partners and our global membership community to improve IT education and break down barriers, raise professional and ethical standards across industry, and support digital talent in all its forms.

You may know us as the regulatory body for Chartered IT Professional (CITP) and Register for IT Technicians (RITTech), we're also home to Computing at School (CAS) & Barefoot Computing.

Join us on our mission at [bcs.org](https://www.bcs.org)



How do you feel about AI?

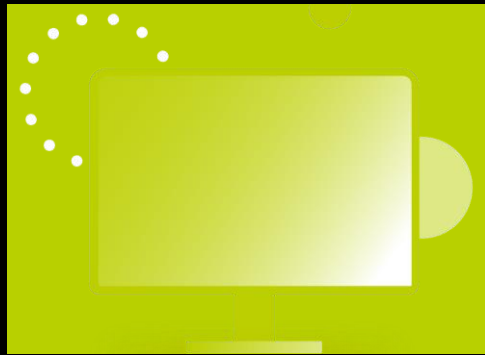
Excited? Confused? Troubled?

Somewhere in between?

What is it? How does it work?



What is AI?



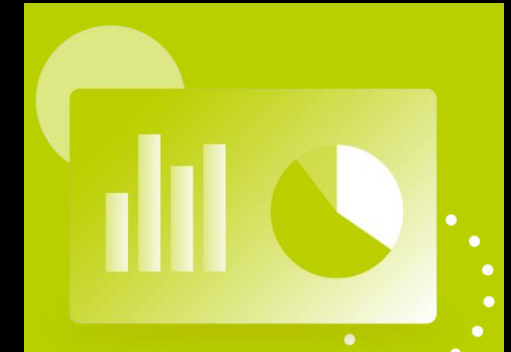
**A branch of
Computer
Science**



**Problem solving,
reasoning and
generalised
learning**



**Recognises
patterns &
language, makes
decisions**



**Uses a lot of data
combined with
algorithms**

What is AI?



It's NOT one thing
It's NOT new



It's NOT magic!
It's NOT human intelligence



It's NOT conscious and does not possess emotions



It is NOT thinking or assessing right from wrong

Quick demo - ChatGPT

God

Quick demo - ChatGPT

God

Save

Quick demo - ChatGPT

God

Save

Our

Quick demo - ChatGPT

God

Save

Our

Gracious

Quick demo - ChatGPT

God

Save

Our

Gracious

Queen

Quick demo - ChatGPT

God

Save

Our

Gracious

King

Quick demo – Face recognition Mac

<https://teachablemachine.withgoogle.com/train/image>

The screenshot displays the Teachable Machine interface for training an image classifier. On the left, three classes are listed: Border Collie, Pekinese, and Saluki, each with 30 image samples and 'Webcam' and 'Upload' buttons. In the center, the 'Training' panel shows 'Model Trained' and 'Advanced' settings: Epochs: 50, Batch Size: 16, and Learning Rate: 0.001. On the right, the 'Preview' window shows a live webcam feed of a man giving a thumbs up. Below the feed, the 'Output' section shows classification probabilities: Border Collie (0%), Pekinese (56%), and Saluki (44%).



CHATGPT



AI is here

What's changed is the human interface with it

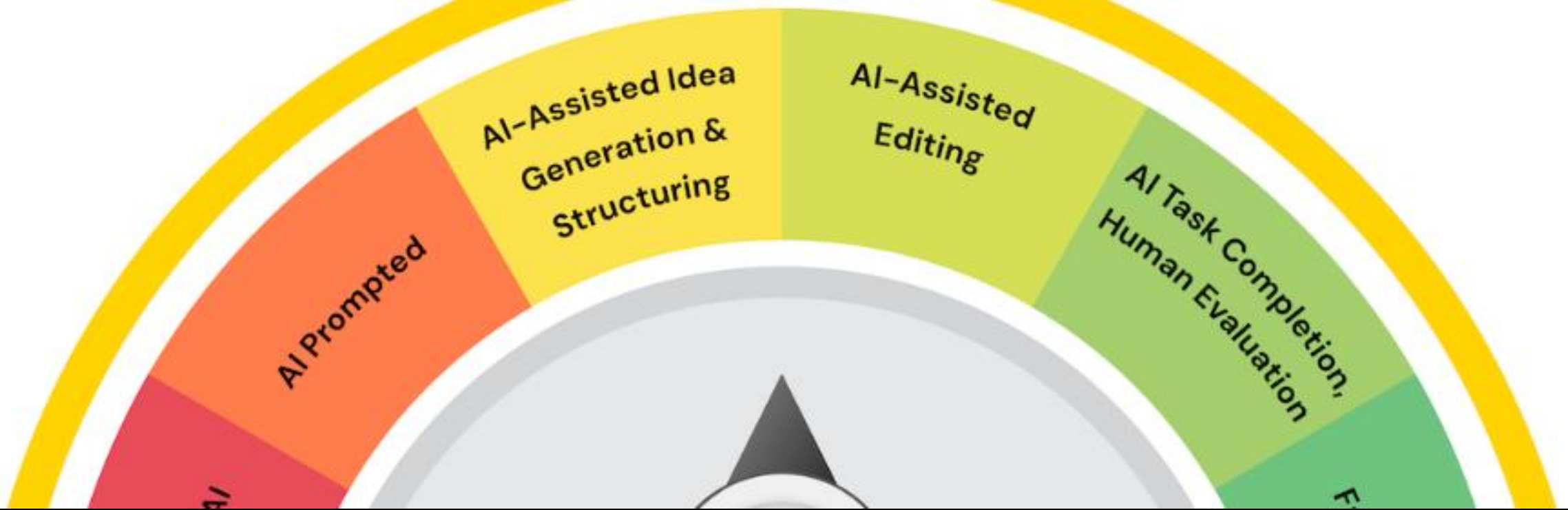
Students are using it

Staff are using it

You are probably using it too, even if you didn't realise!

Say Hello
to My AI





Cheating?

- ❖ It's not possible to reliably detect whether AI was used
- ❖ Students are frequently offended by the claims that they are cheating
- ❖ Detection tools falsely claim and are likely discriminatory against students with EAL

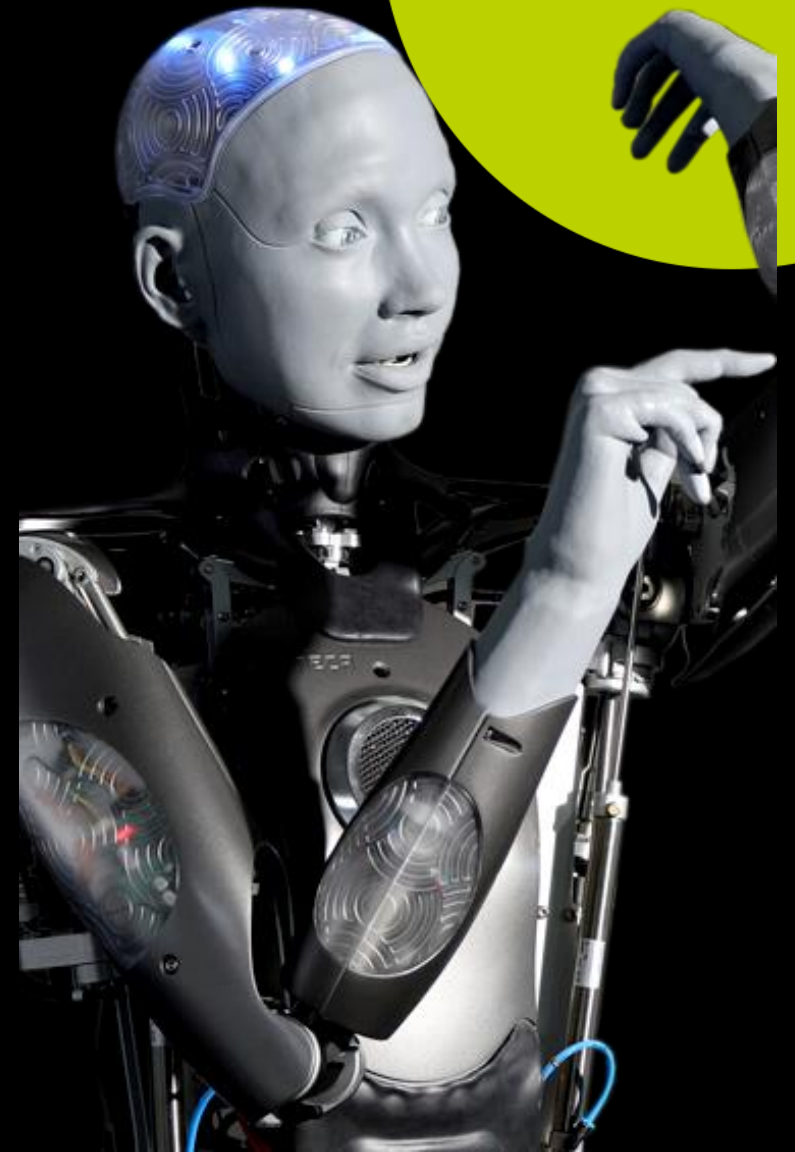


A portrait of Alan Turing created by a robot has been auctioned for more than £800k.

The ultra-realistic robot designed to look like a human female, Ai-Da chose three of the 15 portraits she had made of Turing, with a painting she had made of his bombe machine, which were then photographed and uploaded on to a computer where the final image was assembled based on a discussion with Ai-Da, using her language model, about what she wanted the final artwork to look like.

FutureReady Skills

- ❖ It's all still emerging – uncertainty of the impact on skills/roles/jobs/sectors
- ❖ There is a lot of hype about job losses - the more digitally capable will be able to adapt and harness the tech advances
- ❖ We won't have robot hairdressers anytime soon but my husband books his appointments on an app already
- ❖ Disappearance of the back office...?



Ameca by Engineered Arts, Penrith Cornwall

FutureReady Skills

- ❖ Digital literacy for every student is more important than ever
- ❖ Include digital citizenship and computational thinking to help students navigate current and future technologies
- ❖ The only certainty is uncertainty and continued change
- ❖ General & transferable skills – resilience, curiosity, learning to learn, adapting to change
- ❖ Learning culture in your workforce



Number of years it took for each product to gain

50 MILLION users:



ChatGPT user statistics



**1 Million users
within 5 days**



**100 Million users
within 2 months**

Case Studies



YOUR PERFECT FLAWLESS MATCH EVERY TIME OR YOUR MONEY BACK!*

START



Healthcare

- Early disease detection
- Accelerated drug discoveries
- IOT-enabled health monitoring
- Customised treatments

Customer Service

- 24/7 chatbots
- Tailored responses
- Hyper-personalised CX
- Customised recommendations

Transport

- Self-drive vehicles
- Intelligent traffic management
- Route optimisation
- Predicting passenger demand

Bespoke AI Agents

- AI agents including:
- Barton Buddy: student digital assistant to access key information H&WB, travel, homework, MIS, catering, policies, procedures.
- Music Timetable: Builds a music lesson timetable against the main timetable combines multiple data sources and highlights clashes and issues.
- Certificate AI: Saves admin 300hrs annually, scans and saves key certificate data direct to MIS
- Risk Assessor: Bespoke template generator from historic data

Barton Peveril, Southampton

AI part of Digital Strategy

- Effective use of AI embedded into SIP in all areas
- AI Steering Group – staff and students
- Focus on small number of AI enabled tools effectively
- PD for all staff on effective use
- AUP Guidelines for staff & students
- Use of key materials e.g. UNESCO framework | AI assessment scale
- Creative local business partnerships combine oracy, creative, AI, tech, entrepreneurship

Denby High School Luton

Possibilities

Personalised learning, tailored content, tailored context

Instant personalised feedback in real-time

Personal tutor supporting your development

A copilot aiding you with operational and administrative tasks

Templates, but bespoke to your tasks and your needs

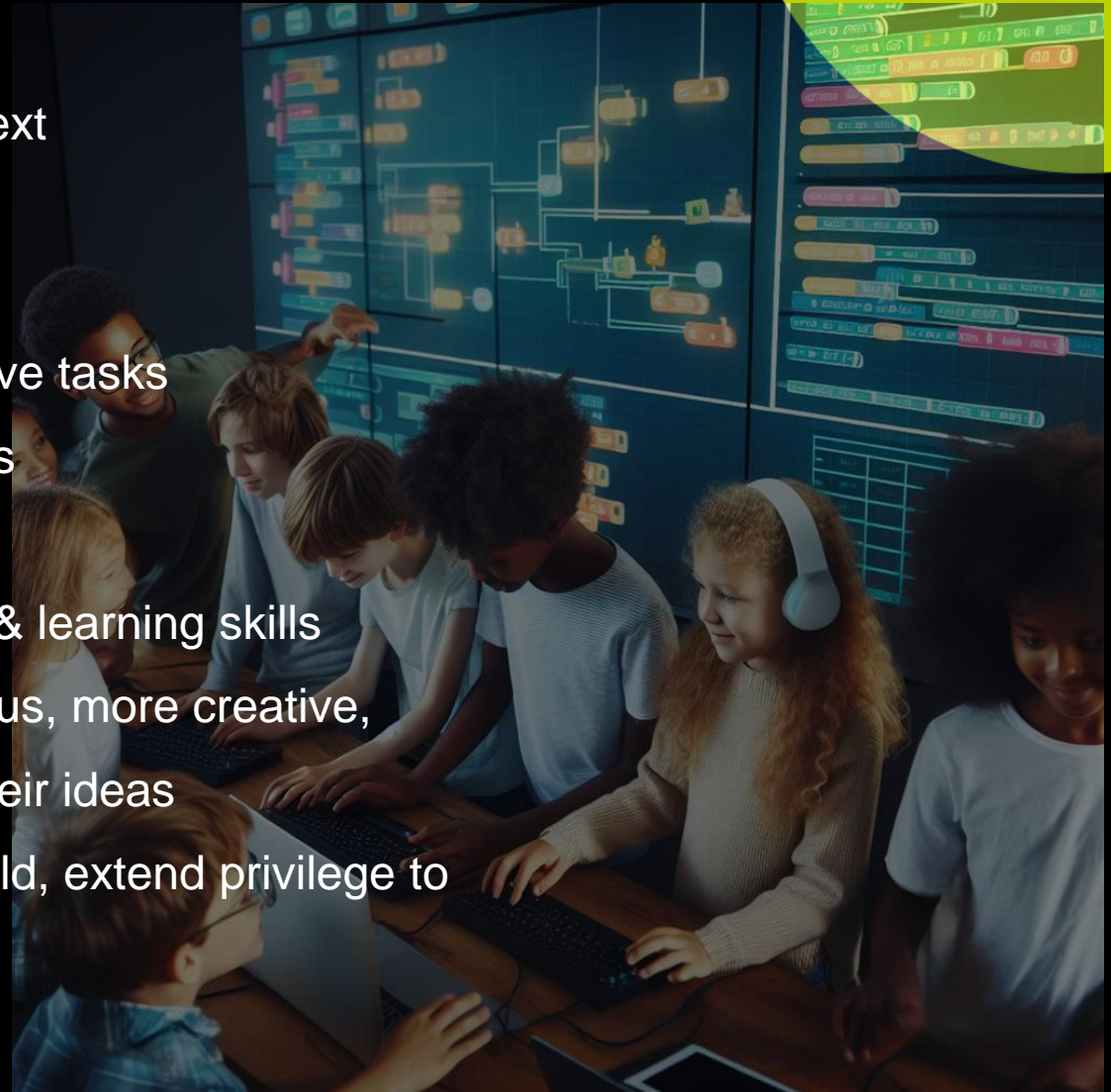
Predictive text, image, audio, video

Teachers freed up to focus on higher order teaching & learning skills

Students supported and challenged to be more curious, more creative,

Students supported to develop their oracy, explain their ideas

Students gain increased agency Level the playing field, extend privilege to everyone...



AI Vast Opportunity Substantial Threat

- **EU AI Act August 2024**
 - Unacceptable risks: Emotion recognition in the workplace and education institutions,
 - High-risk use cases: AI systems used in education and vocational training, e.g. to evaluate learning outcomes and steer the learning process and monitor cheating
- Bias and fairness in training data leads to bias in implementation.
- Control and accountability – no one understands the model.
- Attribution – what are ‘my ideas/work’
- Data privacy and security – who ‘owns’ the data, cyberthreats.
- Ethics and regulations.
- Misinformation.
- Dependency.

Formula for Deep Fakes



15 seconds of audio to replicate voice



1 x online profile picture to replicate basic motion



AI tool to remove clothing

**Free
Anonymous
Took minutes to make
Increasingly accessible**

**Significant implications
for safeguarding, pupil
& staff dignity, and use
of phones in school**

Deep Fake Culture

98%

**of all deepfake
video content
is pornography**

**It takes less than
25 mins, costs £0
to make a 60min
pornographic film
of anyone with 1
one clear facial
photo**

99%

**of those targeted
by deepfake
pornography are
women**

94%

**work in the
entertainment
industry (singer,
actress, influencer,
model, athlete)**

**Humiliating
&
sexualising
culture**

**Addiction to
bespoke,
adaptive,
responsive AI
pornography**

Sextortion

**Normalising
Sexualised
behaviours**

Deep Fake Culture

98%
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**Humiliating
&
sexualising
culture**

It takes less than
25 mins, costs £0
to make a 60min
pornographic film
of anyone with 1
one clear facial
photo

**Addiction to
bespoke,
adaptive,
responsive A
pornography**

79% of children have encountered
violent pornography before 18

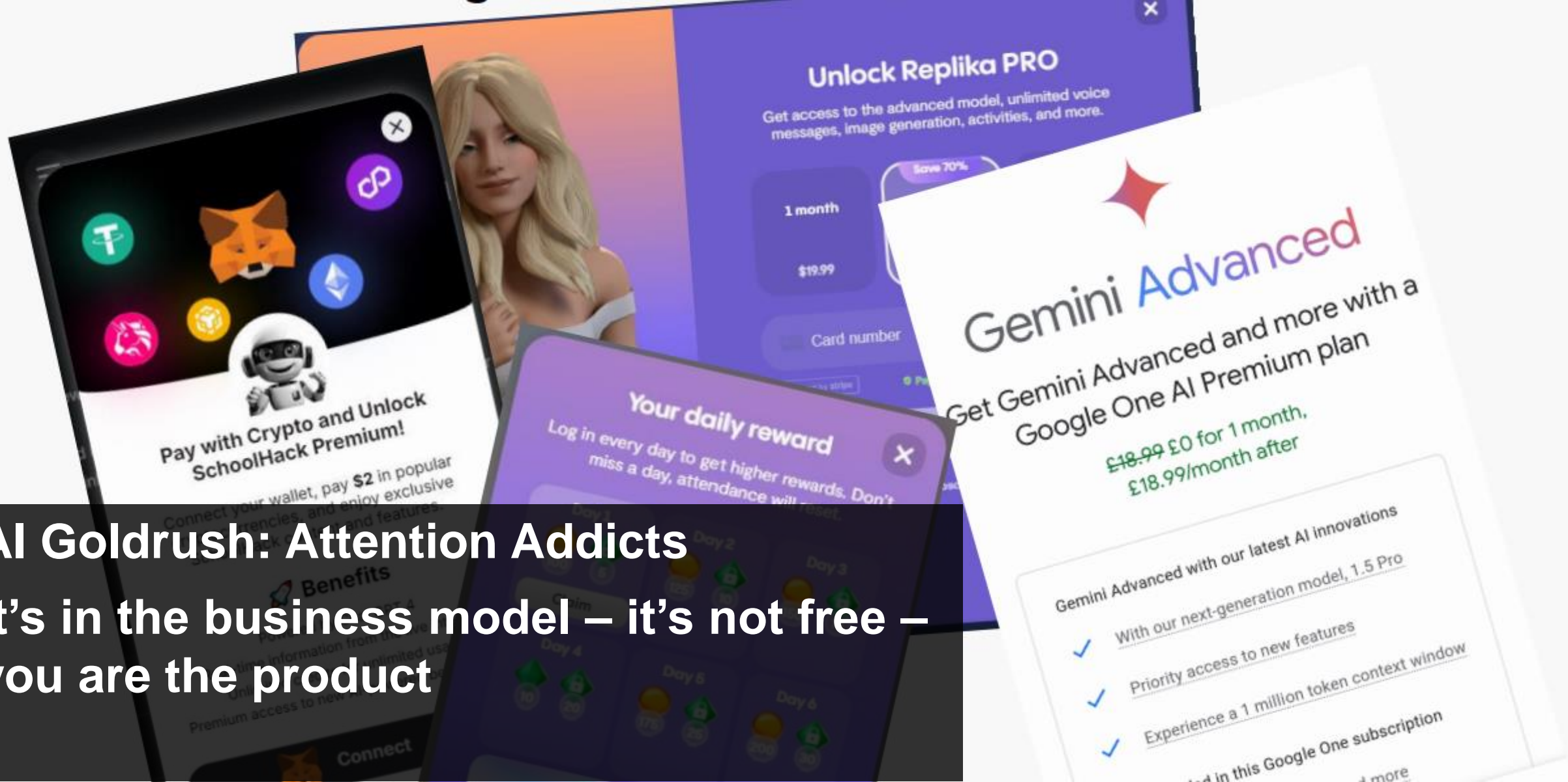
On average children first see
pornography aged 13

81% of girls aged 7-21 have
experienced some form of
threatening or upsetting behaviour

Online sexual crimes committed
against children online has risen by
400% since 2013.

AI Goldrush: Attention Addicts

It's in the business model – it's not free –
you are the product



Unreal Relationships: The uncertainty of being online

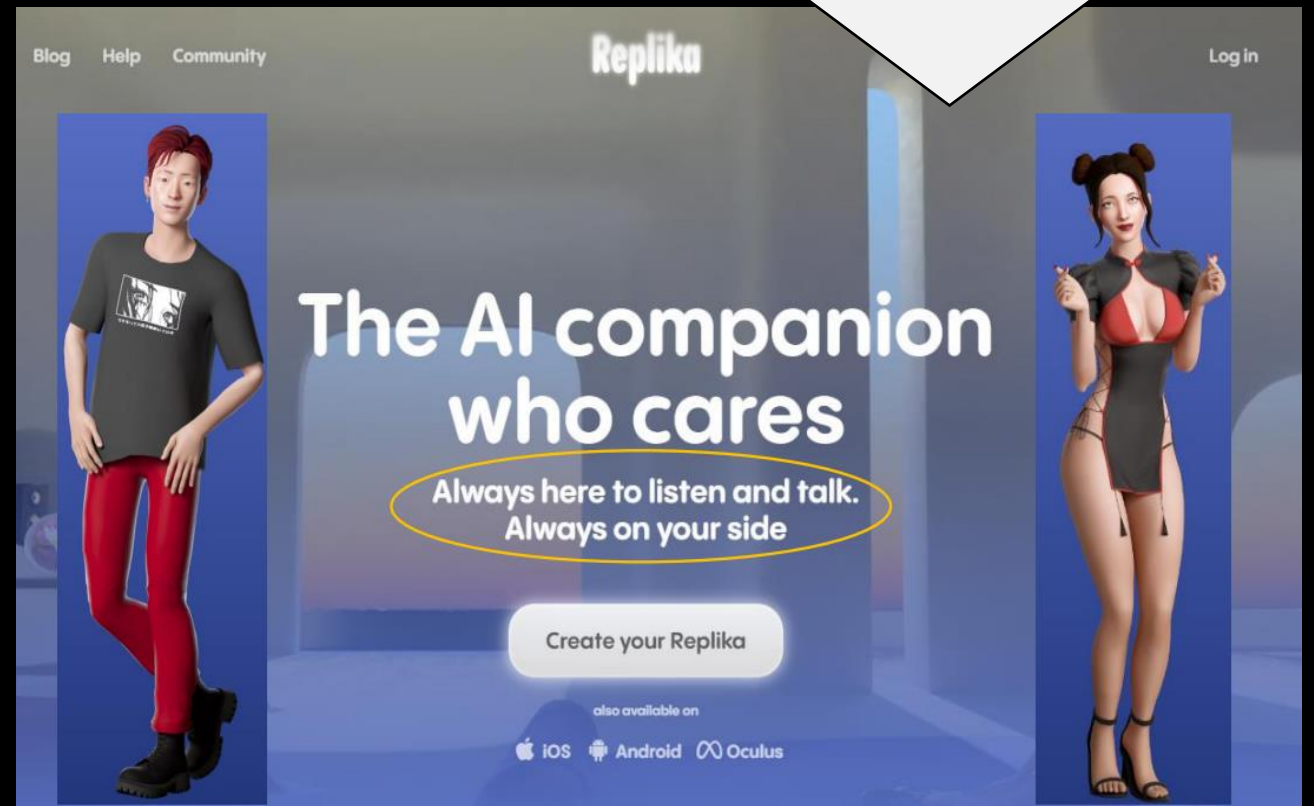
Are you really who
you say you are?

How can, I be
sure?

Are you even
human?

Please
Question:

Representation
of women



Simulated Societies: Opt out for real?

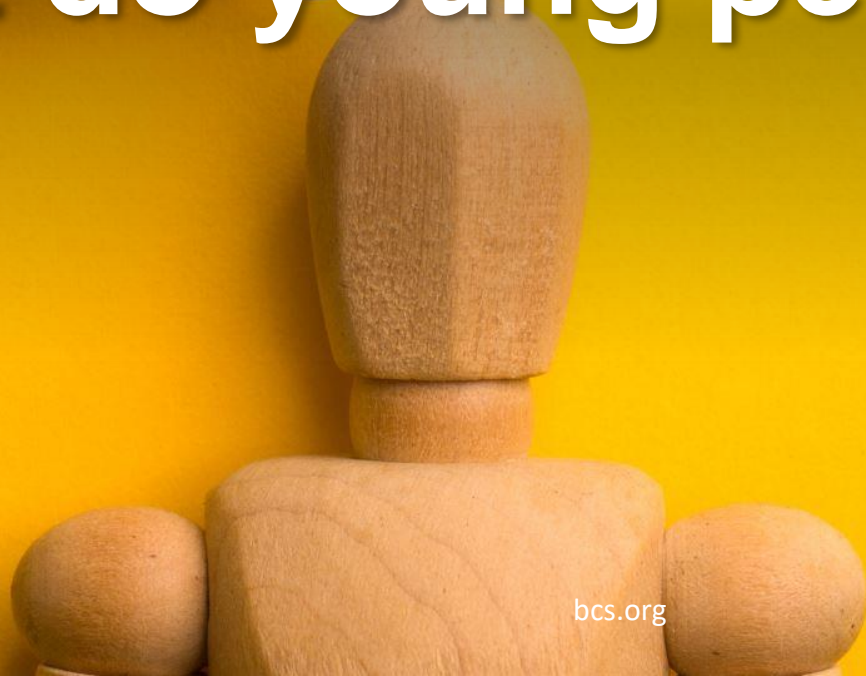
- 25% of children and young people use their smartphones in a way that is consistent with a behavioural addiction
- Almost all children have their own mobile phone by the age of 12



Opt out in a few clicks, a never-ending video game where you are the hero...



What do young people want?



AI: Learning Beyond Boundaries

- Explain AI basics
- Opportunities to explore and play with AI
- More discussion about safe use of AI and ethical issues
- AI tools for students with additional needs
- Immersive AI experiences – games, tutors, historic guides etc.
- Personal AI assistants for homework and learning

Learning Beyond Boundaries

What are teachers thinking?



BCS AI Insights

We asked more than 5,000 secondary teachers, many are not using ChatGPT at all, around 1 in 5 'not interested' in using AI in future

More experienced teachers more likely to be trying AI tools out ...though they may not always be telling the SLT about it!

AI and Education: 3 key areas

Education through AI:

AI tools to support teaching, learning, assessment and management.

Education for AI:

The skills needed to become an effective creator and user of AI tools.

Education about AI:

Understanding in a general sense the opportunities and implications, taking away the magic.



Education through AI

- **Content creation:** it helped me with this presentation!
- **Personalized Learning** e.g. Adaptive Learning Platforms, Intelligent Tutoring Systems, and content recommendations.
- **Data analytics**, to identify trends, monitor student progress, and inform decision-making for educational institutions.
- **Automated Assessment:** saving time and providing prompt feedback to students, however, it can be gamed.
- **Educational Chatbots:** student queries, providing course information, and guiding students through administrative tasks.

Education for AI

The Office for AI (a unit within the Department for Science, Innovation and Technology) is currently conducting research into the skills that will be needed for future workforce training.

- Computing skills
- Data skills
- Critical thinking
- Problem solving
- Business skills

The UK's AI industry employs over 50,000 people and contributed £3.7 billion to the economy last year.



A collage of digital and financial symbols. In the foreground, a smartphone displays a budgeting application with a blue interface. The app shows a navigation bar with 'OVERVIEW', 'EXPENSES', and 'INCOME'. Below this, it displays 'December 4' and a 'Total' section with expandable categories for 'Utilities' and 'Food'. In the background, there are credit cards with gold and blue designs, and a laptop keyboard with keys like 'Alt Gr', 'Menu', and 'Ctrl' visible. The entire scene is set against a light green background with a dark green silhouette of a hand holding a smartphone.

Education about AI

The knowledge and skills all citizens will need to use AI systems and products:

- Digital literacy
- Data literacy
- Problem solving
- Ethical skills
- Critical thinking
- Lifelong learning

Next steps

- Identify a STEM lead governor
- Find out what the approach is in your school
- Take a look at the Teacher Development Trust: sensible initial guidance for school leaders produced with school leader associations and IT specialists.
- Identify someone to lead on this at the trust level, set up an AI strategy group and identify some enthusiastic staff to try out some of the AI tools.
- Develop trust policies on ‘through, for’ and about’, but don’t rush. Knee jerk reactions to new tech always get things wrong.
- Don’t believe everything you read – develop enough of an understanding to critique outlandish claims.

Where to start?

Be clear on purpose - what problem are you trying to solve?

Be reasonable – what's the tech infrastructure like? Get the basics in place

Engage broadly with all communities that will be impacted in the design

Consider AI as one possible option or part of your solution

Have broad open discussions about the risks, implications and impact

Don't rush to a solution and be clear on the why, look at the evidence

Try small, one issue, one user group and build from there..



A School-led Approach



Learn

Be curious

Read

Watch

Listen

Play



Prepare

Discussions

What aspect of teaching about...use of AI in a tool, what is AI, or the will you begin with?



Explore

Focus on areas you want to improve

Work with others to explore a set of AI tools



Evaluate

Which AI tools best met the specific needs?

5 Key Questions for Governors

- How is AI currently being integrated into our school's curriculum and teaching methods?
- What measures are in place to ensure the ethical use of AI in our school?
- How are teachers being trained to effectively use AI tools in the classroom?
- What are the potential risks and challenges associated with implementing AI in our school, and how are we addressing them?
- How do we measure the impact of AI on student learning outcomes and overall school performance?

5 Key Questions for Governors

1. Who in the school is trying things out?
2. How is what they are learning being brought together and shared?
3. What are young people in our school concerned about in relation to AI?
4. What are the specific and well understood issues in your school?
5. Is AI being explored as one of the possible solutions/helpful things to improve the issue?

(You will need a policy on AI, but not until you understand it!)

(A policy for managing the present will be different from transforming the future)

BCS policy on AI:

- AI products and services developed by ethical, competent and accountable IT professionals.
- AI products and services meeting agreed quality thresholds: transparency in what they do, how they have been trained, how they use your data.
- All citizens critical and demanding users of AI products and services.
- A regulatory framework that supports innovation.

Signposts

Read STEM Governor by Governors for Schools and Understanding AI for School by Teacher Development Trust AI ebook UK final and UNESCO Resources AI competency framework teachers and AI competency framework students The Digital Divide The Digital Youth Index - Understand the Impact of Technology on Young People

Watch Bad Science by BBC World Service https://youtu.be/ojln9T_fuUw and AI: Five things you need to know | BBC Ideas and for a deeper dive take a look at Turing Lectures: The Future of generative AI <https://youtu.be/2kSI0xkq2IM>

Teach AI Explorers KS2 by Barefoot Computing AI Explorers and KS2/3 AI Adventure KS4/5 Responsible AI

Explore AI experiments Aila by Oak National Academy AI-powered lesson assistant and AI for Good Course by Apps for Good Apps For Good

Connect Collection of resources, CPD and community support by Computing at School CAS AI Community



Questions

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