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The Modern Classroom:

An Introduction to Immersive Teaching and Learning



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In the spirit of reconciliation, we acknowledge the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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Welcome!

00:00 - 00:10	**Welcome & Introduction to the Learning Lab**
00:10 - 00:35	**An Introduction to Immersive Teaching & Learning**
00:35- 00:55	**Q&A with Lumination Education Team**
01:00	**Close**

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Meet The Team



Campbell Rushton-Smith
Business Development Manager (VIC)

With 14 years of experience as a Drama and Humanities teacher and a further 8 years working with schools across Australia implementing the Edrolo resource, Campbell understands the challenges teachers face. He is passiontate about student engagement, saving teachers time and linking real world skills to the classroom. He is excited to partner with Victorian schools in the extended reality space.



Shai Coggins, *MTeach, MSocSci, BSc*
Learning Design Lead

Experienced classroom and STEM educator in state and independent schools in South Australia. Also worked across multiple industries in Australia, USA, Canada, Singapore, and the Philippines - including media and publishing, nonprofits, and technologies. Passionate about emerging technologies, creativity, and research-based education practices. Oversees Lumination Learning Labs education support.



Jonathan Kim Sing
Education Programs Manager (NSW)

Jonathan has taught Mathematics and STEM across various NSW Public Schools. He is passionate about using technology in the classroom and incorporating evidence-based teaching strategies with his students. He created a library of Mathematics videos on YouTube to engage students and ensure equitable access to learning. Jonathan has worked with various EdTech startups including Edrolo, Education Perfect and Open Learning.

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Revolutionise the way we **teach, learn & work**



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Lumination Learning Lab





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Teacher Training





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Learning Lab
Virtual Lab Tour

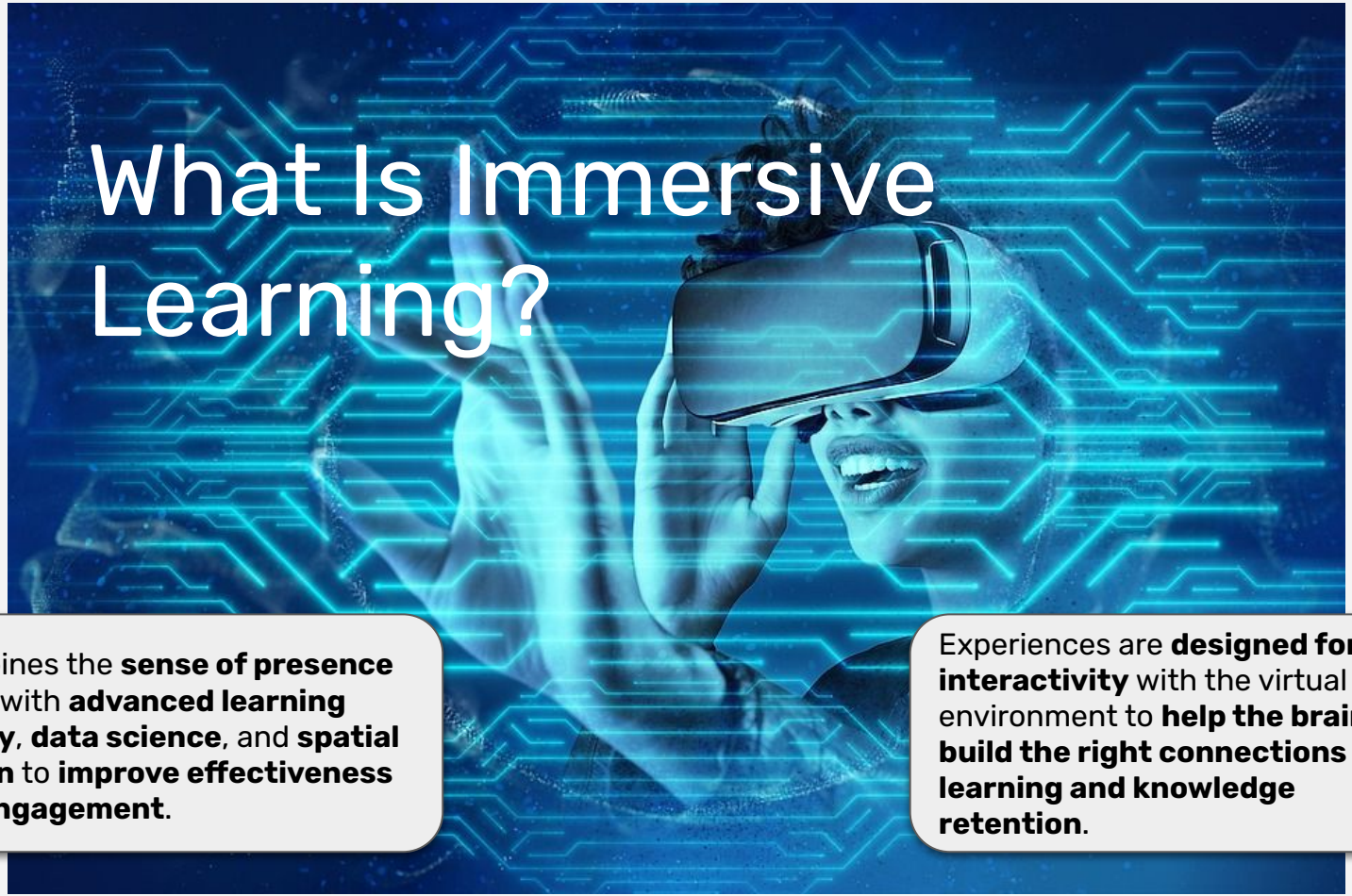
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Share one word to describe how you feel about immersive learning and teaching.

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What Is Immersive Learning?

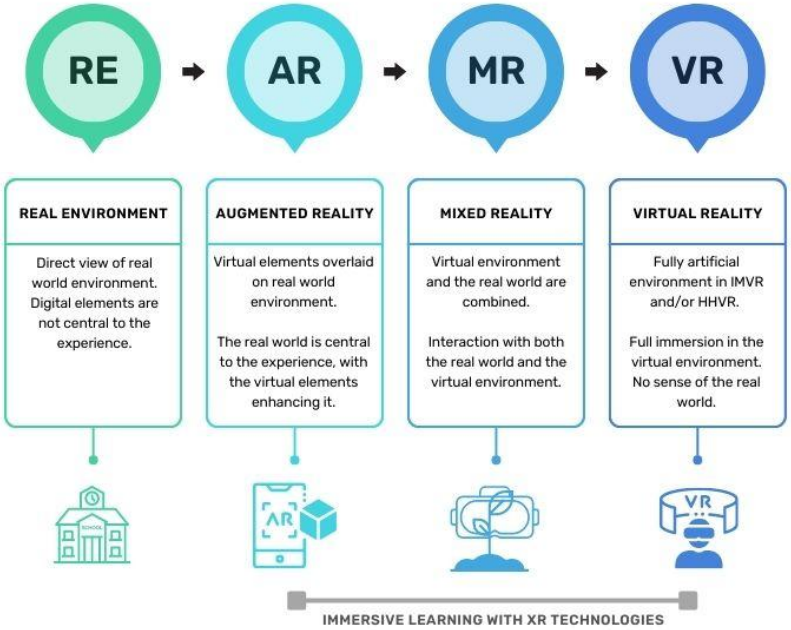


Combines the **sense of presence of XR** with **advanced learning theory**, **data science**, and **spatial design** to **improve effectiveness** and **engagement**.

Experiences are **designed for interactivity** with the virtual environment to **help the brain build the right connections** for **learning and knowledge retention**.

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WHERE LEARNING HAPPENS
Reality > Virtuality Continuum



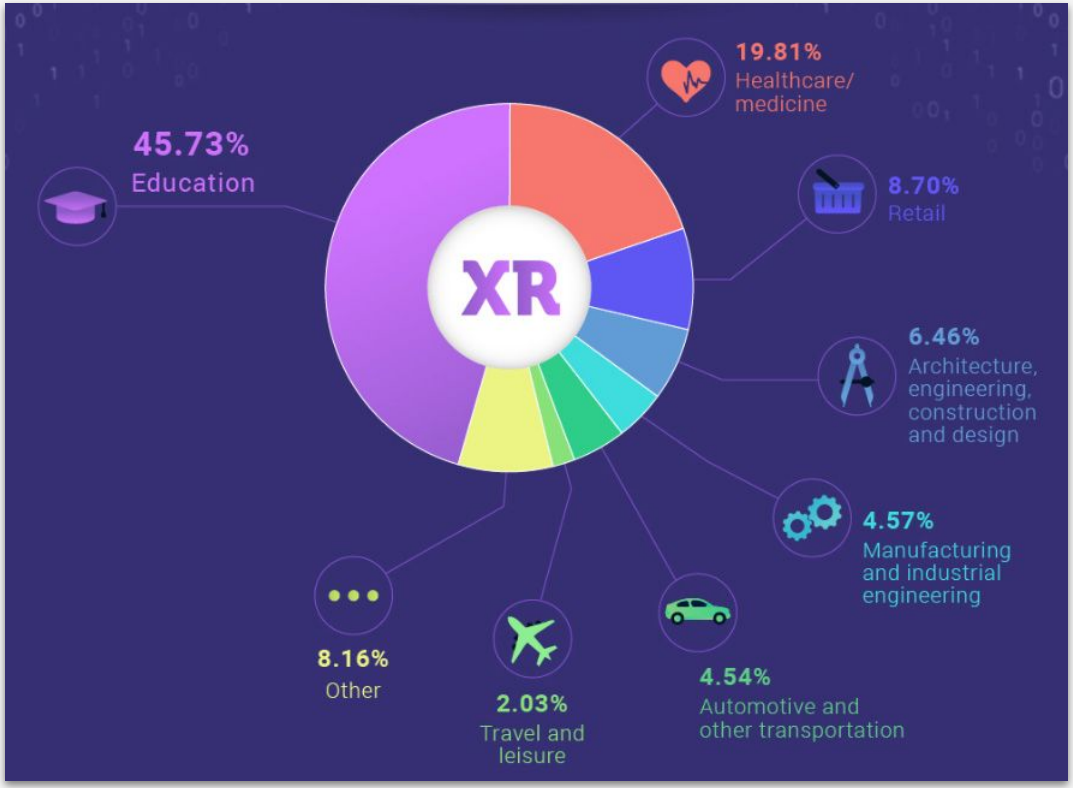
DESIGNED BY SHAI COGGINS (MTEACH, MSOCSCI), LEARNING DESIGN LEAD, LUMINATION

75% knowledge retention rates

12% increase in Basic Empathy Scale

70% Student Engagement scores

XR Use Across Industries



Source: BabbleUp via eInfoChips (2020)

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Industry Partnerships



Defense Industry



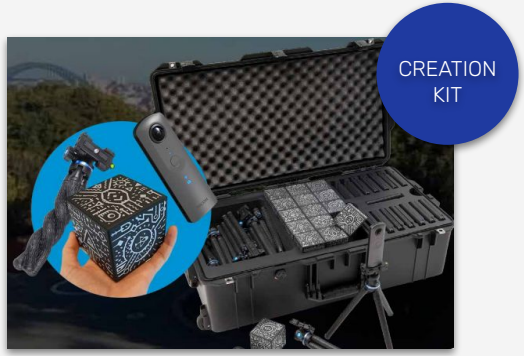
Resources Industry

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Lumination's XR Technologies







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XR across the learning years

	Foundation to Year 2	Year 3 & 4	Year 5 & 6	Year 7 & 8	Year 9 & 10	Year 11 & 12
Augmented Reality (AR) + Merge Cubes 	✔ Content consumption	✔ Content consumption + basic creation with general tools	✔ Content consumption + more advanced creation with general tools	✔ Content consumption + more advanced creation with general tools	✔ Content consumption + more advanced creation with specialised tools	✔ Content consumption + more advanced creation with specialised tools + Connections with industry use
Virtual Reality (VR) 		✔ Limited content consumption + basic creation with general tools	✔ Content consumption + more advanced creation with general tools	✔ Content consumption + more advanced creation with general tools	✔ Content consumption + more advanced creation with specialised tools	✔ Content consumption + more advanced creation with specialised tools + Connections with industry use

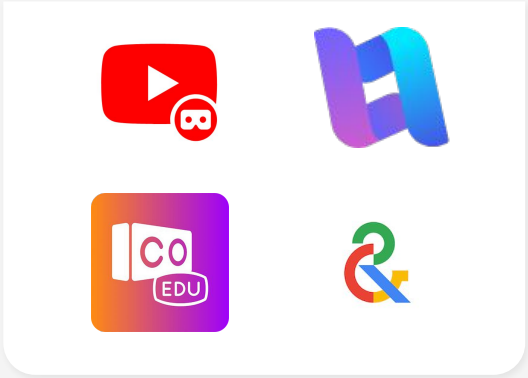
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Some HHVR + AR Apps

Open CoSpaces Edu app

Select QR/ Share code

Select bottom right icon to view in VR or AR



Access to Pro and the MERGE Cube add-on for 30 days with 100 seats. Trial code: **COSSHAICO**

One-time 10% discount on a CoSpaces Edu online purchase. Promo code: **COSPromoSC023**

Farm of the Future

GFZ FBQ

https://edu.cospaces.io/GFZ-FBQ

Merge Cube Book Review

ETT LWQ

https://edu.cospaces.io/ETT-LWQ

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BLOOM'S TAXONOMY & VIRTUAL REALITY



REMEMBER

UNDERSTAND

Google Earth VR
now with Street View

HOME

APPLY

HoloLAB Champions

mondly
learn languages in VR

ALL-IN-ONE SPORTS VR

ANALYSE

TRACKMANIA

NEFERTARI
JOURNEY TO ETERNITY

EN TÊTE-À-TÊTE AVEC LA JOCONDE
MONA LISA BEYOND THE GLASS

EVALUATE

SKYTROPOLIS
A VERTICAL MEGA CITY

CURIOUS ALICE

BBC
1943 BERLIN BLITZ

GADGETEER

The Book of Distance

CREATE

Tilt Brush by Google

Blocks
Google VR

MASTERPIECE VR

Vermillion

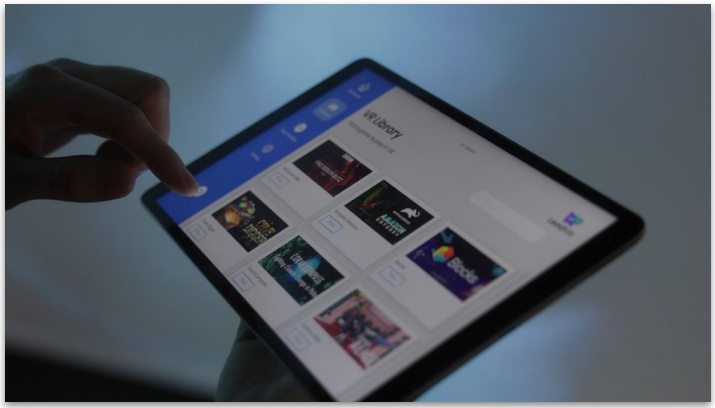
lyra VR

Tiny Town VR

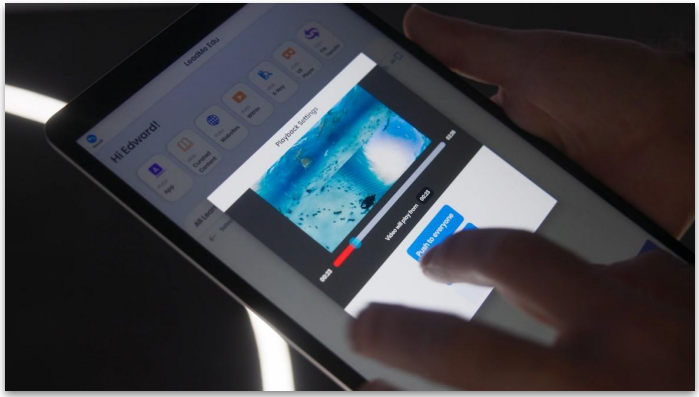
With information and inspiration from the work of Steve Bambury (@steve_bambury)
and input from Shai Coggins (Learning Design Lead, Lumination)

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LeadMe



Continuous app development



Features:

- Launch VR experiences individually or for all the headsets.
- Control the Lab's settings in different modes.
- Guided troubleshooting.

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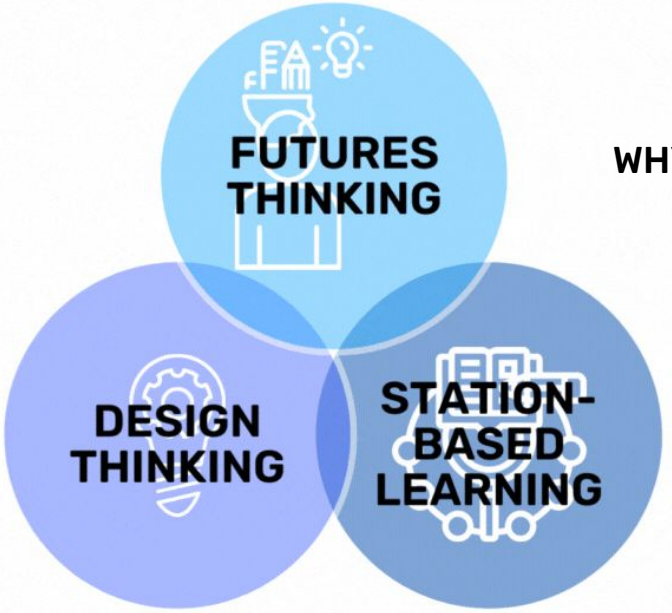
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On a scale of 1 to 5, how confident are you with using XR technologies in the classroom?

ⓘ Start presenting to display the poll results on this slide.

XR LEARNING FRAMEWORKS



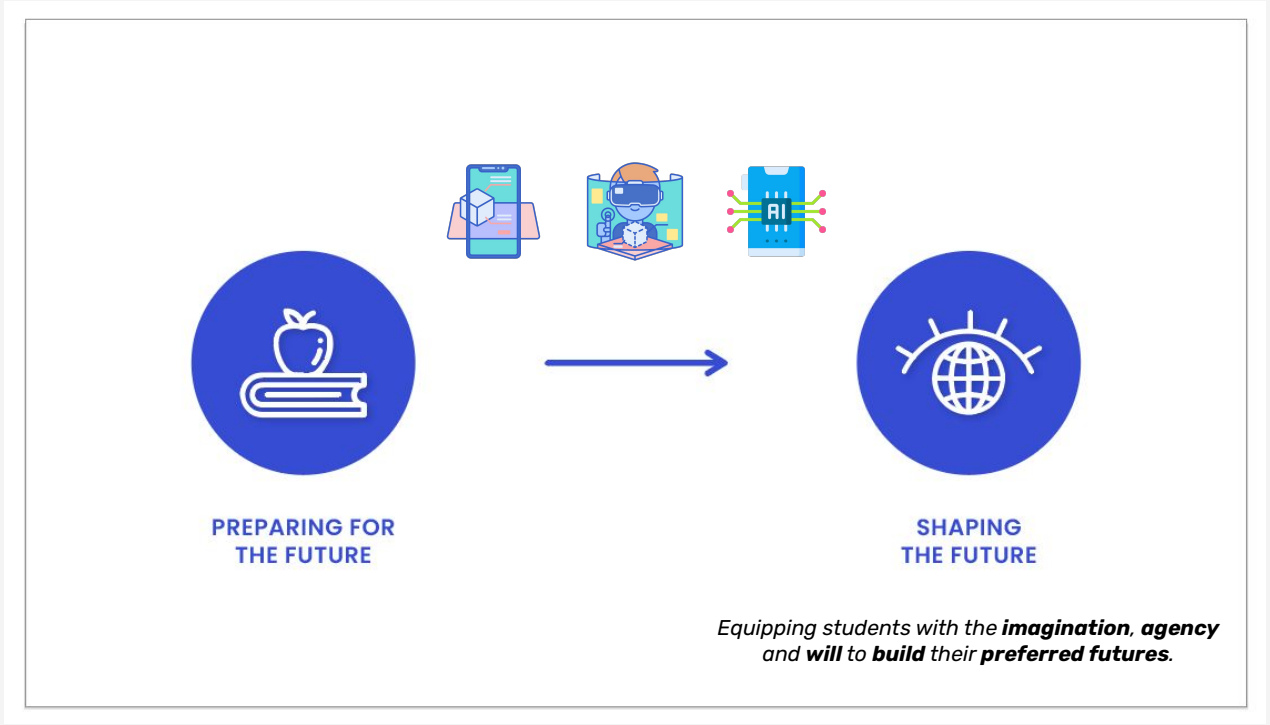
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Futures Thinking: The Educator as Futurist



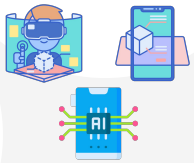




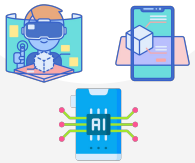


Immersive Learning and The Design Thinking Framework

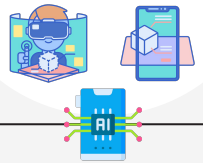
Implement your solution in some way. This could be through a showcase or going to market.

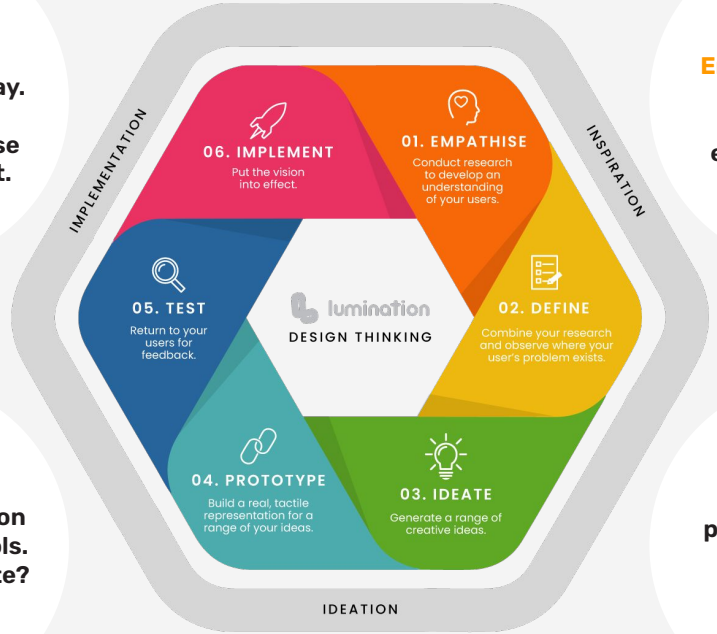


Test your creation and get feedback. Make adjustments and improvements.



Prototype a solution using different tools. What will you create?





Empathise what it's like to look at different world experiences using VR/AR.



Define the issue that you would like to focus on. What is it about?



Ideate some potential solutions. Would you be inventing, innovating, or campaigning?



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Station-Based Learning



Teacher-Based Station

*Teaching content
* Support-intensive tasks
* Learning support tasks



Technology Station

* Tech that students can operate independently *(e.g., Viewing VR videos using HHVR devices, exploring websites, engaging with AR content,etc).*



Creation Station

*Creating VR/AR or other media content, coding or designing games, or designing prototypes for a specific solution.

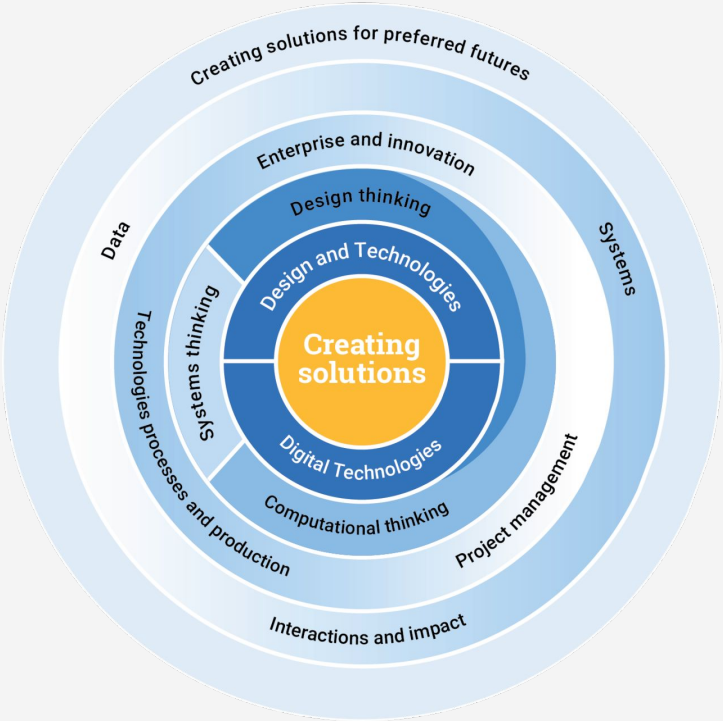


Research and Reflection Station

*Digital notebooks
*Exit tickets
*Research tasks
*Reflections on VR/AR experiences

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Digital Technologies in the Curriculum: Core Concepts



Learning in Technologies is about: *creating solutions for preferred futures* using systems and data; *design thinking*, systems thinking and computational thinking; and technologies processes and production skills, project management skills, and *enterprise skills and innovation*; taking into account interactions and impact.

Source: Australian Curriculum v.9 website - https://v9.australiancurriculum.edu.au/teacher-resources/understand-this-learning-area/technologies

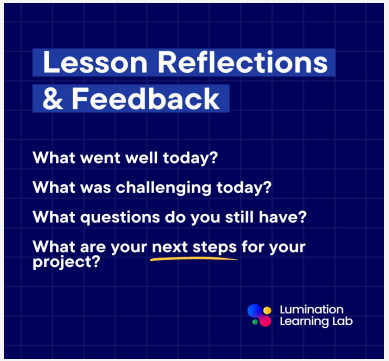
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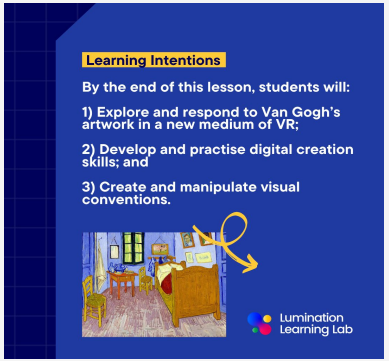
Lesson Plan Sneak Peek: Van Gogh In VR

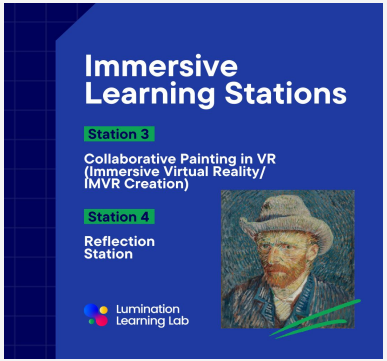














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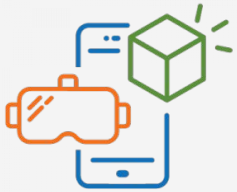
Sample Stations: Van Gogh In VR Lesson

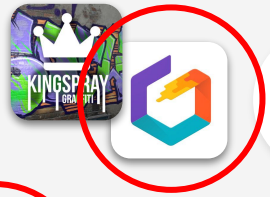
Rotations	**Station 1** *(HHVR – Viewing Van Gogh In VR)*	**Station 2** *(Augmented Digital Creation)*	**Station 3** *(IMVR – Collaborative Painting in VR)*	**Station 4** *(Reflections)*
1	Group 1	Group 2	Group 3	Group 4
2	Group 2	Group 3	Group 4	Group 1
3	Group 3	Group 4	Group 1	Group 2
4	Group 4	Group 1	Group 2	Group 3

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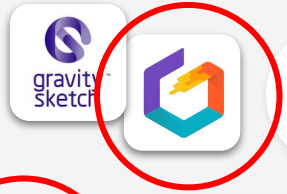
The SAMR Model* of XR Technology Integration in Visual Art Education

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R **REDEFINITION**
Technology allows for the creation of new tasks which were previously inconceivable.



M **MODIFICATION**
Technology allows for significant task redesign.

TRANSFORMATION



A **AUGMENTATION**
Technology acts as a direct substitute, with functional change.



S **SUBSTITUTION**
Technology acts as a direct substitute, with no functional change.

ENHANCEMENT

Adapted by Shai Coggins from SAMR Model by Dr. Ruben Puentedura

Innovative XR in Education Practices

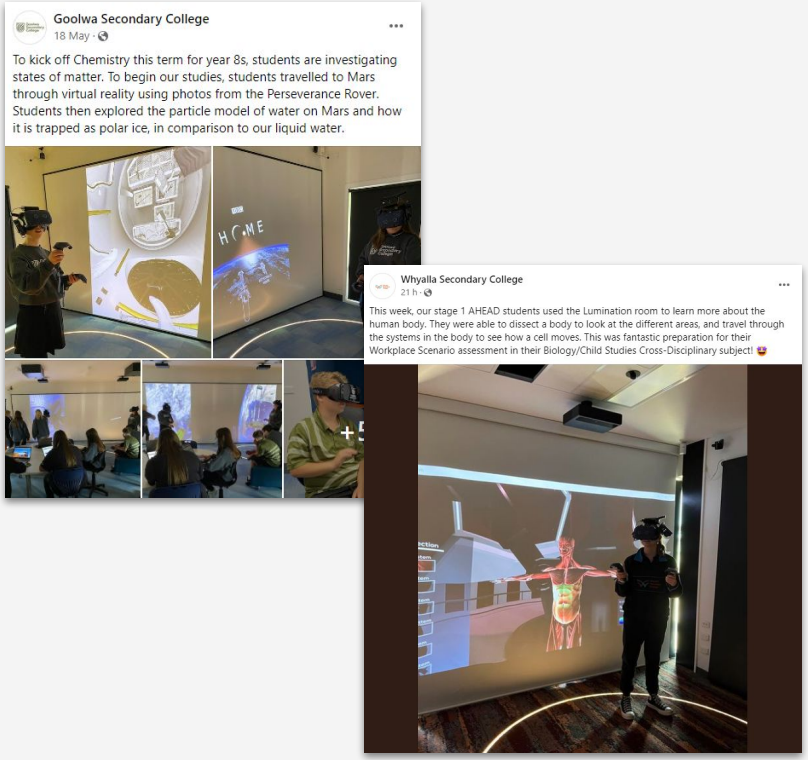


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Innovative XR in Education Practices

- **Student creations**
  - School tours, local wetlands, etc. in VR.
  - Present book reviews, learner profiles, etc using Merge Cubes

- **Other Classroom Use**
  - The Empathy in VR Project
  - Exploring different biomes and landmarks



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Student Feedback: Grange Primary School

My VR experience was unbelievable. I loved how real it looked and how you could go to different places around the world. My personal favourite is the Statue Of Liberty. I think the learning benefits are taking learning to the next level instead of just writing on a piece of paper for one lesson. This could also help us with helping others, so they don't step out of the circle or how to change locations. I see VR being used in the future not just for school learning but high schools even universities to have a go using. We can also try to develop other learning ways in the future including Maths, Spelling, English anything you can imagine. VR is the best learning tool ever.

- Jack L



The headset is put on, you're in another world you see landmarks, destinations, even your home! Then I take it off, and I'm back where I started! During the time of me using the VR, it has been the highlight of the year. Using the VR was very fun. There are massive benefits using the VR. It assists with geography being able to have a look at the real place and getting info from the area. It also teaches students to teach sometimes, as in showing someone on how to do something. I think my favourite part was how you can be in an amazing place and then when you take the headset [off] you are back in the reality world. I think that in the future, VR will be a lot more common in primary schools. Teaching kids' important thing about the VR like the time limit. It is very important not to do it for too long. VR will probably become the lifeblood of education in the future!

- Enzo L



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Discussion / Questions

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Audience Q&A Session

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Questions

How do you implement immersive technology effectively across the curriculum?

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Questions

What opportunities are there for content creation in immersive technology?

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Questions

How are different industries using immersive technology today?

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Questions

What evidence of the impact of immersive technology on students is available?

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Questions

What are the best practices for managing a class in a Lumination Learning Lab?

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Questions

How can a Lumination Learning Lab be integrated across different school contexts?

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Questions

How do you support teachers in implementing immersive technology in the classroom?

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