



ST PETER'S COLLEGE
PALMERSTON NORTH, NEW ZEALAND

Pacific-led Education

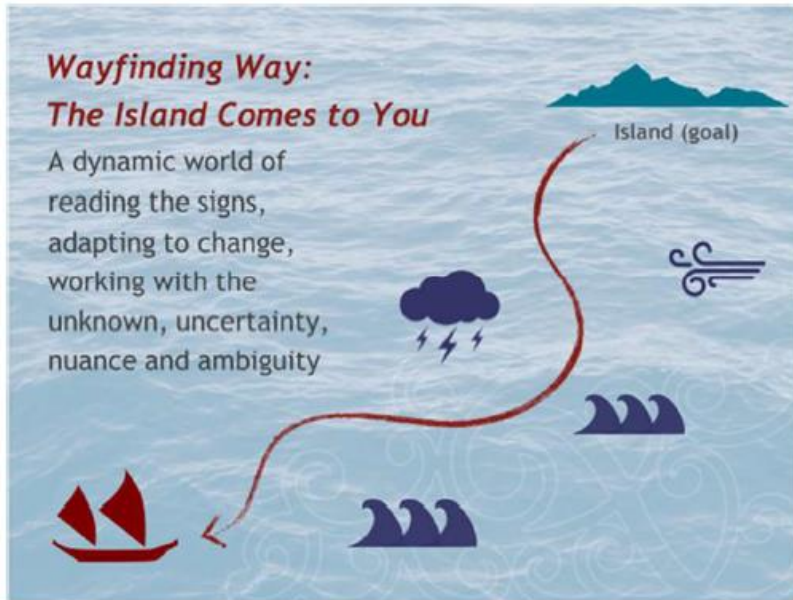
Level 1 NCEA Genomics

Empowering Pasifika Strengths in Genetics
Education

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Our Journey today



Spiller, C., Barclay-Kerr, H., & Panoho, J. (2015). *Wayfinding Leadership: Ground-breaking Wisdom for Developing Leaders*. Huia Publishers.

Explore

- Pacific values and language, and their implications for practice

Encounter

- Tapasā | Pasifika Success Compass

Envision

- Curriculum and pedagogy where Pacific students and their families can 'see' themselves

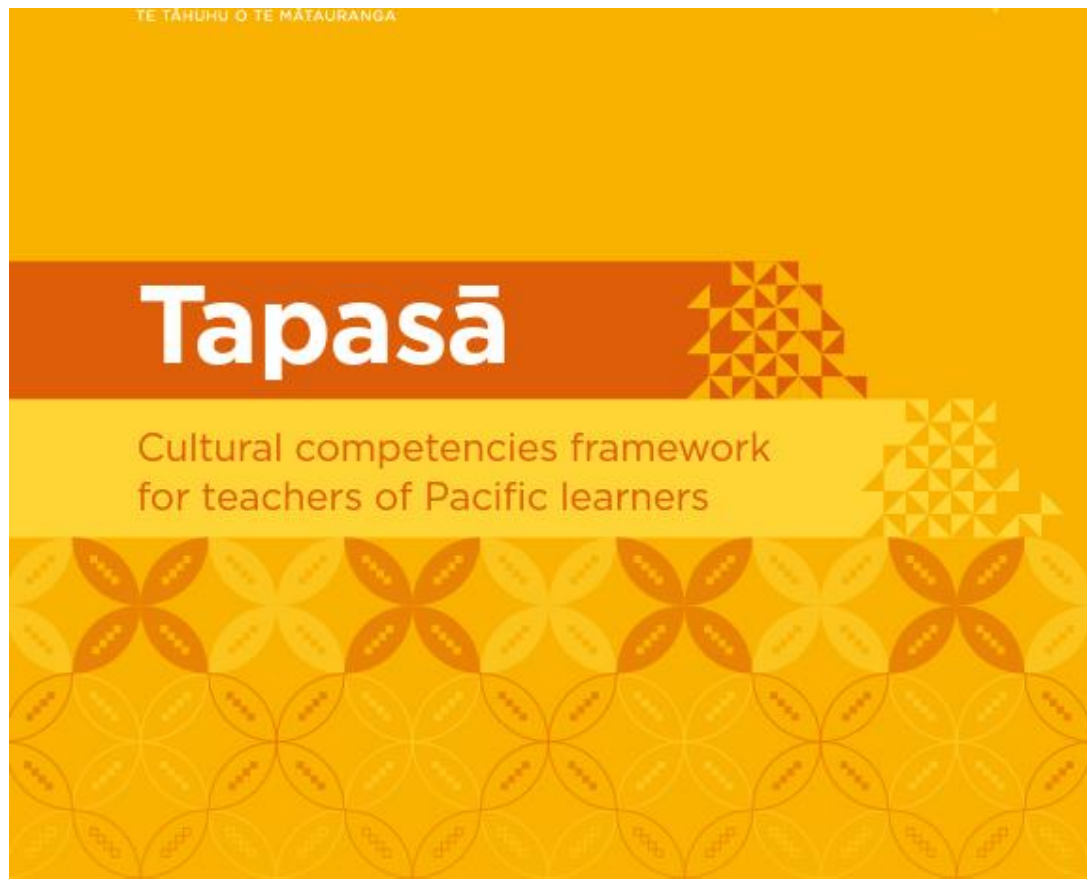
Teu le va - Whakawhanaungatanga



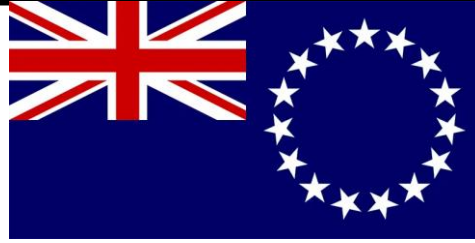
What is the story behind your name?

- Who named you?
- Does it have any cultural, historical, or family significance?
- Have you ever asked your parents or guardians about why they chose your first name?
- Do you know what your name means?
- How do you feel about your name?
- How has your perception of your name evolved over time?

Tapasā



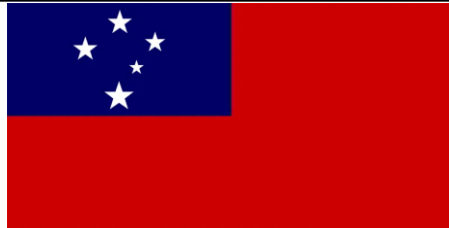
Kia orāna
Pē'ea koe?
Meitaki au
'Aere rā / 'Ē no'o rā



Mālo ni
E ā mai koe?
Manuia fakafetai
Tōfā ni



Tālofa lava
O ā mai oe?
Manuia fa'afetai
Tōfā soifua



Mālō e lelei
Fēfē hāke?
Sai pē, mālo
'Alu ā / Nofo ā

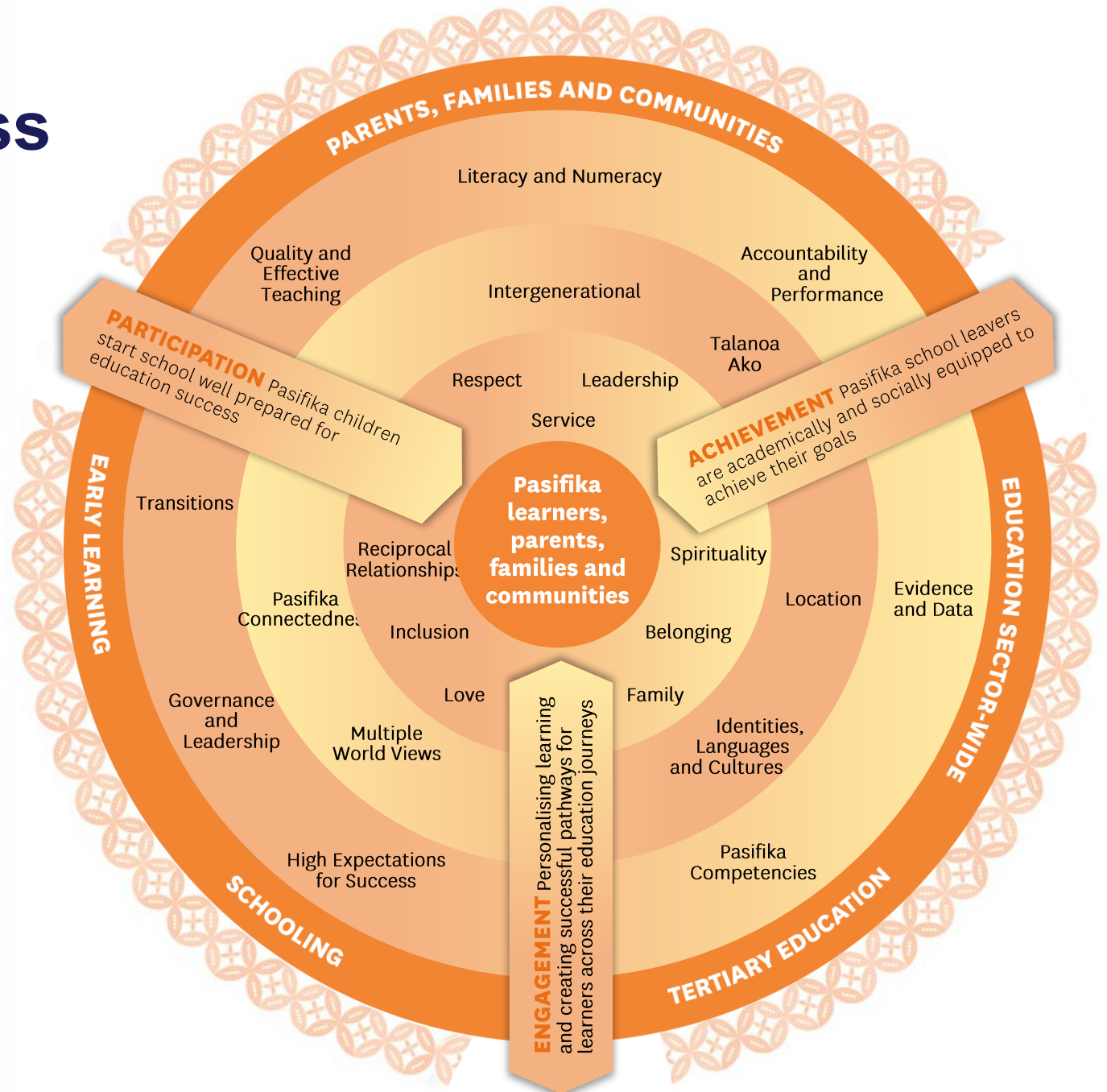


Pasifika Success Compass

A tool to help people understand the essential connections and relationships required to ensure Pasifika success



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Layer 1:

Know their strengths, aspirations, dreams, challenges and learning needs



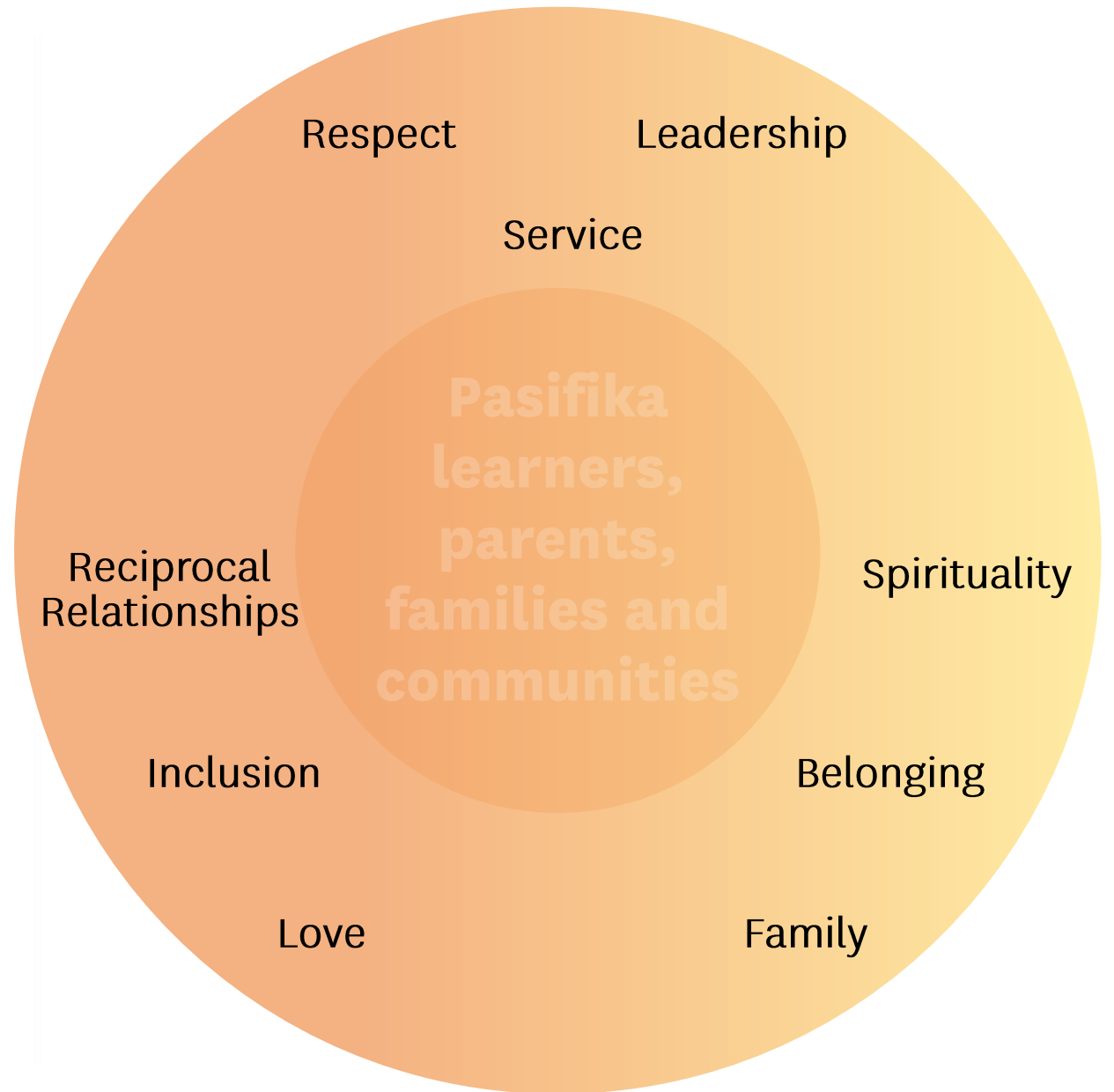
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**Pasifika
learners,
parents,
families and
communities**

Layer 2: Pasifika Shared Values



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BELONGING



“When you say my name correctly, I feel like I belong”

Belonging is about making that space where learners and their families feel that they can open up.

What does belonging mean to you?

- I feel like I belong when
 - I create a sense of belonging in my classroom by ...
 - I develop a sense of belonging with the people I lead by ...
-
- What does belonging mean to Pacific peoples in your community?
 - How can learning environments strongly embody Pacific perspectives of belonging?



Demonstrate understanding of genetic variation in relation to an identified characteristic

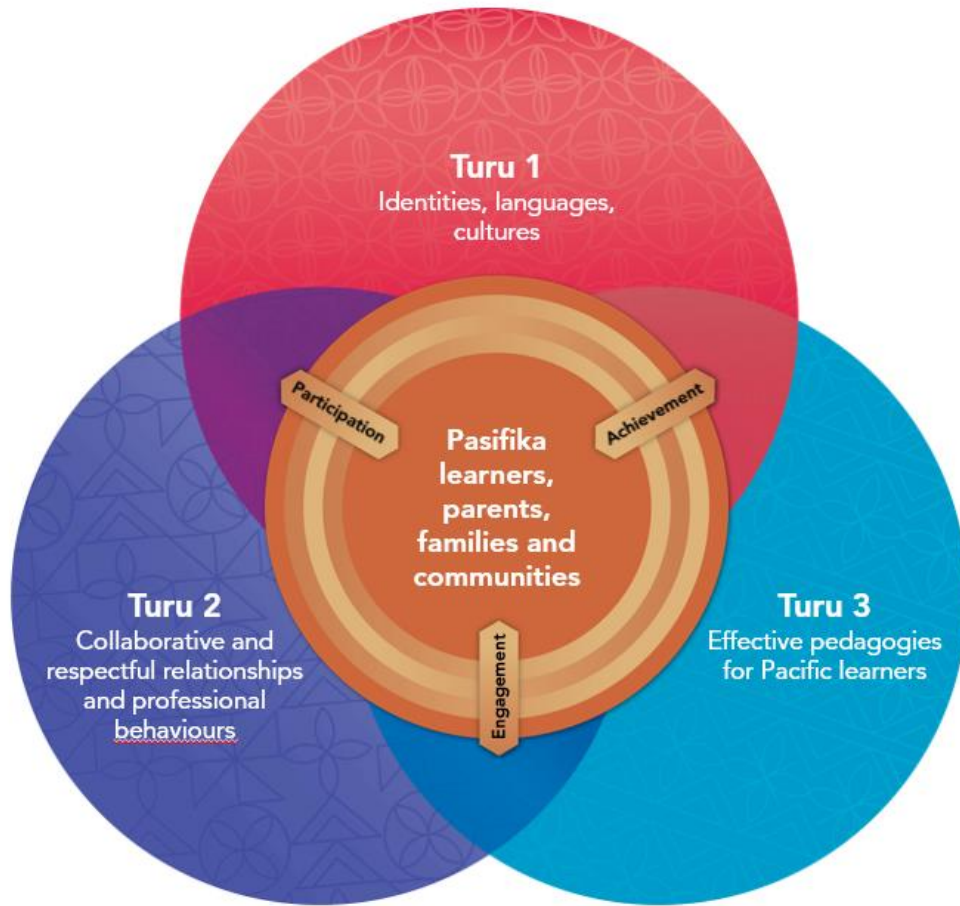
- All learning should connect with students' lives in Aotearoa New Zealand and the Pacific.

(p.1 SLO for Assessment of 1.1 & 1.3)

- The diverse and unique cultures, languages, and identities of the Pacific Islands mean that the Pacific concepts in NCEA Achievement Standards can be understood and applied in various ways across different communities, offering flexible interpretations for kaiako and students to **explore**.

<https://ncea.education.govt.nz/science/chemistry-and-biology/1/3?view=unpacking>

Tapasā



1.10 Demonstrate a **strengths-based practice**, and builds on the cultural and linguistic capital Pacific learners, their parents, families and communities bring

2.14 Critically reflects and examines **whose knowledge is being taught and valued** in the early learning setting or classroom in order to balance and enhance power sharing collaborative relationships.

3.8 Understands that Pacific learners come with **prior knowledge and are equal partners together** with their parents, families, and communities in determining their learning journey and what achievement and success means to them.

Pasifika Fusion 2023 Theme

"Heroes have been present in our past and have forged our journeys into the future."

Who is someone that has been instrumental in your success and why?

In what (heroic) ways has Science addressed issues and challenges for our Pasifika communities?



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Caroline Taripo-Keith 2024

SECONDARY SCHOOLS PACIFIC FESTIVAL
PASIFIKA FUSION
REGENT ON BROADWAY, PALMERSTON NORTH
2023 21ST & 22ND JUNE

**HEROES:
PAST, PRESENT
& FUTURE**

WWW.PASIFIKAFUSION.CO.NZ
THURSDAY NIGHT CONCERT @ 6PM

Quiz - Debate - Speeches - Cinematography
Culture Performances - Drama - Talent - Visual Arts
Wearable Arts - Essay - Poetry - Science

Panel One	Panel Two	Panel Three
My Story Who is someone that has been instrumental in my success and why? How has this hero impacted my sense of who I am?	Centre Pacific Science What's this got to do with science and/or technology? How does my hero define Science? How would I define 'Pacific Science'?	Impact on Self and Pasifika Community How does this impact our wider Pasifika community? What issues and challenges does this science board address for our Pasifika Peoples ? How was this heroic? How does this heroism link to who I am?



Rosalia Siu (Year 12)

“our ancestors found ways of healing, especially in nature. The nonu wasn’t just discovered by accident. They observed it, and experimented by testing ...they explored more, finding more benefits of what the nonu plant can do. This happened over many years, communicating with each other to understand the new benefits. This collective knowledge of the nonu plant would be developed and revisited by Pacific Peoples improving on its accuracy and relevance”

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Junior Faiao Pelasio (Year 11)

“Looking outside of Pacific knowledge for ‘answers’ reflects a system that doesn’t acknowledge our culture - a feeling of inferiority. This science board not only acknowledges ancient and valid knowledge, but it also values and celebrates Pacific ways of being. The challenges Pacific Peoples face in Aotearoa NZ are many - and one is having our intellect acknowledged”

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Beilene Lealofi (Year 10)

“One of my favourite memories is helping my nana make Fagu’u Samoa with my cousins. Making it was really fun even though we were all a bit clumsy and made mistakes. My Nana would growl at us and tell us to do it properly, but she also had a sense of humour about it. Sometimes the best way to learn is through laughter and making mistakes”.

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“There is a science behind traditional practices such as making coconut oil. The process involves a series of steps that require a deep understanding of the natural world and how it interacts with the human body. The science is a testament to the deep knowledge and wisdom of our ancestors, and it continues to be an important part of our cultural heritage today”



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Drawing on different knowledge systems

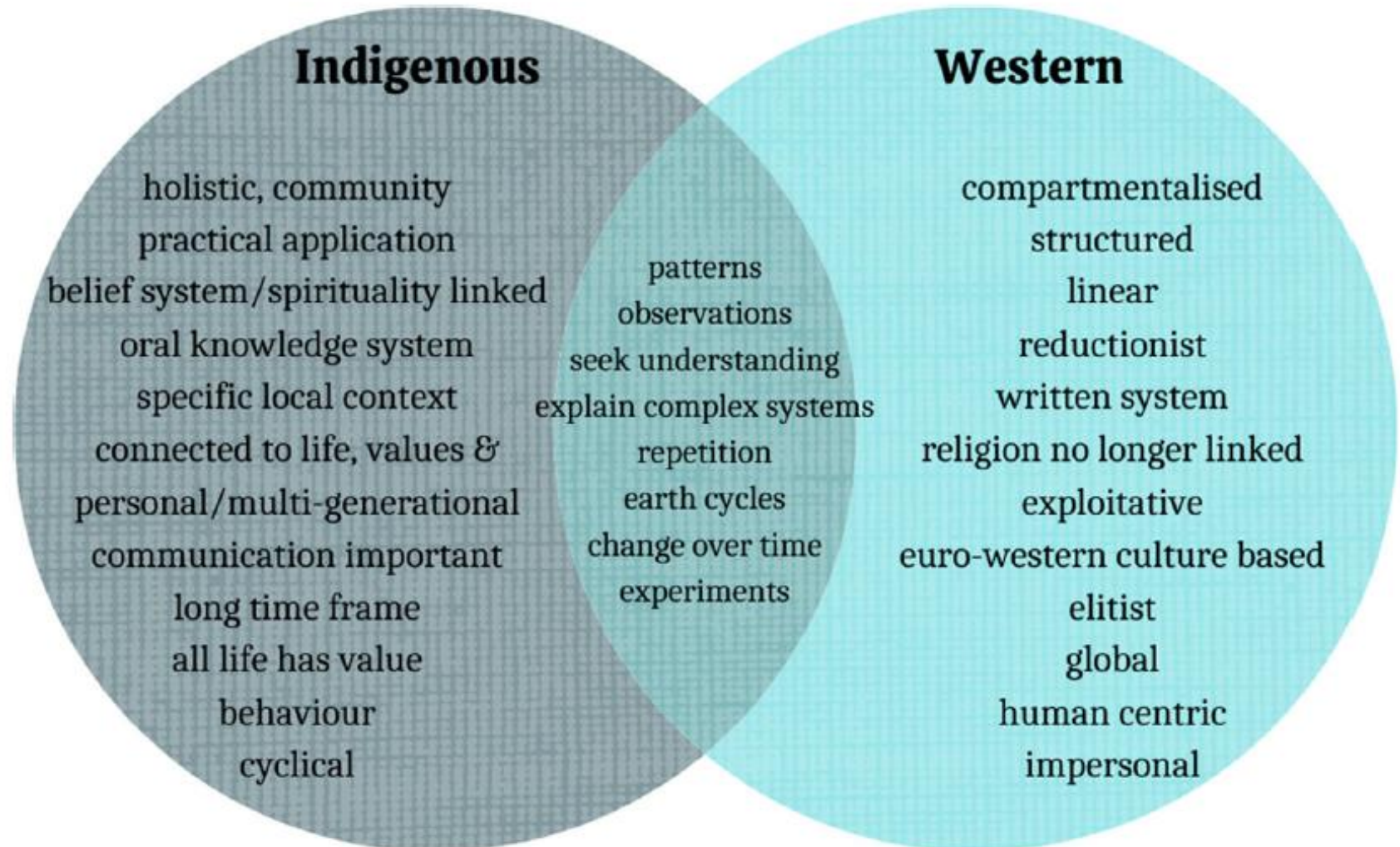
“Mātauranga Māori as a knowledge system provides a world view and an **identity** for those who have whakapapa Māori and engage with the knowledge system. For those who do not whakapapa Māori, engagement with mātauranga Māori provides an opportunity to explore and understand Māori world view; however, it does not provide identity” (p. 5)

Enduring competencies for designing science learning pathways

Rosemary Hipkins, Sara Tolbert,
Bronwen Cowie, and Pauline Waiti



Knowledge Systems





Drawing on different knowledge systems

- How will we support students and teachers to develop a strategy for bringing the two knowledge systems into a meaningful and respectful dialogue that works for them?
- How could we make space for Indigenous knowledge from the Pacific?
- What could this mean for Pacific learners and their identity?
- How might we frame this in terms of developing Pacific Academics Identities, Pacific Academic Science identities, etc ?

Knowledge Systems

In what ways might your students benefit from having awareness of more than one knowledge system?





AS92022 | Demonstrate understanding of genetic variation in relation to an identified characteristic

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Validating and Building Upon Pacific Indigenous Knowledge Systems

Indigenous knowledge systems and their significance. For example,

- The rich oral traditions, storytelling, and practical knowledge in Pacific cultures that relate to genetics and biodiversity.

Connecting Indigenous Knowledge with Genetics. For example,

- The concept of gene pools and genetic diversity in the context of Pacific Island biodiversity.

Strategies for Integration. Fo example,

- Storytelling: Use stories from Pacific cultures to explain genetic concepts.
- Community Involvement: Involve local elders and community leaders in teaching sessions or through the context of projects
- Encourage students to explore their own family histories and genetic traits



Creating an Inclusive and Empowering Genetics Curriculum

Inclusive Teaching Practices

- Representation: Use examples and case studies that reflect the diversity of the student population.
- Language: Incorporate Pacific languages and terminologies where possible.

Empowering Pasifika Students

- Role Models: Introduce students to Pasifika scientists and geneticists.
- Student-Led Projects: Encourage students to lead projects that explore genetic variation within their own communities.

Gafa o le ava – The Genealogy of the Kava

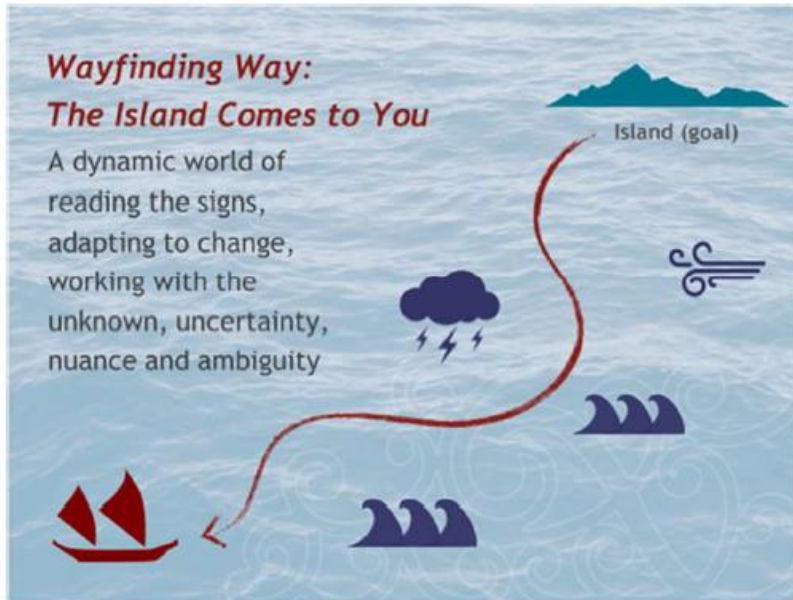
Read the story of '*The Journey of the Kava Plant*'
created by Caroline Taripo-Keith

1. How does the story of the kava plant help students connect with their cultural heritage?
2. What examples from the story illustrate the principles of genetic variation and inheritance?
3. How can teachers use storytelling to make complex scientific concepts more relatable and understandable for students?
4. What questions can teachers ask students to encourage them to think critically about the relationship between traditional knowledge and modern science?

Anything else?



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References

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- [Braiding Sweetgrass](#)
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- <https://www.nzcer.org.nz/nzcerpress/teaching-complex-systems-thinking>