GREEN ORANGE BLUE BRONZE SILVER GOLD

Indigenous Research Methodology – Education

The Indigenous Research Methodology (IRM) is a collaboratively developed approach that reflects the deep, place-based knowledge systems of Aboriginal and Torres Strait Islander peoples and applies them in contemporary scientific research. Adapted for educational settings, the IRM forms a framework for exploring and applying Aboriginal and Torres Strait Islander Peoples' longstanding scientific knowledge traditions and can scaffold respectful engagement with Traditional Owners when teaching scientific inquiry. Though presented in stages, the methodology is cyclical and flexible, allowing educators and students to revisit and move between stages as needed.

The IRM aligns closely with western scientific methods through shared practices such as observation, predicting, testing and drawing conclusions, while encouraging a holistic understanding of knowledge and Country. Utilised in the classroom, the IRM is a scaffold for teachers to showcase Aboriginal and Torres Strait Islander scientific processes. Students can demonstrate their understandings across both the Aboriginal and Torres Strait Islander Histories and Cultures Cross Curriculum priority, and the Achievement Standards for Science.

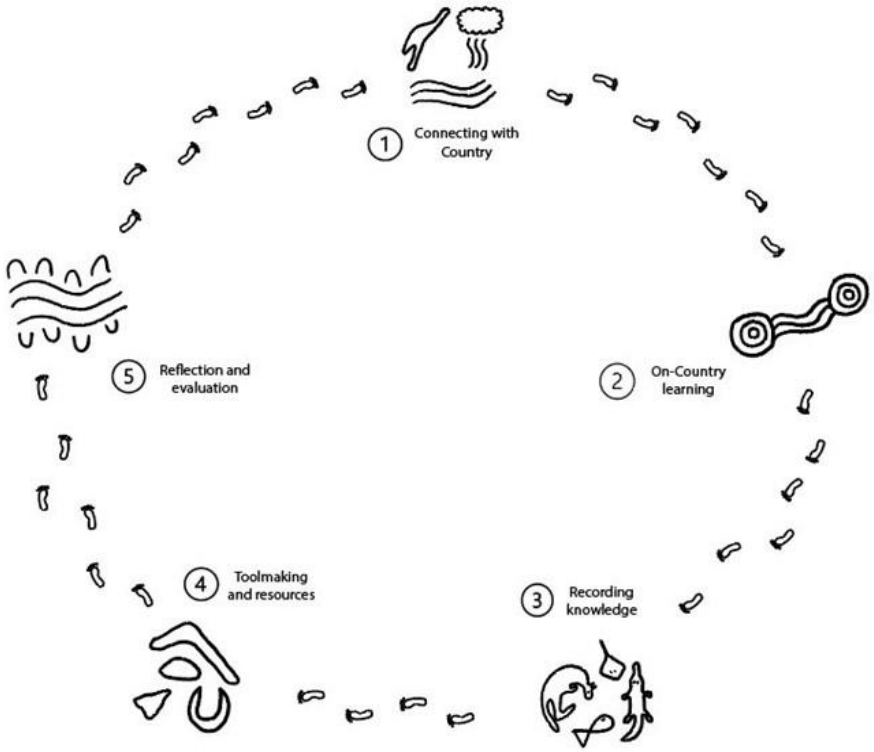
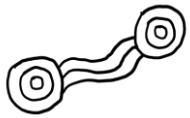


Figure 1: Indigenous Research Methodology[1]

[1] Fabila M, Moggridge B, Braedon P, Akeroyd M, Connolly M, Court Z, Gilbey S (2025). *Indigenous research methodology for drought resilience*, CSIRO, Australia.

IRM Stage	Example classroom activities	Inquiry model
 **Connecting with Country** Elements of Country, including the Great Emu in the Sky constellation, rainfall and a flowing river, represent the first stage. Indigenous Peoples have been observing Country since time immemorial. They comprehensively understand all elements of Country including Land, Water and Sky Country. For example, if a river flow changes, Indigenous Peoples can foresee the flow on effects to other parts of Country.	• Begin by exploring the concept of Country. Country includes Land, Water and Sky and encompasses spiritual, cultural, and ecological relationships. • Encourage students to reflect on their own connections to Country. • Connect to Country where you are - walk on Country (any outdoor space), look at elements of Country in the classroom (e.g. plant, rock or animal specimens), create a soundscape. • Learn about the Traditional Custodians of the land you are on and incorporate local language words into your teaching. Language can reveal historical and ecological insights—for example, the Yuwaalaraay word for crocodile suggests their historical presence in Dharriwaa, supported by fossil records. • Use targeted questioning to guide students toward forming inquiry questions and hypotheses. – Observe and discuss observations/changes to Country. – Discuss issues seen on social media/TV/news – eg droughts, cyclones, water catchments, endangered species, animal interactions. – Discuss changes or issues regarding Country (this includes school grounds, home, city) with teachers, friends, family	Identify and explore issue Pose inquiry question Make prediction/hypothesis

IRM Stage	Example classroom activities	Inquiry model
 **On-Country learning** The symbol of places on Country connected by waterways represents the second stage. Indigenous Peoples learn about Country by walking, seeing, smelling, hearing and feeling Country. Country is constantly changing and therefore Indigenous Knowledge is always flowing and evolving. For example, senior Indigenous Peoples may walk Country to monitor wind behaviour, temperature and soil moisture levels before conducting a cultural burn.	• Inquiries can take place on Country—whether during field trips, on school grounds, or even in a classroom. All spaces in Australia are part of Country. • Investigations might include testing soil, observing plants, or exploring ecosystems, with a focus on observation of and engagement with the environment. • Other ways of collecting data could be walking on Country and yarning, conducting storytelling circles, structured interviews or surveys with Traditional Owners, and other people with a long-term knowledge and understanding of Country (e.g. grounds staff, long term school staff, grandparents). • Collect data from research or literature that reflects changes to Country.	Plan investigation Conduct investigation

IRM Stage	Example classroom activities	Inquiry model
 **Recording knowledge** Sandstone engravings of culturally significant animals symbolise the third stage. Indigenous Peoples have recorded and preserved data and knowledge for thousands of years. They store knowledge in Dreaming stories, rock art, technology, ceremonies, songs, dances and Songlines. Kinship systems including human and non-human relations, age and gender, guide how knowledge is held, communicated and passed on.	• Indigenous data recording has a rich history, from sandstone engravings to modern tools like photography, drone footage, and spreadsheets. • Students should be encouraged to use diverse methods to document and interpret their findings, reflecting both traditional and contemporary practices e.g.: – spreadsheet – graph – sound recordings – maps – photos – videos	Results Conclusion

IRM Stage	Example classroom activities	Inquiry model
 **Toolmaking and resources** Cultural objects, including a boomerang, grinding stone, fishhook and spearhead, represent the fourth stage. Preserving, sharing and passing on knowledge of Country has allowed Indigenous Peoples to continually create new tools and resources to manage their Country, live sustainably and adapt to environmental change. For example, fish traps are another helpful tool that Indigenous people continue to preserve and modify to source food more efficiently and sustainably.	• Guide students in evaluating their results and considering how their findings can contribute to the health and function of Country beyond the needs of people. • Consider creative ways to share new knowledge. – Historical impact timelines – Indigenous seasonal calendars – Community newsletters – Maps – Photo album – Journal/reflection – Podcast	Communication of findings

IRM Stage	Example classroom activities	Inquiry model
 **Reflection and evaluation** The symbol of people gathering and fishing along a river represents the fifth stage. When new tools or practises are implemented to respond to Country, Indigenous Peoples to have always monitored, evaluated and managed their impacts on Country and their communities. For example, the return of cultural species after a cultural burn or flood may indicate healthy Country.	• Encourage students to reflect on their learning journey, revisiting their original inquiry questions and predictions and reflecting on the accuracy and validity of their inquiry. • Support them in making recommendations to improve the health or function of Country and identifying new questions or areas for further investigation. • Share your findings, including with Traditional Owners and others who have helped you gather data. • This stage fosters ongoing curiosity and responsibility for caring for Country.	Conclusion Reflection Evaluation