

# Generative Artificial Intelligence – Quick Learning Ideas

CURRICULUM AREA	AI IDEA	EXPLANATION
English (Literacy)	AI Writing Coach	AI can be used to provide instant feedback on grammar, style, and coherence. Kaiako can use AI to create writing prompts, and ākonga may use AI to assist in brainstorming and refining stories.
	AI-Powered Book Recommendations	Kaiako can use AI to suggest books/texts for the class to read based on their reading levels and interests. Ākonga and whānau may use AI to create personalised reading lists based on ākonga interests matched to their age and reading level.
	AI debate partner	AI can generate arguments and counterarguments to act as a debate partner. For ākonga, AI can engage in live debates and help ākonga refine persuasive speaking. It may provide feedback on their arguments, clarity or arguments, and suggest areas for improvement.
Mathematics and Statistics	AI-Powered Problem-Solving Tutor	AI can guide ākonga through step-by-step mathematics problems. This can include visual guides to assist ākonga with new concepts.
	AI Data Visualisation	AI can transform data into charts and graphs, and these can be edited and changed based on feedback and further prompts. This can also simulate data, and ākonga can use this to visualise relationships between variables. AI may explain what graphs shows to help ākonga question and probe data.
	AI Problem Generator	Kaiako and ākonga may prompt AI to create maths and statistics problems based on ākonga interest areas and mathematical capabilities. Ākonga performance can then be used by AI to refine questions and make them easier or harder.

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Science	AI-Powered Science Simulations	AI can simulate experiments in safe environments where ākonga can freely change variables and conditions. This can simulate science in areas such as climate change, genetics, and chemistry, for ākonga to ask questions and gain a greater understanding of scientific methods.
	AI Experiment Predictor	AI can suggest hypotheses for science experiments and ākonga can probe these prior to conducting an actual experiment. It may help ākonga on measurement issues so they know how to gather data and how to summarise it after data collection.
	AI Research Tool	Ākonga may ask AI to summarise a given topic (such as how climate change will affect New Zealand native birds) and provide sources. Ākonga can then explore these sources and fact check the answers.
Technology	AI Code Assistant	AI can help ākonga debug and complete coding projects. It can also provide codes and encourage ākonga to identify problems/bugs.
	AI-Based Digital Design	AI can generate invention ideas to novel problems, or ākonga can ask AI for problems and come up with inventions themselves. AI can be used to refine these ideas and help ākonga create images or prototypes. For example, robots that clean oceans.
Health and Physical Education	AI Game Creation	AI can be used to create new games or refine existing ones. Ākonga can then refine the rules and test the games.
	AI Personalised Exercise Plans	AI can create and adapt exercise plans matched to ākonga fitness levels and capabilities, encouraging them to think proactively about the activities that keep them healthy.
	AI Nutrient Coach	AI can discuss different nutrient requirements and describe foods that contain those nutrients. This can encourage ākonga to create foods with these nutrients and think about the contents of foods.
Learning Languages	AI Conversation Partner	AI can simulate real-life conversations in different languages.
	AI Translation and Pronunciation	AI helps with real-time translation and can assist ākonga in proper pronunciation. It may provide phonetic guides to pronounce new words.
	AL Cultural Exploration	Ākonga may use AI to research cultures and understand historical events and cultural practices.

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<b>The Arts</b>	AI Music Composer	Ākonga may use AI to compose and remix music. It could also provide things like chord progressions and lyrics so ākonga then finish the creative projects themselves.
	AI Scriptwriting Assistant	AI can help generate play scripts or warmup exercises that encourage ākonga to perform.
	AI Art Historian	AI can be used to delve into art history and help ākonga explore themes and prominent artists.
<b>Social Sciences (History, Geography, Economics, Civics)</b>	AI Historical Interactive Reenactments	AI can simulate historical events through interactive narratives. Ākonga may use this tool to create alternative histories and explore outcomes if history was slightly different. For example, if a key event were not to happen. AI can then simulate these historical events and provide ākonga with perspectives on history and how they influence our world today.
	AI Map Analysis	AI can discuss the impacts of things like population changes, climate impact, trade routes on maps. Ākonga may explore geography in an interactive way and consider alternative histories.
	AI Economic Modelling	AI can predict how different policies affect economies in simulations. This way, ākonga can explore different ways that economies are affected and alternative histories etc.