

Day 2 - A Multidisciplinary Arena

Tuesday - A Multidisciplinary Arena 09.30-18.00 (All sessions)

09.30-10.45 **Review and agenda-setting for Day 2** Berry Billingsley and Mina Cullimore

11.00-12.15 **Thinking about astronomy and art & working with virtual spaces**

with Mina Cullimore

13.15-14.30 **Cultural views of astronomy and archeoastronomy**

with Elfneh Bariso and Kevin Walsh

14.45-16.00 **Working with GenAI and your tutor**

with Will Beckwith-Chandler and Kevin Walsh

16.15-17.30 **Power & Problems of the Search and Generative AI Scenarios**

with Ted Selker

Session 1 – GenAI Skills and EI

GenAI used as a tool for writing, knowledge creation, networking

Focus – using Gemini AI to support planning for public engagement/teaching activities with primary and pre-GCSE secondary students.

We experimented with asking GeminiAI to:

1. come up with project names, and then asked for changes to make it more about the future.
2. explaining strong lensing to ten year-olds
3. create a riddle to 'go with' what happens if we put water droplets on a plastic lid and then tip it up

Here's the riddle from GeminiAI:

I cling to plastic, a tiny, round bead,
But when you tilt me, I might not proceed.
I hold on for a while, defying the fall,
But gravity wins, and I soon answer the call.
What am I?

"create a riddle to 'go with' what happens if we put water droplets on a plastic lid and then tip it up"

Gemini AI's response:

I cling to plastic, a tiny, round bead,
But when you tilt me, I might not proceed.
I hold on for a while, defying the fall,
But gravity wins, and I soon answer the call.
What am I?

We pasted in the riddle to a new chat – could it solve it:

You've got it all figured out! The answer to the riddle is a **water bead in a water bottle**.

...and we explored whether we can use Gemini AI to generate new ideas in a conversation about torches, experimenting with different colour film and t-shirts

Plenary Session Day 1

We discussed:

Big Questions

Our building understanding of the nature of reality

Big Questions...

...about the nature of reality, the meaning of life, and the significance of being unique

"the nature of reality"

*consider this in
the age of GenAI*



how would you describe 'the nature of reality'?

Show drafts 



The nature of reality is a head-scratcher that's been contemplated by philosophers and scientists for millennia, and there's no one definitive answer. Here are a couple of key ways to think about it:

- **Independent Reality:** This view says there's an objective reality "out there" that exists independent of our minds. Mountains stand tall whether we're looking at them or not, and gravity keeps us grounded even if we don't believe in it. Science thrives on this idea, constantly uncovering the rules that govern the universe.
- **Perceived Reality:** This perspective focuses on how our minds interpret the world. Our senses take in information, and our brains construct our understanding of reality. Colors might be mind-made interpretations of light waves, and what we see as a solid chair is actually made of mostly empty space with tiny particles zipping around.

Here are some disciplines that delve into the nature of reality:

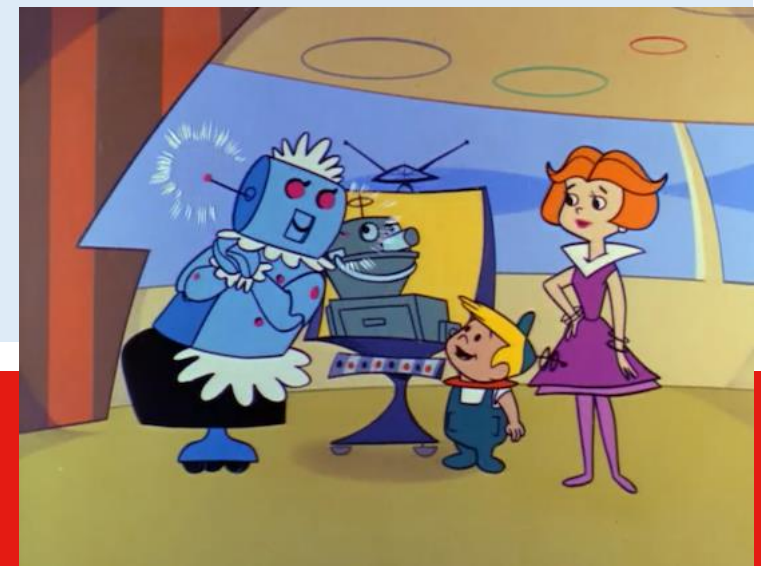
- **Metaphysics:** This branch of philosophy explores the fundamental nature of existence, asking questions about being, time, space, and knowledge.
- **Physics:** Science investigates the objective world, uncovering the laws and principles that shape everything from subatomic particles to galaxies.

Ultimately, the nature of reality is likely a combination of these perspectives. There's an objective world out there, but our perception of it is shaped by our minds. Even science, which relies on the objective world, is limited by our tools and current understanding.

Three 'Big Questions' to consider this afternoon:

- 1. 'Is it real or fake?'**
- 2. Can a robot* have its own sense of curiosity?**
- 3. What is the future of knowledge?**

** for example, a remote telescope in space*





- *Epistemic insight (EI)*
- refers to those 'aha' moments when suddenly we realise something about knowledge that was hidden before.
- It means 'knowledge about knowledge' including knowledge about disciplines and how they interact.

Where was the camera that took this photo? Outside our Galaxy?

We see images like this all the time in science books ... is this a science 'fact'?

This picture is what we predict we would see. So far Voyager is only now leaving our solar system!



When children are asked 'What is science' many of them tell us "facts".





Is there something uniquely human about the way we engage with these images?

If we send an AI into space – can it only ask the questions we have prompted it to ask – or can it develop a sense of curiosity and come with questions of its own... does it need to have a sense of curiosity to do this?

What did you **observe**?

Was your prediction correct?

Did this surprise you?



Epistemic Insight



**building
knowledge**
**working with
knowledge**



knowledge

...about the nature of reality

...about our experiences
of being human

'informing
our thinking'
about 'x'

disciplines

methods (ways of working)

types of questions

norms of thought (what is valued)

- Can science fully answer this question? Why/why not?
- How can science inform our thinking – what does it add to our understanding?
- What about other disciplines?



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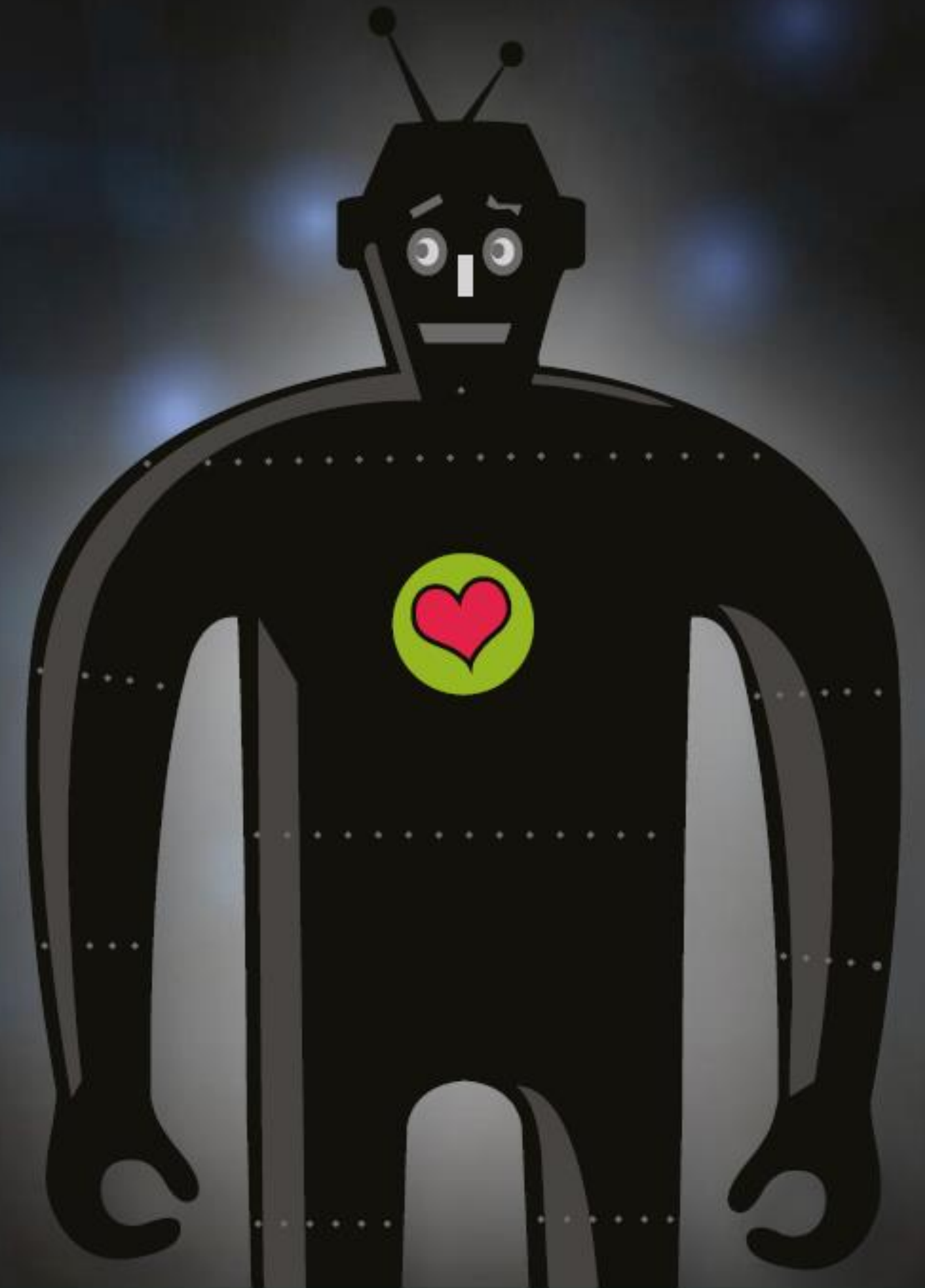
Thu 11 July CAMPUS	Fri 12 July CAMPUS
Research future of knowledge / Public engagement activities	Research future of knowledge / Outreach activities

preparing, informing, inspiring

Epistemic Insight

THE EPISTEMIC INSIGHT INITIATIVE

Investigating
Big Questions
(IBQ)



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