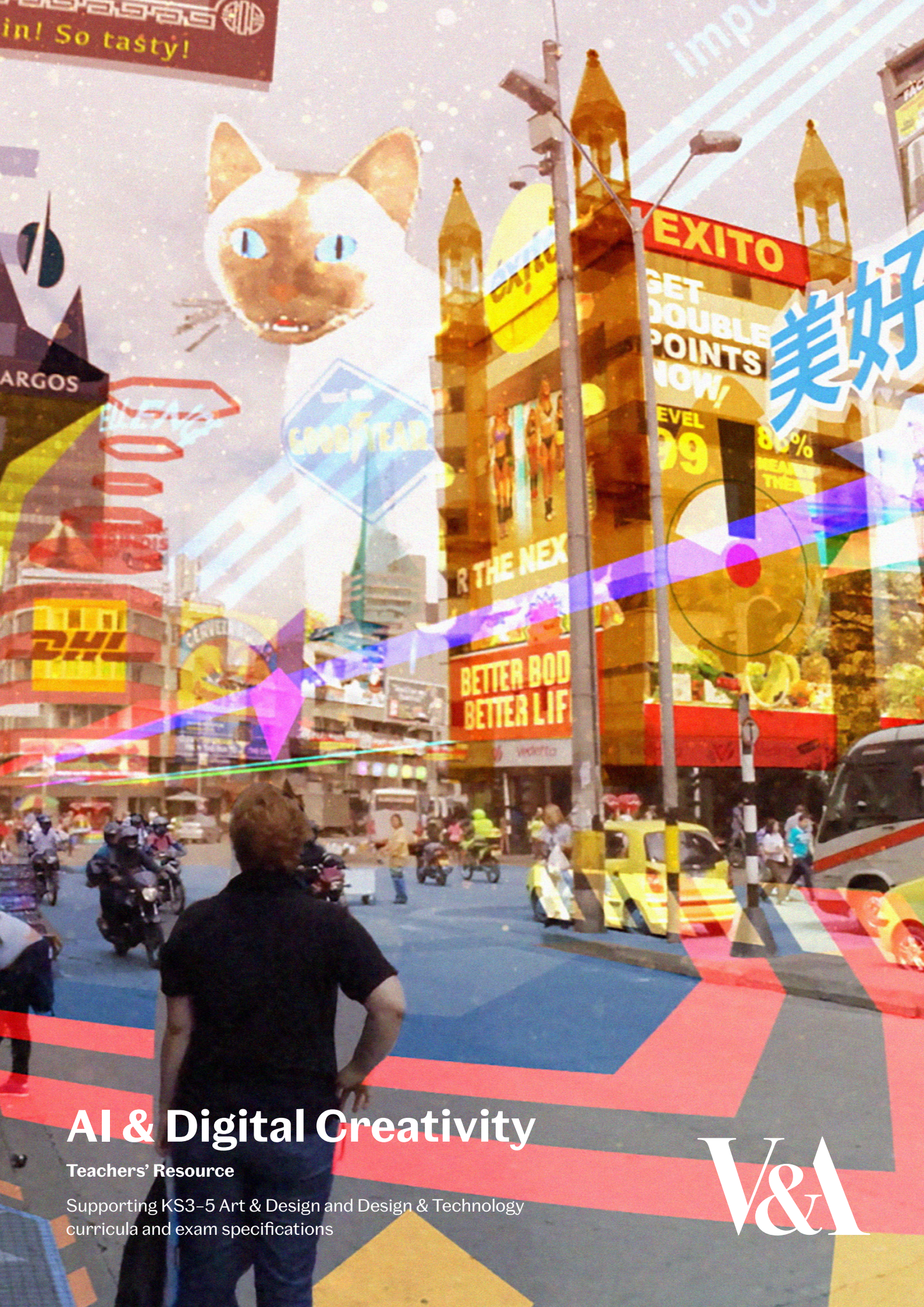




AI & Digital Creativity

Teachers' Resource

Supporting KS3–5 Art & Design and Design & Technology
curricula and exam specifications

V&A

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Author and Contributors

This resource has been written by V&A Learning staff with the support of Maria Than, Adobe Creative Resident for AI, Alice Bednarova, the V&A collections and interpretation teams and the V&A Teachers' Collective.

Maria's residency forms part of the Adobe Creative Residency Programme at the V&A, a year-long programme that supports artists to develop their practice through researching the V&A collections and connecting with our audiences. The Adobe Creative Residency is supported by The Adobe Foundation.

Special thanks to artists and designers who contributed quotes and Digital Schoolhouse for creating a bespoke activity for this pack. Digital Schoolhouse is a not-for-profit transforming computing education through play.

V&A-printed copies of this resource are made from 100% post-consumer waste and is FSC (Forest Stewardship Council) certified as coming from sustainably managed forests. The ink is vegetable oil-based and eco-friendly. Free, digital PDF copies are available at: bit.ly/VATeacherResources

Teachers: About this resource

The Victoria and Albert Museum (V&A) is the world's leading museum of art, design and performance. Its collection of 2.7 million objects spans over 5,000 years of human creativity. Each object has a different story to tell and can spark questions about our connection to art and design. For many years, V&A curators have been working to collect objects and artworks that represent and critically engage with how we live and create with AI and other advanced technologies, building a collection of works from the 1970's to the present day and from around the world.

The V&A was founded on a mission to improve the standards of British industry by educating designers, manufacturers and consumers in art and science. The collection shows that bringing together creative practices with advances in scientific knowledge and innovative technologies is nothing new. This clockwork tortoise from the 1600's is a great example -

bit.ly/VAtortoise

Find out more bit.ly/VAnewfrontier

This resource explores how designers and artists have reflected this relationship between the disciplines. Spanning drawing, photography, product design, sculpture, and textiles, the objects featured reflect how digital and traditional practices can work together, strengthen each other, and how creative work can both embrace new tools and ask critical questions about them.

Themes covered in this resource include creative authorship and human machine collaboration, truth and misinformation in digital images, augmented reality and gamification, digital identity and the environmental and human cost of AI.

Also included is an interview with Maria Than, Adobe Creative Resident for AI.

How to use this resource

Seven object cards feature items from the V&A collection, complemented with discussion and activity suggestions for students to explore their own ideas, develop creative responses, advance their critical thinking and use as a springboard for future work.

Activities can be run over multiple 1-hour lessons, allowing students the opportunity to build skills and confidence in how they interact with digital tools. It may be possible to deliver more than one activity within an hour's lesson. You can use these cards as independent activities, or to support your own teaching.

Managing student discussion

You can carry out object discussion while visiting the V&A or to support learning in the classroom. Students can explore the objects individually, however, we recommend they work in small groups to encourage peer-to-peer discussion.

We recommend sharing the following discussion guidelines before students start:

- Allow everyone in the group to voice their opinion. Be kind, patient and respectful of other people's views and ideas.
- Don't worry if you don't know what your opinion is yet. Ask further questions of your group or do more research to help you.
- Remember that everyone's opinion is valid. If someone has a different opinion to you, listen to them and ask them to explain their reasoning – it might change your own viewpoint.

Questions

Encourage students to look at or draw the details of the object for at least 2 minutes before taking it in turns to read the description aloud and ask questions within their group. We suggest giving students about 5 – 10 minutes to work through the questions on each card.

To support object-based discussion, each card begins with a looking activity built around simple observational questions. You can also print out and use the following questions:



<i>Aesthetic</i>	What are its stylistic features?
<i>Technical</i>	What is it made from? How does it work?
<i>Industrial</i>	How and in what volume is it manufactured?
<i>Cultural</i>	What or who is it responding to?
<i>Behavioural</i>	How do you interact with it?
<i>Economic</i>	How does it financially impact the consumer and/or manufacturer?
<i>Environmental</i>	Is it sustainable? What is its lifespan?
<i>Emotional</i>	What is added and what is taken away when we use AI or digital tools? How does it change our emotional response to the result?

Once initial observations have been shared, each card includes more complex questions for deeper discussion. Use the prompts to open a group discussion and brainstorm onto paper or ask students to move around the room and add as many post-it notes as possible in response to the questions.

Student activities

Activities are designed to be delivered in the classroom, without access to specialist equipment, with the support of teachers and educators. You could however team up with other departments in your school (e.g. computer science), local universities, and nearby design industries, artists and makers to potentially share specialist equipment (e.g. digital cameras or printers) or gain further insight.

AI in the classroom

Before using AI tools in class, you should check your school's AI policy and approved software that is available to you. Department of Education advice for creating an AI use policy can be found here - bit.ly/4vxBLMm

Working with AI tools includes GDPR and online safety considerations. We highly recommend carrying out a full risk assessment for all activities, materials and equipment.

Please follow your schools' guidelines for using AI, but here is some advice for working with AI:

- AI is a tool or a material, not a person or artist/designer
- Ask if AI is needed to do the task or to create the work before using it
- Be transparent about when AI has been used and what tools have been used and where
- You should not input personal data, sensitive information or content created by others into any AI platform. This is because AI platforms often store, share, or use your data to train their models. Entering sensitive personal information causes you to permanently lose control over who accesses it.
- Use a critical eye on the outputs of AI. Are they accurate, do the results confirm or encourage biases that might exist, does the output accurately reflect the style or creative idea of the student? Have you lost anything essential to the project?

Visiting the museum

We suggest complementing activities with a trip to one of the V&A sites or a local museum which may hold a collection that includes objects with similar processes or themes.

Locations on the object cards relate to the V&A South Kensington. V&A displays and galleries change regularly, please check before you visit to make sure the works you would like to see are on display and that you can use certain drawing materials in a gallery space. You can email hello@vam.ac.uk

Two objects included in this resource pack are part of the Artificial Intelligence Collection Selection Box bit.ly/4w2In4Z held in the Prints & Drawings collection.

You can find further information and book to view this box in the Prints & Drawings Study Room with your students here - bit.ly/44qBvmc

Encourage your students to find out more about the objects by visiting **Search the V&A collections** vam.ac.uk/collections

A history of artificial intelligence in 10 objects bit.ly/VA-AIObjects

Curriculum and exam specification links

The V&A AI & Digital Creativity resource is designed to support areas of the Design & Technology, Art & Design and Photography curriculums and allow students to develop their own ideas while exploring the work of others.

Celebrating your school's work

Please share your students' digital creativity journey while using this resource, tag [@vamuseum](https://twitter.com/vamuseum) in your social media posts.



Maria Than © Victoria and Albert Museum, London

Interview with Maria Than, Adobe Creative Resident for AI

Please introduce yourself and your practice

I'm a creative technologist, artist and designer. I usually say, I am an overexcited Asian woman who's really into storytelling and uses forms of new media art to explore different themes. I use digital technology such as augmented reality, creative AI, physical computing with drawing and moving image to create an experience that is either interactive or immersive. I'm also an educator and work mainly in universities.

How did you get into doing the work that you do?

I got into my work when I was doing BA Graphic Design at Camberwell UAL (University of the Arts, London). I'm a highly relentless person when something is a passion of mine. I will go on and on and on. My tutor helped me understand that this is exactly where my ideas come from and, if I really apply myself in understanding my target audience, and find the best medium to visualise the stories I want to tell, I could create some kind of positive impact that actually helps people.

I came across the UAL Digital Maker Collective in second year, which is a mix of staff, students, alumni and industry people, by just walking past the canteen and seeing a sign in the window. It was the first time that I realised that there was a whole group of people interested in the same, niche, domain of how you involve computer generative art and computer-based systems within design and art.

They also gave me so many computer art references to look at, and through our conversations and discussions I got a lot of support on the theory side of the computer-based stuff that I do.

What is most important to you and your practice?

For me, the most important things are authenticity / honesty. I work on a lot of social, political or cultural topics and that absolutely demands a certain level of authenticity and honesty in the way you approach the topic, the way you understand it in your research (intellectual honesty), your blind spots and biases and reflecting on the potential impact or the impact you have already made.

The other thing is playfulness for both myself and the audience. I call it my safeguard, mentally and creatively. If I'm tackling a subject, and I'm not having fun in the research and don't want to talk about it anymore, that usually means either my approach is wrong or that I simply have to let the idea go and revisit it at another time (if ever!). There also needs to be an element of interactivity or something that makes the audience smile and have fun.

Did you have an inspiring moment in your journey to working as a creative?

In first year at university I was getting really stressed because I'm very multidisciplinary, I used so many materials and mediums. I told my tutor, 'I'm really concerned because I feel like I'm the only one that hasn't got a visual style'. He told me, and I quote, 'Maria, remember, visual styles are perishable'. He helped me understand that although I didn't have an 'aesthetic' style, my passionate and relentless way of working is my 'style'.

How does collaboration come into the way you work?

Collaboration comes into my work through Ricebox Studio which I've been running with three friends and was created six years ago, straight after graduating from BA Graphic Design. As four Asian women (Japanese, Vietnamese, Bengali and Indian), we would rant about where we felt we were in the industry as women of colour and feeling like we were held to almost a higher standard in the creative tech aspects of things, because, at the time at least, it was seen as a very male-dominated field. It felt like we had to prove ourselves much, much more and that we could support each other through collaboration.

We also have similar motivations in regards to improving the world through playful creativity, where we're just trying to do our best to make the world a better place, even if we're changing the mind of only one person, it's a great start.

In terms of my art practice, the residency and in general, I like to work with people that I've already connected with either through real-life encounters, social media or friends whose skillsets are appropriate for the task.

I need collaborators to really understand my neurodivergent brain. Even if they have strong technical skills and knowledge, if I don't feel like I'm being heard in a nuanced way or we can't find flexible ways of working, I will not be able to communicate properly and the collaboration will not be fruitful long-term. So, it's also this idea of building my own community of people that just get me and how I work.

What advice do you have for young people wanting to enter a creative career?

You have to learn how to fail properly early on. You are learning so, so much as you are trialling and failing. The educational context itself, especially in university design and art courses, is built for you to fail safely. You'll spend time trying something out, and by the end, it'll look horrible or it won't work. You'll be so miserable in the moment, but afterwards you'll realise, oh, I could have done this or that in a different way, you'll talk to people and then you'll do it again, and suddenly people are looking at you like, whoa, how did you do that? Do it and document it well! Remember what you're learning, what your weaknesses / strengths are. Remember how you felt when making something, so that you work out what medium, process, technique or approach is simply not made for you.

Develop whatever random strands of passion and interest you have as early on as possible. The more you do that, you will develop confidence in your own ideas and in identifying if any of these random strands might develop into something worthwhile to look into.

There's also an idea of what's the point of doing art if I'm not going to have a job? You could try to find a degree that will provide you with the best transferable skills. For example, if you are interested in being a creative designer at a broadcasting company, sometimes doing a BA in Graphic Design might not be the answer but a degree in Media and Communication could be more adaptable. Weigh up the right options by talking to the people around you, your friends, your parents. Be honest and ask them, what am I good at? When did you see me the happiest or most content? So, don't make your decision alone.



Homage to Quan Âm Exhibition 2023-4. Commissioned by arebyte, London, Maria Than © Photography by Max Colson



HOME AGE 2.0 / You Wouldn't Steal a TV 2025, Maria Than ©Victoria and Albert Museum, London

What advice would you give for using digital tools?

When you go into creative technology and computer-based design or art, there's a really important boundary that you have to define in your learning process. I like to use a metaphor. Are you trying to learn how to drive a car or are you trying to learn how to build a car?

What I mean by that, is when you are doing a project that demands, let's say, working with creative code, learning to solder and use Arduino and all these different tools.

You shouldn't try to force yourself to be an engineer and spend all your time trying to learn every single thing that has to do with the technical code or physical computing thing you're trying to do in your art. Your job is to learn just enough so that then you can really flourish in your creativity.

You're trying to learn how to drive a car. Your job is not to build the car, it's to learn how to drive it properly with your ideas, drive that narrative, that concept as clearly as possible.

Break down that massive or complex task into tiny steps and slowly achieve every single step one by one and give yourself the time to do that.

On the side of AI, we are talking much more about how AI companies should be more regulated and that they are really impacting the environment negatively. We're more aware of deepfakes and misinformation on social media which can impact our mental health, public mistrust and personal insecurities. The future generation of designers hold a responsibility in helping change that landscape.

When you start your career in those tech spaces, in the industry, in university, or starting your internships, because you'll be designing for other users just like yourself, it's important to remember how you felt on social media, or with different AI tools, all of the negative stuff that came with it. Then, you can really try to make a difference in the world by being empathetic in the way that you approach technology in general.

Watch a short film about Maria's creative practice and her residency at the V&A: bit.ly/VAMariaThan

Find out more about the Adobe Residency programme: bit.ly/4gXeZcn

Maria's responses to some of the featured collection items are included on the object cards.



Hawthorne '73

Drawing, 1973, Computer-generated drawing with hand colouring

Harold Cohen (1928–2016), born UK, lived USA

This drawing was made by AARON, a computer program developed by Harold Cohen, an artist who originally trained as a painter. Through his work, Cohen sought to discover if a machine could make autonomous creative decisions and whether the act of drawing could be codified into a set of rules a machine could follow.

Abstract children's drawings and Native American petroglyphs (ancient images carved into rock) were among the early influences on Cohen's work on AARON in the 1970s. He was exploring what made those images evocative and whether an algorithm could produce the same qualities.

AARON is considered the earliest artificial intelligence (AI) program for artmaking. Cohen was interested in the program taking greater ownership of the creative process, rather than simply executing his own ideas. In its early years AARON could only produce monochrome abstract drawings such as the work featured here. The drawing was hand-coloured by Cohen himself, making the finished work a product of both human and machine. Cohen continued to refine AARON and the program gradually evolved from abstract shapes to figurative drawings and eventually gained the ability to select its own colours.

This drawing is included in the Collection Selection Box about AI bit.ly/4w2ln4Z



Maria's response to this object

'This artwork is a great example of how AI is NOT always the contemporary 'slop' seen on social media but historically has been about exploring the fundamentals of human-computer interaction and the limitations and possibilities behind computer / machine engineering principles to drive fine art mediums and painting aesthetics, which was unseen at the time.'

Find Out More

More works by Harold Cohen:
bit.ly/VAHaroldCohen

Film: AARON drawing live as part of Tate exhibition
bit.ly/TateHaroldCohen

Observe

Describe the marks and shapes in this artwork. How do you think they were made and who made them? Do they remind you of anything?

Discuss

- AARON cannot learn new techniques on its own. AARON's behaviour was hand-coded by Harold Cohen. Even so, AARON can produce an infinite number of distinct images in its own style, and some works are signed by AARON rather than Cohen. In your opinion, who is the artist here?
- Would you say that work created by a machine can be considered art?

Create

Activity 1

Harold Cohen taught his AARON program to draw using rule-based artificial intelligence he developed over 40 years. Using Scratch, 'train' your own 'AARON' program to recognise and colour in a series of shapes using a machine learning algorithm (saving several years of development!). This activity has been developed by Digital Schoolhouse.

Activity instructions

bit.ly/Digital-Schoolhouse

Activity 2

Cohen wrote code to teach AARON how to draw. Today we write text prompts to tell AI what to generate without changing how it functions. Explore how prompting works in this activity.

Step 1: Write a description of an image you want to 'generate'. Add important details about its style, colours, objects and references that would help to describe it better.

Step 2: In pairs pick your roles: The 'Input' reads out their prompt and the 'Output' sketches what is being described without seeing any reference image. The 'Input' should also not see what the 'Output' is drawing.

Step 3: Compare the sketch to the original image. How closely does it match? What is missing or is different? Switch roles in your pairs and repeat.

Go further: Find a new partner and repeat the activity. How does the image change each time a different person draws it? What made some prompts more effective than others? What does this tell you about how AI interprets language?

Main image caption:
Drawing by Harold Cohen © Victoria and Albert Museum, London/Harold Cohen



Bust (YW), 2016, C-type photographic prints, polystyrene, mixed media Osang Gwon, born 1974, South Korea, lives in South Korea

Wanting to move away from heavy subjects and materials like stone, bronze or wood that are traditionally linked to sculpture, Korean artist Osang Gwon developed a way of building three-dimensional forms out of images, covering lightweight handmade structures with hundreds of photographs taken directly of the subject or collected found images.

Gwon noticed that traditional casting and photography share the same underlying idea: both take something and reproduce it in a new form. His photo-sculptures bring these two processes together, creating works that are at once image and object, flat and three dimensional, digital and physical.

Osang Gwon

‘When I began this series in 1998, I used film. About a decade later, the transition to digital cameras allowed me to skip the film stage entirely. Today, modern 3D scanning systems use hundreds of digital cameras simultaneously – a method that perfectly mirrors how I manually construct my photo-sculptures. In this way, my work continues to reflect how we produce and consume images in the contemporary, digital era.’

Find out more

Arario Gallery: bit.ly/4brlqAA

Observe

What is this object made from and how do you think it was constructed? Who do you think it depicts? Does it feel more like a photograph, a sculpture or both?

Discuss

- We present ourselves through digital images in many ways, like profile pictures, avatars or social media posts. Does ‘realness’ exist in the digital world? How can digital tools enhance or limit our own representation?
- Not every photograph used on the surface of this work relates directly to the figure. Some are there to capture a colour, a texture or a detail. How does this collage technique remind you of the way AI assembles information to generate an image or text?



Create

Activity 1

The artist based his practice on combining photography and sculpture because these are his favourite art forms. Think about the art forms you like the most or pick two at random.

Think of an unexpected way to combine them into something new? Sketch out your initial ideas, what materials or processes might you use? Share your ideas with the class and discuss what each hybrid art form could explore that the originals could not do on their own.

Activity 2

What happens when photos of multiple people are combined to create a single portrait? Does it capture a collective identity, or does it become anonymous? Let's experiment with your own photocollage artwork.

Step 1: In groups, use tablets or cameras to take portrait photographs of each other from many angles but at the same distance from the subject. Your teacher will print these out in colour for the next step. Use found images or materials to add more colour, shape and texture to your photocollage.

Step 2: Consider what fragment should go where and how realistic or abstract you want the result to be. Discuss as a class how you selected the portrait photos, which found images you selected and how you decided to arrange them? Do you think AI can be biased in the way it selects its sources and if so, how?

Go further: You could use a papier-mâché covered balloon or cardboard box as a base to make a 3D version of your portrait.



Groeland, 81.07 N 74.23 W, 1427 - 1610

Terram in Aspectu (Grocland), 2019, Inkjet print Liliana Farber, born 1983, Uruguay, lives USA

Liliana Farber's work explores the boundaries between the physical and digital worlds and how photography, history and geography intersect. For *Terram in Aspectu*, Farber collected data from historic maps that charted islands later proven to never have existed. She fed this data into an AI algorithm trained on real Google Earth satellite imagery which then generated convincing satellite photographs of these phantom islands, producing Google Earth-style images of fictitious places.

The work questions the systems we rely on to define reality. Farber draws a parallel between colonial-era mapmaking, where powerful institutions controlled how the world was recorded and today's big tech companies, which shape how we see and navigate the planet. At the same time, the images invite viewers into a space between fact and fiction.

This print is included in the Collection Selection Box about AI bit.ly/4w2In4Z



Maria's response to this object

'This project highlights how internet neutrality doesn't really exist – whether it's search engines, social media or online archives – and how important it is for us to have knowledge mappers and holders who are not invested in governmental / institutional or commercial powers but wish to only hold and map the physical reality around us.'

Find out more

More works from this series: bit.ly/VALilianaFarber

Artist website: lilianafarber.com

Observe

How would you describe this image? Based on what you can see, where in the world might this place be? Do you think it exists?

Discuss

- For many people Google Earth feels like an objective, factual view of the world, but Farber's work shows that even images that look like real satellite photographs can be entirely fictional. Where else in your daily life do you encounter images or information that feel real but might not be accurate? How do you decide what to trust? How much can digital visualisation techniques and tools bring us closer or further away from the truth?

- From ancient myths and utopian literature to virtual reality and gaming, humans have always sought refuge in imagined places. Farber's fictional islands tap into this same desire and the need to believe that somewhere out there, another undiscovered and untouched world might exist. Can you think of examples in art, design, literature or digital culture where people have created or sought out alternative realities? What are we looking for in those worlds and why?

Create

Activity 1

Let's explore how AI learns from human input and what gets lost, changed or misrepresented in the process. What does it mean for an image to be 'real'?

Step 1: In small groups, discuss and agree on a single 'perfect' world you wish existed. It can be a better version of a real place or an imaginary one. Give it a name and discuss what it looks like, who lives there, what are its features or physical qualities and what makes it a nice place.

Step 2: Without looking at drawings of the others, sketch your own version of the utopia. Include details and a sense of what this place would feel like for you. Draw your vision as if you were standing in front of it. Develop your sketch into a collage using materials like magazines or old maps, paint and drawing materials.

Step 3: Reveal your collage to the rest of your group or class. Take turns presenting your version of utopia. Talk through what you included and why. How do everyone's imaginary worlds vary? What do the differences tell you about everyone's way of thinking? Which details surprised you most in other people's versions?

Activity 2 (Please complete Activity 1 first)

As a group, upload all of your collages to an AI image generation tool like Newarc. Your teacher may do this in front of the class so everyone can see the result at the same time. Watch what the AI generates from your combined work.

Compare the AI generated image to your collages. What details were kept, lost and changed? AI makes its own choices about what is shown, prioritised and left out. If AI is trained to reflect the interests of the creators, what version of the world are we going to see

Main image caption: *Terram in Aspectu (Grocland)*, by Liliana Farber
© Victoria & Albert Museum, London

VARIOUS ARTISTS IS THIS WHAT WE WANT?

Megan Lewis

Paul Leonard-Morgan
Paul Lewis
Paul Max Edlin
Paul O'Duffy
Paul O'Sullivan

Robin A Taylor-Firth
Robin Jax
Robin Kiel
Robin Schlottermeyer
Robyn Sellman
Roderick Williams
Rodolfus Choir
Rodolfo Meneses

Stuart MacRae
Sue Quin
Susan Bixley
Susanna Gray-Jones
Suri-Eeva Aikio
Suwuese Smith
Tamsin Waley-Cohen
Tara Creme
Tasmin Archer
Teri Bryant
The Anchoress
The Choir of Royal Holloway
The Choir of St. Bartholomew the Great
The Clash
The Flight
The Gesualdo Six
The Kameh-Masons
The King's Singers
The Ligeti Quartet
The Sixteen
The Swingles
The Ugly Guys
The Vivum Singers
The Wellermen
Three Alcoholics
Third Girl From the Left
This Is the Kit
Thomas Cobdick
Thomas Howitt-Jones
Thomas Richard Haslehurst
Tim Exile
Tim Gosden
Tim Knight
Tim Oliver
Tim Scott
Tim Seddon
Timothy Binko
Toby Wheatley
Tom Bullard
Tom C. Cleary
Tom Grennan
Tom Rasmussen
Tom Stafford
Tony Valsandis
Tony Volker
Tori Amos
Toyah Wilcox
Trevor Heath
Tristan Hamilton
Ulrya
Victor Ray
Victoria Ann-Louise Whittaker
Vincent Watts
Vinter
VOICES
Walter Mair
Wayne Corrie Beecham
Will Mowat
Will Todd
William Morris
Willie Dowling
Yard Act
Yazz
Yolanda Brown
Yusef / Cat Stevens
Zara Nurm
Zero 7

Is This What We Want?, 2025, Vinyl records in sleeves and printed cover Ed Newton-Rex (lead founder), Darren Rumney (graphic designer) & 1,000 UK Artists

This limited edition vinyl record was released on 25 February 2025, the final day of a UK government consultation proposing significant changes to copyright law. The proposal would have allowed AI companies to use creative content for text and data mining without the consent of the people who created it. Critics argued that such a move would be deeply unfair to artists and that the proposed opt-out system would be almost impossible to use in practice.

The album was coordinated by Ed Newton-Rex, a composer, former AI executive and founder of Fairly Trained, a non-profit that certifies AI companies that use licenced data, and co-created with his music industry colleagues. It was co-signed by more than 1,000 musicians. Each of its 12 tracks consists of ambient recordings of empty recording studios, with the track names spelling out a direct message to the government:

The / British / Government / Must / Not / Legalise / Music / Theft / To / Benefit / AI / Companies

Ed Newton-Rex (Creator)

'We agreed to keep information regarding who had provided each track largely secret, and co-credit all 1,000+ musicians equally, to stress that this is a collective message.'

Darren Rumney (Graphic Designer)

'I kept the artwork as bold, stark and direct as possible – the message was everything. It was a 'call to arms', in a similar vein to the "Your Country Needs YOU" Lord Kitchener poster. The minimalism compliments the silence of the vinyl inside.'

Find out more

Listen to the album: bit.ly/ITWWW

Project website: isthiswhatwewant.com



Observe

Look carefully at the album cover, read what it says on the front and back and listen to some of the tracks. How would you describe the sounds? How does the sound, text and graphic design make you feel? What do you think the album is trying to say?

Discuss

- The album *Is This What We Want?* consists of silent recordings of empty studios, made by over 1,000 musicians who largely remained anonymous. The track listing sends a direct message to the government. What do you think these creative choices are warning us about? What other forms of art expression could be negatively affected by AI and how?
- What are the dangers of AI being trained using original creative content like music to generate new pieces? What role can AI play in the creative process to make original work and what are AI's creative limitations?

Create

Activity 1

Design a piece of protest art!

Step 1: In small groups, discuss any concerns about the way AI will impact our lives as it becomes more advanced. What feels most urgent to your group? Research the issues that concern you.

Step 2: Agree on a message and who it is for. This could be a message of protest to change behaviours, or raise awareness of the impact among your community. Or you might want to highlight important things and experiences that could be lost as AI and technology change how we live if not used carefully and appropriately. These could be things like a classroom full of voices, a handwritten letter, or a conversation without screens.

Step 3: Should your solution be an artwork, a piece of clothing, a warning graphic, a plug-in that limits how long videos can be? Could it be a soundscape, a short film or maybe a live performance? Select a medium that will suit your idea best and create your artwork or prototype.

Image captions: *Is This What We Want?*

by Ed Newton-Rex, Darren Rumney, and 1,000 UK Artists

© Victoria and Albert Museum, London



Nabaztag, 2005, Smart device. Rafi Haladjian, born 1961, Lebanon (Armenian origin), lives France; Olivier Mével, born 1967, France, lives France. Manufactured by Violet

The *Nabaztag* is a small rabbit-shaped device designed to feel like a friendly companion you would want to have at home. It is a great example of 'Calm Technology', designed to share information without demanding your attention when not in use. The ears moved independently, its lights changed colour and, using embedded speakers, it was able to communicate short messages about the weather, stock prices or sports scores, all pulled wirelessly from the internet. This made it one of the first ever 'Internet of Things' (IoT) devices, everyday objects connected to the internet that share data autonomously.

It sold out quickly after it was released and even inspired an opera performed by one hundred rabbits. The device depended on central servers to function and to enable them to connect to each other. After high demand caused a crash, every rabbit was forced to shut down and ultimately the manufacturing company went bankrupt and all the rabbits were switched off.

Find out more

See how Nabaztag works: bit.ly/3TfRRLC

Student researcher looks at Nabaztag: bit.ly/4eHmNxI

Observe

What do you think object does? Where might you find an object like this and who do you think it was designed for? How does it communicate with its owner?

Discuss

- Before the *Nabaztag*, the idea of a device sitting in your home, always on and connected to the internet, would be considered strange or intrusive. Its friendly design made that feel normal. What methods do designers use today to normalise these kinds of products and to make us forget that they are constantly listening and gathering data?
- When the design studio went bankrupt, every *Nabaztag* went silent. Rather than walking away, the original designer released the source code and published instructions for users to bring their devices back to life themselves. Do you repair technology (the way you might repair a bicycle or a piece of furniture), or do you replace it instead? How easy do tech companies make it for us to repair our devices and why?

Create Activity 1

IoT (Internet of Things) are smart devices connected to the internet that collect and share data. When combined with AI, these devices can learn and make autonomous decisions. IoT can support elderly people and those with impairments. They detect a fall, give information or send alerts. Design a smart device that solves an everyday problem for your chosen user.

Step 1: In groups, identify a person with a particular need who could benefit from a customised IoT device. Interview your user to find out what problems they face, their needs, the things they like or enjoy and what matters to them. Talk to others with the same need or someone who knows your user well. Create a user profile.

Step 2: What is your device going to be? What features will it have? Consider practical questions based on the user's needs like size, weight, screen or internet connection.

Step 3: How can you design your device to be 'calm'? How it will communicate without distracting you. Will it use light, sound or haptics (vibrations)? Is it something you wear? The goal is a device that does not pull your focus when not in use.

Step 4: Sketch at least two different concepts before choosing the best direction. Build a prototype, using materials available, like cardboard, clay, paper or tape. It does not need to work, but it should communicate your idea well enough to test it.

Step 5: Test your prototype with the user. Is it the right size and weight? Are the features useful? Ask questions, observe their interaction with your prototype and take notes. Iterate your prototype based on the results, then present it to your class and share your process.



Image captions: *Nabaztag*, by Rafi Haladjian and Olivier Mével
© Victoria and Albert Museum, London



Chorillos, 2023, Embroidered photograph on cotton paper Ana Teresa Barboza, born 1981, Peru, lives Peru

In her practice, Barboza combines photography and textiles to explore the natural world and the communities that depend on it. Her work draws on Peru's ancient weaving traditions, using naturally dyed yarns to honour both her family history and the country's deep-rooted knowledge of plants and the land.

Chorillos is part of a series reflecting on the transformation of the Piura dry forest in northern Peru into a desert. Threads spill out from the edges of the photographic canvas, suggesting the continued effects of intense rainfall on waterways that were once dry. The work asks us to think about how climate change is reshaping landscapes and disrupting ecosystems and how those effects fall hardest on Indigenous communities in the Global South. Barboza bears witness to what is being lost while keeping ancestral practices alive through the act of making.

Find out more

Artist website: anateresabarboza.com

Observe

What materials and techniques can you identify? Why do you think the artist chose to combine these different media and what do you think the work is trying to say?

Discuss

- The internet causes around 4% of global emissions, more than the airline industry. Data centres powering AI consume vast amounts of water to cool their servers, and energy to keep them running. As everyday users of digital technology and AI, how aware are you of your own environmental footprint?
- Indigenous and vulnerable communities often feel the greatest consequences from the impact these emissions and the pressure on natural resources and local ecosystems. Do you think global technology companies have a responsibility to protect the environment and human rights?

Create

Activity 1

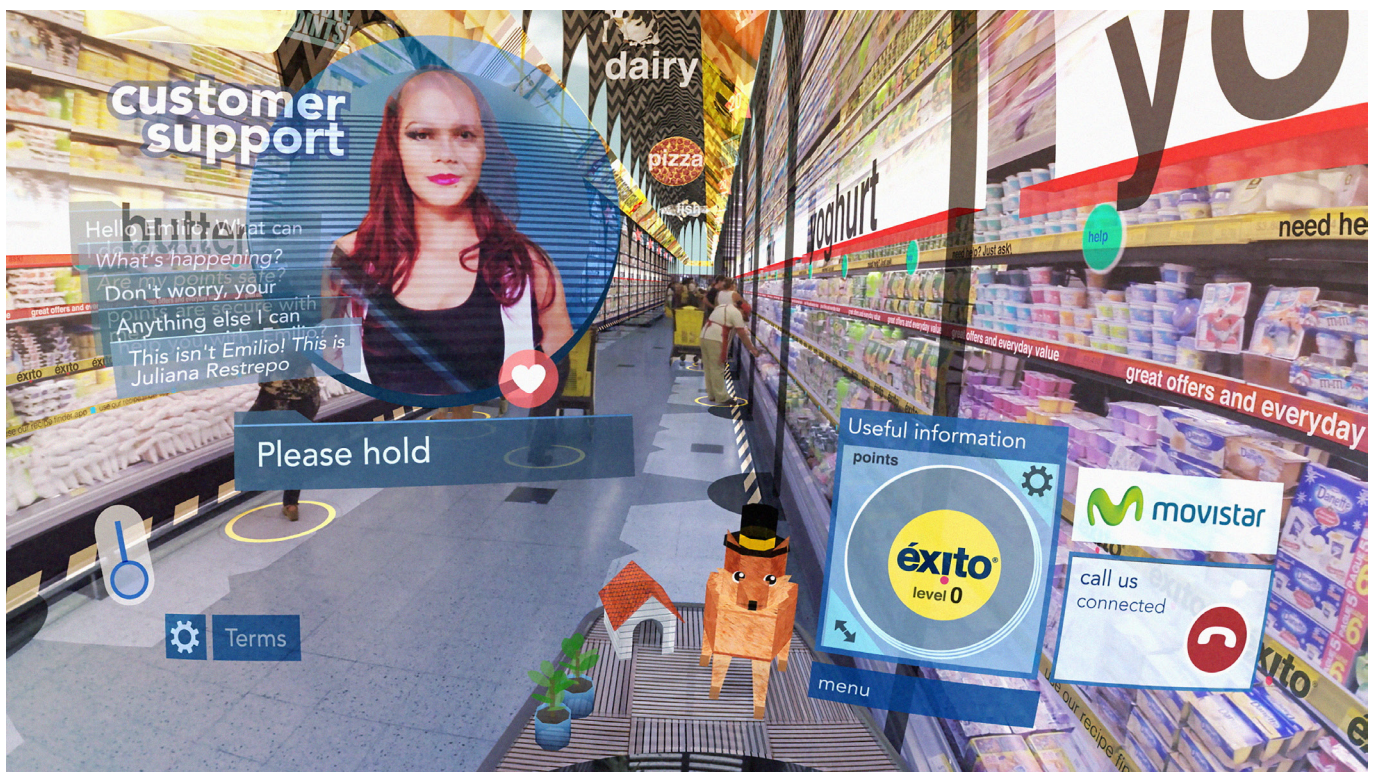
Step 1: Think of a landscape or natural place you know well. Have you noticed any unusual changes there because of climate change or heard about changes from older family members? Have you seen any local initiatives responding to these changes, like tree-planting efforts, wildflowers for insect life, habitat restoration or flood-prevention projects?

Step 2: Find a photo of a landscape affected by climate change, either somewhere local or elsewhere in the world. Think about who or what drove those changes. Then alter the image to reflect that change and loss. You could embroider words or shapes into it, add patches of fabric, paint over it or use collage.

Step 3: Now try the same with a different photo, but this time imagine the landscape thriving under better protection. Would it become greener? Would wildlife return and communities flourish? Share both versions with the class.

Main image caption:

Chorillos, by Ana Teresa Barboza
© Victoria and Albert Museum, London



Watch the *Hyper-Reality* video
bit.ly/HyperRealityShort

Hyper-Reality, 2016, Film made with live footage, digital design and VFX Keiichi Matsuda, born 1984, Hong Kong (British and Japanese), lives UK

Hyper-Reality is a six-minute concept film set in Medellín, Colombia. It follows Juliana Restrepo, a woman with an augmented reality device implanted in her body, as she moves through a city where the physical and digital worlds have completely merged. Through her eyes, every surface is layered with advertisements, gamified tasks and social data, turning daily life into something resembling a video game.

The film takes a darker turn when her implant is hacked, corrupting her identity and erasing her digital life. Without the interface, the world becomes unreadable and hostile, revealing just how dependent society has become on technology it cannot fully control. Matsuda made the film as a provocation, not a prediction, inviting us to question who really benefits when our attention, behaviour and personal data are turned into a product.

Observe

How does the film make you feel? How would you describe its aesthetic and sounds? How different does this world feel from the one you live in today and how much of it already exists around you in some form?

Discuss

- How does the film make you rethink how we measure human worth? Should we be measuring such things at all, and if so, who should be setting the rules?
- What games or apps do you use that reward you with points, likes or streaks? Do those systems make you feel motivated or pressured to keep going? Could scoring everyday behaviour be used for good, like encouraging recycling or acts of kindness? Or does turning life into a game always end up benefiting the people running it more than the people playing?

Create

Activity 1

What human habits, sensory experiences and connections are we losing as we rely more and more on digital technology?

Step 1: In groups, discuss which behaviours, habits or traditions are fading because of the use of digital technology and growth of digital isolation? Think about things like meeting in person, knowing your neighbours, being present when spending time in nature, or experiencing the world through your senses.

Step 2: Pick one behaviour that would benefit your community if it were renewed or reinforced. Consider how you could encourage this behaviour through gamification. What would it look like? What would the reward be? Sketch your ideas for a non-digital version, like a gamified community gathering, event, walk or shared meal. You could use physical game elements such as dice, costumes or prompt cards. Then sketch ideas for a digital version like an app, a platform or a tool. For the latter, you could use a tool like Canva to visualise your ideas.

Step 3: Create a prototype for both versions, test them with your peers or community and observe the reactions. How could you improve it? Which version is more impactful, the analog or the digital? What are the benefits and drawbacks of each? Discuss and share your findings with the class.



Maria's response to this object

'This video helped me understand the difference between gamification vs actually making a game, where you take inspiration from game features such as scoring systems, levels, bonuses, leaderboards, avatars etc and use them within a non-game context or system. This video is a great example of how everyday interactions are measured through points and you are punished as a result of "losing" points in the game of life.'

Keiichi Matsuda

'I made *Hyper-Reality* because I could see our possible future with technology, and I didn't like it. Design isn't just about function or beauty, it can also be a way of challenging the systems we live inside, and asking whether we actually chose them, or just inherited them. The future isn't something that happens to us. It's something we build, decision by decision, often without noticing. If you want a say in what that future looks like, learn to imagine it critically, out loud, in as much detail as you can.'

Find out more

Designer website km.cx

Glossary for teachers and students

AI or Artificial Intelligence

An umbrella term for a set of technologies designed to perform tasks that normally require human intelligence, such as recognising speech, making decisions, or learning from experience. Data and coding are used to teach machines how to learn, problem-solve and read information. AI is linked to contentious issues including algorithmic bias, data privacy and the automation of labour.

AI prompt

Text instructions inputted into AI tools to produce a result or output

AI Slop

Low quality or inaccurate content produced by generative AI tools

Algorithm

A set of instructions to complete a task. In computing, an algorithm can be used to solve a problem, perform calculations, process data, and undertake automated reasoning. Everyday uses include web searches, streaming platforms, online dating and voice assistants.

Augmented reality

Technologies used to enhance the physical world, visually superimposing images and digital content into a physical space, often using devices such as smart glasses, head-mounted display devices (HMD), tablets or smartphones

Calm technology

Technology products or services that operate without the need for direct attention from the user

Dataset

A collection of data, like images, text, or numbers, that is used to train or test an AI model

Data centre

A large facility that stores and manages a group of networked computer systems, applications, servers and data, including those used to run AI tools

Data mining

The gathering of large amounts of data such as text information, images and music, fed into AI to extract patterns so that AI can use these to produce its own outputs

Deepfake

Highly convincing, false products such as images, film or text, which are created by AI

Digital footprint

The trail of data and information that you leave behind when using the internet, social media or apps. This could also relate to the environmental impact of digital activity

Gamification

Making activities or tasks more ‘fun’ through the language and elements of a game

Generative AI

Artificial intelligence used to create “original” products such as text, images or music, based on patterns it has learned from data

Internet of Things (IoT)

The internet connectivity of everyday items, which allows devices to wirelessly collect and communicate data autonomously

Machine learning

In machine learning, training data is fed into an algorithm, which in turn changes and adapts based on the information it receives

Utopia

An imagined vision or an ideal or perfect view of a society, place or situation

Find out more

bit.ly/VADictionary

Looking to explore this theme further with your students?

Digital Art & Design at V&A

Explore more digital objects in the V&A collection

bit.ly/VADigitalDesign

Careers in Creative Technology with Jen Sykes, V&A Live

Learn about creative coding and how to pursue a career as a creative technologist

bit.ly/VAJenSykes

Ways of [machine] seeing

A collection of activities and resources for teachers of Art and Design developed by London South Bank University, UCL Institute of Education, The Photographers' Gallery, and participating secondary school teachers

waysof.net/machine-seeing

Digital Schoolhouse

For more hands-on computing and coding activities

digitalschoolhouse.org.uk

Code Your Own Tartan

Use computer code to design a tartan that tells your story. Learners will think about what groups they identify with or belong to, pick colours that represent their group or clan and edit code to tweak their tartan design

bit.ly/CodeTartan

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bit.ly/4fcdhB5

Are you a teacher interested in contributing to the development of future V&A resources and activities for schools? You can

join our Teacher Collective or find out more by emailing

schools@vam.ac.uk