VIRTUAL WORLDS IMPLEMENTATION GUIDE

Click icon below for Implementation Guide Virtual Worlds

VIRTUAL REALITY IN EDUCATION

WORKING TOGETHER

WARRKAMU YIKAMARTALA

CULTURALLY RESPONSIVE STEAM

Why?

PUBLIC SCHOOL REVIEW RECOMMENDATIONS

Relationships & Partnerships	Learning Environment	Leadership
Continue to build on relationships with local network schools to further strengthen teacher capacity.	Explore the option of becoming a Positive Behaviour Support school to develop a consistent approach and language to guide behaviour.	Sustain quality leadership through the coaching and development of staff.
Review and reflect on the implementation of the Aboriginal Cultural Standards Framework to strengthen connections with the local community.	Develop an ECE Philosophy founded on a play based learning approach from K - 2. Create a wider understanding of the approach across the school.	Empower staff to lead the refinement of instruction and curriculum design and delivery.

Department of Education
GOVERNMENT OF WESTERN AUSTRALIA

Teaching for Impact

Shaping the future

Department of Education
GOVERNMENT OF WESTERN AUSTRALIA

Every student, every classroom, every day
Strategic directions for public schools 2020–2024

The Western Australian public school system is a major contributor to the State's prosperity and growth as a fair society promoting the wellbeing and participation of all its citizens.

Our aspiration is for every student to:

Unlock and fulfil their learning potential	Be equipped with contemporary and emerging work capabilities	Develop the personal and social attributes that form the basis for future wellbeing	Achieve year on year growth in their learning throughout their schooling	Be well prepared to take the step beyond school into further education, training or work

Our improvement drivers:

1. Provide every student with a pathway to a successful future.
2. Strengthen support for teaching and learning excellence in every classroom.
3. Build the capability of our principals, our teachers and our allied professionals.
4. Support increased school autonomy within a connected and unified public school system.
5. Partner with families, communities and agencies to support the educational engagement of every student.
6. Use evidence to drive decision-making at all levels of the system.

Our success will:

1. Enable Aboriginal students to succeed as Aboriginal people
2. Ensure students are on track in the early years for continued success in school
3. Enhance student health and wellbeing
4. Progress student literacy and numeracy
5. Improve student attendance
6. Increase student participation in STEM
7. Increase retention and achievement of students to Year 12
8. Ensure students gain the skills, qualifications and knowledge needed to experience success

Objectives

Improved Student Achievement through Culturally Responsive Curriculum:

- Improve student success in their education through the use of motivational & applied learning experiences, that authentically represent Aboriginal culture.

Improve Student Attendance and Engagement:

- Use a culturally responsive learning curriculum, focus and pedagogy [e.g., Two way-Learning] through the "VR & technologies Learning Vehicle" to provide motivation and purpose in education for students, families and community and improve attendance and engagement for all students.

Engaging and Empowering Aboriginal Parents and Communities:

- Provide a platform and process for Aboriginal communities to actively participate in the creation and curation of educational learning content to be embedded through the "VR & technologies Learning Vehicle".

Community Engagement and Education:

- Provide opportunities for the broader community to engage with and support the culturally responsive curriculum development and aligned "VR & technologies Learning Vehicle".

OBJECTIVES

PROJECT 1, AUSTRALIAN TWO-WAY SEASONAL CALENDAR

MARCH
APRIL
MAY

JULY
AUGUST

November

- [Two Way Seasonal Calander](#)

PROJECT 2 AUSTRALIAN ANIMALS AND FIRST NATIONS ART CANVAS

WORKING TOGETHER

WARRKAMU

YIKAMARTALA

Australian Animals

Project 1 & 2, Virtual 2-Way Seasonal Calendar integrates Nyamal cultural knowledge with digital art, fostering stronger school-community bonds. Students work with elders to create a seasonal calendar, blending traditional canvas art with modern tools like Tilt Brush. This project enhances literacy, ICT skills, and cultural understanding through immersive learning.

Weeks 1 & 2

Introduction and Exploration

Students explore the concept of seasonal calendars, understanding the significance of different times of the year in Nyamal culture.

3 & 4

Concept Development and Values Integration

Students brainstorm and develop the design of the seasonal calendar, integrating Nyamal cultural themes and values through collaboration with elders.

5 & 6

Technical Skills and Artistic Techniques

Students learn artistic techniques to represent their seasonal knowledge, using tools like Tilt Brush to create vibrant digital art pieces.

7 & 8

Collaborative Creation

Students work with community elders to integrate traditional knowledge and values into their seasonal calendar, ensuring cultural accuracy.

9 & 10

Presentation, Reflection, and Preparing for Upload

Students present their seasonal calendar, reflect on their learning journey, and prepare the project for sharing with the community.

Curriculum Links: Science

Years 4-6: Study environmental changes and adaptations over different seasons

Content Descriptions: ACSSU072, ACSSU073, ACSSU075, ACSSU043, ACSSU094

English and Math

Years 4-6: Create descriptive texts and oral presentations on seasonal significance, and use measurement and data to document seasonal changes.

ACELY1680, ACELY1694, ACELY1704, ACMNA075, ACMNA076, ACMMG084)

Art

Develop and apply artistic techniques to create digital representations of seasonal elements.

ACAVAM110, ACAVAM111, ACAVAM112

Digital Technology

Use digital tools to create and compile a seasonal calendar, planning and managing data to represent seasonal changes and events.

(ACTDIK007, ACTDIP009, ACTDIP018)

General Capabilities

Develop general capabilities (literacy, numeracy, ICT, critical thinking, social skills, ethics) through the documentation and presentation process.

ACTDIK007, ACTDIP018

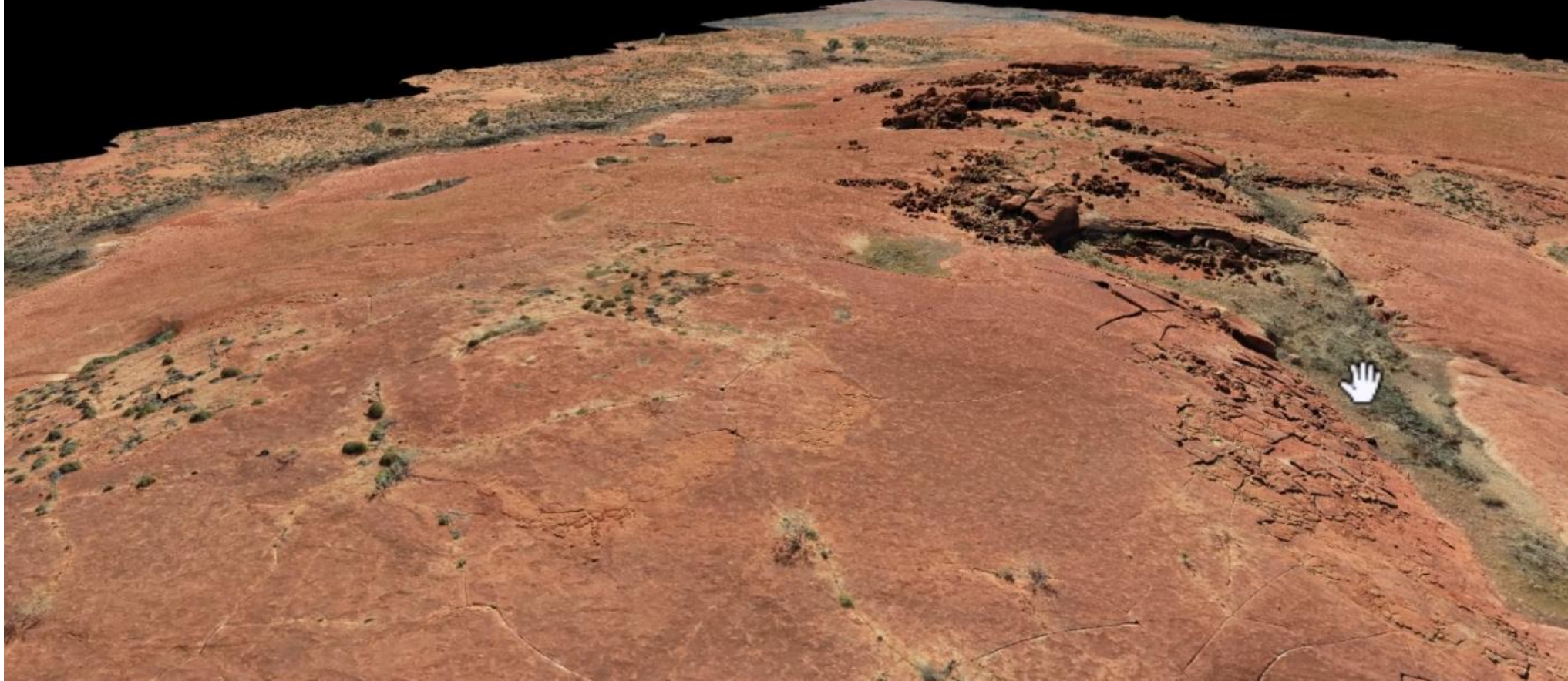# PROJECT 3 MARBLE BAR VIRTUAL WORLDS

10:42 PM

[Virtual World Flyover](#)

Student Voice expressed through STEAM

[Drone Topographical Mapping](#)

Project 3 Virtual Worlds project integrates Digital Technologies and Aboriginal Cultural Standards, enhancing literacy, numeracy, and critical thinking. Students create virtual art using photogrammetry, VR, and audio editing, collaborating with elders, capturing voices through storytelling, and ensuring cultural respect. This approach enriches learning and preserves Nyamal culture.

Weeks 1 & 2

Introduction and Exploration

Students explore photogrammetry, creating 3D models from photographs, integrating Nyamal culture with technology.

3 & 4

Concept Development and Values Integration

Students brainstorm virtual environments using photogrammetry, integrating themes and values through elder collaboration, fostering cultural respect and creativity.

5 & 6

Technical Skills and Artistic Techniques

Students learn technical skills and artistic techniques, mastering photogrammetry and VR tools to create detailed, culturally-rich virtual environments.

7 & 8

Collaborative Creation

Students work with community elders to integrate traditional knowledge and values into their photogrammetry-based virtual world creations.

9 & 10

## Presentation, Reflection, and Preparing for Upload

Students present their 3D models, reflect on their learning journey, and prepare projects for upload, ensuring cultural accuracy and technical precision.

Curriculum Links: Science

Years Use photogrammetry to model environmental adaptations and changes; create differentiated 3D projects showing survival strategies and geological impacts.

4-6 (ACSSU073, ACSSU043, ACSSU094)

English and Math

Students use photogrammetry to create virtual worlds, integrating English, and local language, capturing voices through storytelling and data analysis.

English: (ACELY1680, ACELY1703, ACELY1712);

Math: (ACMNA076, ACMNA100, ACMNA123)

Art

Students create virtual art using Tilt Brush, integrating Art and Digital capturing voices through digital storytelling, local language, and NFT creation to showcase their work.

Art (ACAVAM110, ACAVAM114, ACAVAM116)

Digital Technology

Students create virtual art, integrating Digital Technologies collaborating with elders, capturing voices through digital storytelling, using photogrammetry, VR, and audio editing to enhance their projects.

Digital Technologies (ACTDIK007, ACTDIP018, ACTDIP021)

General Capabilities

integrate general capabilities (literacy, numeracy, ICT, critical thinking, social skills, ethics) with Aboriginal Cultural Standards by documenting projects, using math and ICT, collaborating with elders, solving problems, and respecting cultural protocols.

(ACTDIK007, ACTDIP018)
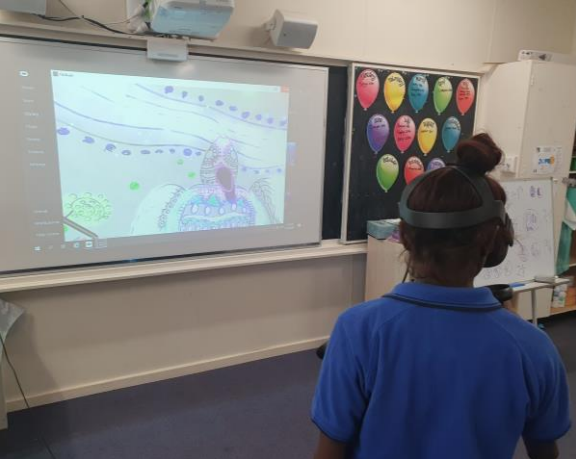
THE SOLUTION

- Including the community end user requirements in the planning process through extensive mind mapping

- Identifying community aspirations and pride; achieving the blessing of community elders; Developing a project plan and methodology to implement and embed culturally responsive STEAM that aligns with community aspirations

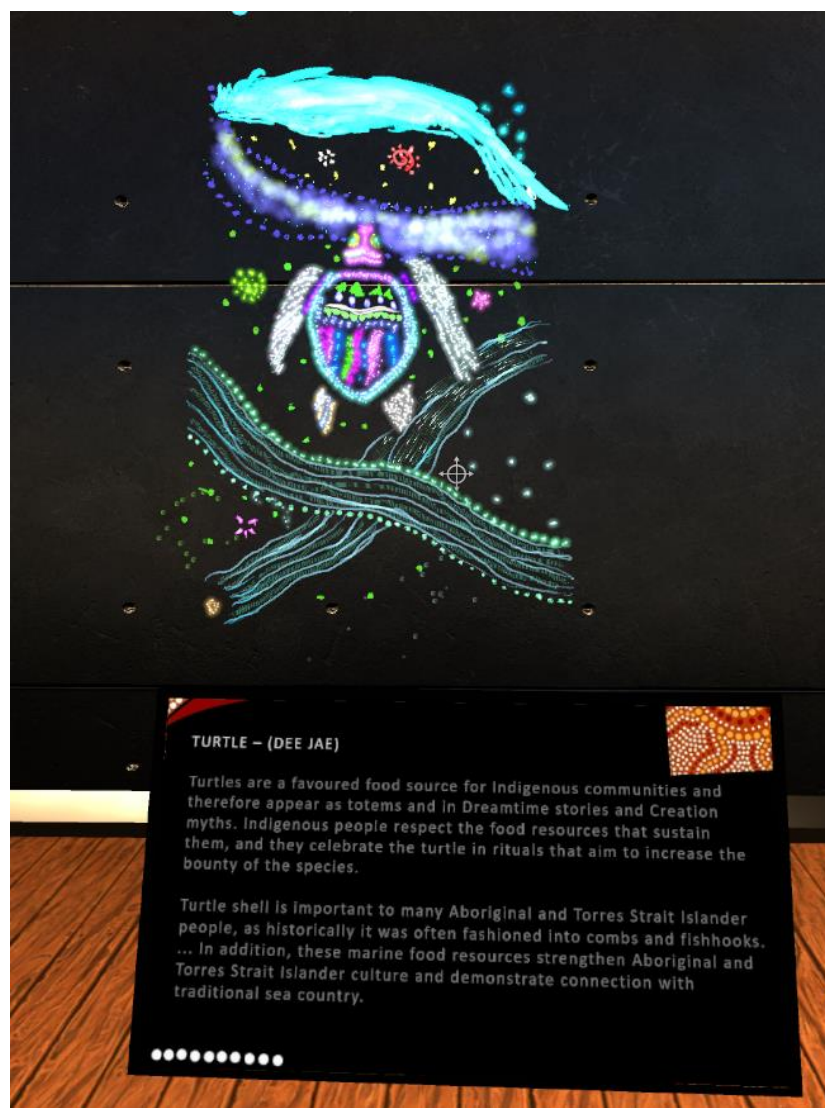- Identifying the hardware, software and training required to deliver desired outcomes

A SUCCESS STORY DEEJAE

Student leader Deejae was approached by a New York artist in VR at the WA Resources Technologies Showcase and offered income for her Aboriginal Non-Fungible Token.

FEEDBACK & IMPACT

Nyamal Elder Julie Whalebone:

"It has been great to see my kids and their fellow students going through an engaging and hands-on educational journey to create these amazing pieces of work. This initiative has sparked curiosity and passion amongst our students while also encouraging learning about our rich Aboriginal culture and history".

APICTA 2022 Awards

WHAT'S NEXT ?

2024-2025

The Mura Mirri VR Initiative in Western Australia encapsulates the project's mission to pave the way for future educational success using advanced technology while honoring and integrating Aboriginal cultural perspectives. The name reflects the journey (Mura) towards the future (Mirri) facilitated by Virtual Reality, providing students in remote areas with cutting-edge educational experiences.

THANK YOU