

Ways of [Machine] Seeing

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Ways of [Machine] Seeing (WoMS) offers a practical, classroom-ready approach to AI literacy, using creative activities to help students explore how machines 'see' the world and how designers can respond critically in return.

"The way we see things is affected by what we know or what we believe," wrote John Berger in *Ways of Seeing* (1972). Half a century on, as Generative AI tools begin to redefine how we see and make images, Berger's insights feel more relevant than ever. This is particularly true for those of us teaching design. The project Ways of [Machine] Seeing (WoMS), developed in close collaboration with secondary school design teachers, builds on this provocation by offering a new set of creative activities. These activities explore how AI systems 'see' the world, and how we might learn to critically see them in return.

In a world increasingly shaped by computer vision, facial recognition, algorithmic bias and automated creativity, the WoMS project presents a practical and reflective approach to AI literacy. It invites teachers to treat AI as both a creative medium and a cultural phenomenon. The key question is not whether AI can help students design better, but rather how AI is shaping how students imagine design.

Artificial Intelligence is not a new concept. However, the arrival of widely accessible tools such as Craiyon, Adobe Firefly and ChatGPT has brought generative AI into everyday classrooms. Often, students are already using these

tools before teachers have had the chance to assess their impact or potential. WoMS addresses this gap by framing AI not as a technical hurdle, but as a topic that belongs within the creative curriculum. The aim is not to teach coding, but to encourage critical thinking and visual literacy. The project introduces the idea of *invisual literacy*: the ability to understand and question the often unseen assumptions within AI systems.

Seeing Through AI

A central theme of WoMS is the understanding that AI does not observe the world objectively (or, as Berger puts it, "*every image embodies a way of seeing.*"). When an AI model produces an image based on the words "a classroom chair" or "a beautiful place", it is not reflecting reality. Instead, it is generating an image based on patterns drawn from a limited and biased dataset.

Activities such as "Unmasking Facial Recognition" and "(Mis-)Representing Place" help students explore how machines construct images, how they interpret visual data and what gets left out in the process. These workshops are hands-on.

In "Make Like a Machine", for example, students sculpt objects in response to prompts. In doing so, they learn how language, interpretation and bias are embedded in the data that trains generative models. Such activities transform classrooms into investigative spaces, where students learn not only how AI functions, but also how it frames the world.



ways of [machine] seeing

an introduction to using Generative AI in the art and design classroom



the door



the wind



the bird



the valise



curricular connections with subjects such as art, media, computing and citizenship.

Why This Matters

Design education has always involved more than simply learning how to make things. It is also about understanding the systems, assumptions and intentions behind the things we make. As generative AI tools become standard across creative industries, students need more than digital skills. They need the ability to critically evaluate the tools they use, to understand where those tools come from and how they shape their thinking.

Ways of [Machine] Seeing shows that AI does not need to undermine creative education. On the contrary, it opens up new opportunities for critical engagement. By using AI as a prompt for creative inquiry and ethical debate, teachers can help students develop a more thoughtful and informed approach to both creative practice and digital culture.

A common concern about AI in the classroom is that it may encourage shortcuts or replace students' original thinking. WoMS takes the opposite view. With thoughtful guidance, AI can be a valuable collaborator. What matters is how students use it. In "*One & (More Than) Three Chairs*", inspired by Joseph Kosuth's conceptual work, students examine how AI 'understands' everyday objects, exploring the relationship between physical form, visual representation and textual description.

These kinds of activities support key learning goals such as iterative making, material exploration and contextual analysis. They also provide space for ethical reflection. Students are encouraged to ask who designs the AI systems, whose perspectives are included or excluded, and what environmental costs are hidden behind seemingly 'clean' technologies.

Tools for Thought

Importantly, WoMS does not require teachers to be experts in AI or digital technology. Many of the activities are 'unplugged', meaning they can be carried out without any devices. Drawing, mask-making and model-building are all core to the approach.

This is particularly beneficial in schools where access to equipment may be limited. The project includes pre-prepared teaching materials, a glossary, FAQ from teachers and students, and safeguarding guidelines to support teachers as they introduce AI-related activities. The structure is flexible, making it suitable across different key stages, and it encourages cross-

"The relation between what we see and what we know is never settled."

- John Berger

In a world increasingly mediated by machines, learning to question both what we see and how we see has never been more important.



Ways of Machine Seeing
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