Unlocking Gen AI for Teachers: Your Personal AI Assistant

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TeachAI AI Guidance for Schools Toolkit

(https://www.teachai.org/toolkit}

AI Guidance For Schools Toolkit

Access Editable Document

Potential Benefits of AI in Education

Content development and **differentiation**

Assessment design and timely, effective feedback

Tutoring and **personalized** learning assistance

Aiding **creativity, collaboration,** and **skill development**

Operational and administrative **efficiency**

Plagiarism and academic dishonesty

Diminished student and teacher agency and **accountability**

Compromised student **privacy** and unauthorized data collection

Overreliance and loss of critical thinking

Perpetuating **societal bias**

Potential Risks of AI in Education

Teach AI

Australian Framework for Generative Artificial Intelligence in Schools

The Australian Framework for Generative Artificial Intelligence (AI) in Schools (the Framework) seeks to guide the responsible and ethical use of generative AI tools in ways that benefit students, schools and society. It was developed on behalf of all Education Ministers by the National AI in Schools Taskforce, which includes representatives from all jurisdictions, education sectors and the national education agencies.
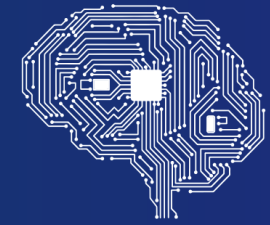
Teaching and Learning

Generative AI tools are used to support and enhance teaching and learning.

1.1 Impact: generative AI tools are used in ways that enhance and support teaching, school administration, and student learning.

1.2 Instruction: schools engage students in learning about generative AI tools and how they work, including their potential limitations and biases, and deepen this learning as student usage increases.

1.3 Teacher expertise: generative AI tools are used in ways that support teacher expertise, and teachers are recognised and respected as the subject matter experts within the classroom.

1.4 Critical thinking: generative AI tools are used in ways that support and enhance critical thinking and creativity, rather than restrict human thought and experience.

1.5 Learning design: work designed for students, including assessments, clearly outlines how generative AI tools should or should not be used and allows for a clear and unbiased evaluation of student ability.

1.6 Academic integrity: students are supported to use generative AI tools ethically in their schoolwork, including by ensuring appropriate attribution.

Human and Social Wellbeing

Generative AI tools are used to benefit all members of the school community.

2.1 Wellbeing: generative AI tools are used in ways that do not harm the wellbeing and safety of any member of the school community.

2.2 Diversity of perspectives: generative AI tools are used in ways that expose users to diverse ideas and perspectives and avoid the reinforcement of biases.

2.3 Human rights: generative AI tools are used in ways that respect human and worker rights, including individual autonomy and dignity.

Transparency

School communities understand how generative AI tools work, how they can be used, and when and how these tools are impacting them.

3.1 Information and support: teachers, students, staff, parents and carers have access to clear and appropriate information and guidance about generative AI.

3.2 Disclosure: school communities are appropriately informed when generative AI tools are used in ways that impact them.

3.3 Explainability: vendors ensure that end users broadly understand the methods used by generative AI tools and their potential biases.

Fairness

Generative AI tools are used in ways that are accessible, fair, and respectful.

4.1 Accessibility and inclusivity: generative AI tools are used in ways that enhance opportunities, and are inclusive, accessible, and equitable for people with disability and from diverse backgrounds.

4.2 Equity and access: regional, rural and remote communities are considered when implementing generative AI.

4.3 Non-discrimination: generative AI tools are used in ways that support inclusivity, minimising opportunities for, and countering, unfair discrimination against individuals, communities, or groups.

4.4 Cultural and intellectual property: generative AI tools are used in ways that respect the cultural rights of various cultural groups, including Indigenous Cultural and Intellectual Property (ICIP) rights.

Accountability

Generative AI tools are used in ways that are open to challenge and retain human agency and accountability for decisions.

5.1 Human responsibility: teachers and school leaders retain control of decision making and remain accountable for decisions that are supported by the use of generative AI tools.

5.2 Reliability: generative AI tools are tested before they are used, and reliably operate in accordance with their intended purpose.

5.3 Monitoring: the impact of generative AI tools on school communities is actively and regularly monitored, and emerging risks and opportunities are identified and managed.

5.1 Contestability: members of school communities that are impacted by generative AI tools are actively informed about, and have opportunities to question, the use or outputs of the tools and any decisions informed by the tools.

Privacy, Security and Safety

Students and others using generative AI tools have their privacy and data protected.

6.1 Privacy and data protection: generative AI tools are used in ways that respect and uphold privacy and data rights, comply with Australian law, and avoid the unnecessary collection, limit the retention, prevent further distribution, and prohibit the sale of student data.

6.2 Privacy disclosure: school communities are proactively informed about how and what data will be collected, used, and shared while using generative AI tools, and consent is sought where needed.

6.3 Protection of student inputs: students, teachers and staff take appropriate care when entering information into generative AI tools which may compromise any individual's data privacy.

6.4 Cyber-security and resilience: robust cyber-security measures are implemented to protect the integrity and availability of school infrastructure, generative AI tools, and associated data.

6.5 Copyright compliance: when using generative AI tools, schools are aware of, and take measures to comply with, applicable copyright rights and obligations.

Where we want to be in Education (best case scenarios):

- AI apps could be used as personalised and collaborative tutors for teachers and students.

- AI can adapt the content and pace of learning to each student's needs.

- Human-to-machine collaboration can include feedback and support cycles.

- Students might achieve their individual learning goals more effectively by working collaboratively with adaptive AI.

- However, this needs careful preparation and teacher guidance.

- In the future, it will be crucial for teacher education to include training on personalised and collaborative learning using AI.

Dr Philippa Hardman
Evidence-Based Learning Design

Lesson #1: AI is Here to Stay

Whether we like it or not, AI is already part of our students' lives. It will only become more critical in their future. As educators, we have three options:

WHAT OUR STUDENTS NEED

1. Ban it, using tech like GPTZero.
2. Bury it, by returning to in-person assessment & testing.
3. Embrace it & prepare our students to be critical consumers & expert users of AI in a post-AI world.

AI and teaching the Humanities

- How do you see AI affecting the study and teaching of subjects like history, English, music, the arts, languages and social sciences?
- Share one positive and one challenging aspect of AI in your field.
- How do you already use AI (e.g., ChatGPT, Grammarly, Siri)? Share one success story or challenge you've faced using AI.
- **Activity:**
  - 5-minute pair discussion.
  - 5-minute group sharing.

Why this matters in an AI-Driven World:

Critical thinking equips humanities students to:

Question AI-generated content.

Recognise bias or misinformation.

Apply human judgment to interpret data and narratives.

But AI can also be useful in Lesson Planning for Humanities

- **How AI Can Help:**
  - Generate lesson content tailored to historical, cultural, or literary themes.
  - Simplify the creation of multimedia materials for the arts and music.
  - Provide historical or contextual overviews with ease.

- **Some tools to explore:**
  - **ChatGPT:** Create lesson plans, activities, questions and lots more
  - **Canva:** Create visually engaging lesson, graphic organisers, worksheets, storyboards and many other types of documents
  - **Storybird:** AI-supported storytelling in English and creative writing.

Identified prompt functions - teachers' GenAI use cases

Educational/instructional tasks (n=80)

Creativity enhancement (n=47)

Defining, explaining, and/or summarising concepts and texts (n=39)

Differentiation (n=32)

Assessment-related tasks (n=29)

Administrative and organisational tasks (n=25)

How to write a good prompt?

- https://www.zdnet.com/article/7-ways-to-write-better-chatgpt-prompts-and-get-the-results-you-want-faster/
- Basically:
  - Talk to the AI like you would talk to a person
  - Give it a lot of context
  - Be specific
  - Ask it to assume a role
  - Provide examples
  - Explain the tone or level
  - Interact, follow up, refine,
  - ask the AI to re-read the prompt and refine

The Humanities and Critical Thinking: A Vital Connection

The Humanities explore human experiences, culture, and values, and foster **Critical Thinking:**
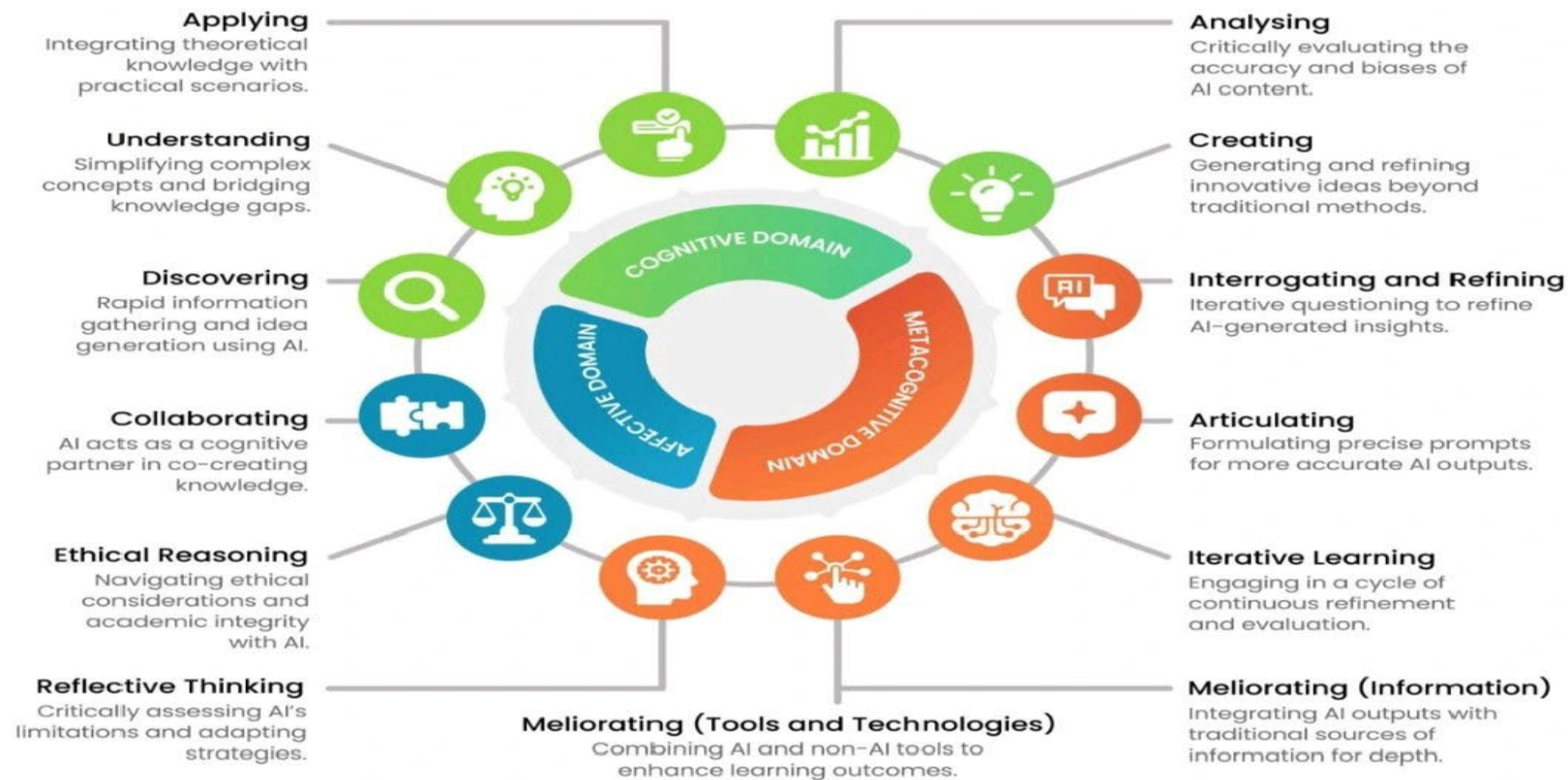
•**Analysing Perspectives:** Evaluating diverse viewpoints in texts, historical events, or artistic works.

•**Forming Arguments:** Encouraging constructing and defending opinions based on evidence.

•**Ethical Reasoning:** Promoting thoughtful consideration of moral questions and societal impacts.

•**Interpreting Contexts:** Developing skills to understand complex cultural, historical, and philosophical contexts.

Generative AI and Critical Thinking:
Expanding Bloom's Taxonomy

Applying
Integrating theoretical knowledge with practical scenarios.

Understanding
Simplifying complex concepts and bridging knowledge gaps.

Discovering
Rapid information gathering and idea generation using AI.

Collaborating
AI acts as a cognitive partner in co-creating knowledge.

Ethical Reasoning
Navigating ethical considerations and academic integrity with AI.

Reflective Thinking
Critically assessing AI's limitations and adapting strategies.

Analysing
Critically evaluating the accuracy and biases of AI content.

Creating
Generating and refining innovative ideas beyond traditional methods.

Interrogating and Refining
Iterative questioning to refine AI-generated insights.

Articulating
Formulating precise prompts for more accurate AI outputs.

Iterative Learning
Engaging in a cycle of continuous refinement and evaluation.

Meliorating (Information)
Integrating AI outputs with traditional sources of information for depth.

Meliorating (Tools and Technologies)
Combining AI and non-AI tools to enhance learning outcomes.

COGNITIVE DOMAIN

AFFECTIVE DOMAIN

METACOGNITIVE DOMAIN

Cognitive Domain

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1. Understanding

AI helps in simplifying complex concepts and bridging knowledge gaps.

For example, AI tools can explain challenging topics in personalised ways.

2. Applying

Involves integrating theoretical knowledge into practical scenarios using AI tools.

For instance, using AI-generated simulations to apply learned concepts.

3. Analysing

Critically evaluates the accuracy and biases in AI-generated content.

Encourages deeper scrutiny of AI outputs and their reliability.

4. Creating

Supports generating and refining innovative ideas beyond traditional methods.

AI enables users to think creatively by offering novel perspectives or tools.

Understanding Through AI: Simplifying Complex Concepts

How AI Supports Understanding:

Breaks down complex ideas into simpler, digestible explanations.

Bridges gaps by providing immediate, tailored responses to questions.

Example Applications:

ChatGPT: Ask for a simplified explanation of challenging topics, e.g., "Explain the symbolism in *Of Mice and Men* for Year 9 students." Then ask for simple questions about the text that students can answer in a worksheet.

Khan Academy's AI Tutor: Generate a scaffolded explanation of the main causes of World War I (e.g., militarism, alliances, imperialism, nationalism). Prepare a timeline activity where students place events in chronological order based on the scaffolded content.

•**Quizlet with AI:** Use Quizlet's AI feature to create flashcards for key terms like "nirvana," "karma," and "the Eightfold Path."Design a classroom activity using these flashcards, including multiple-choice quizzes, matching activities, or group discussions about the terms.
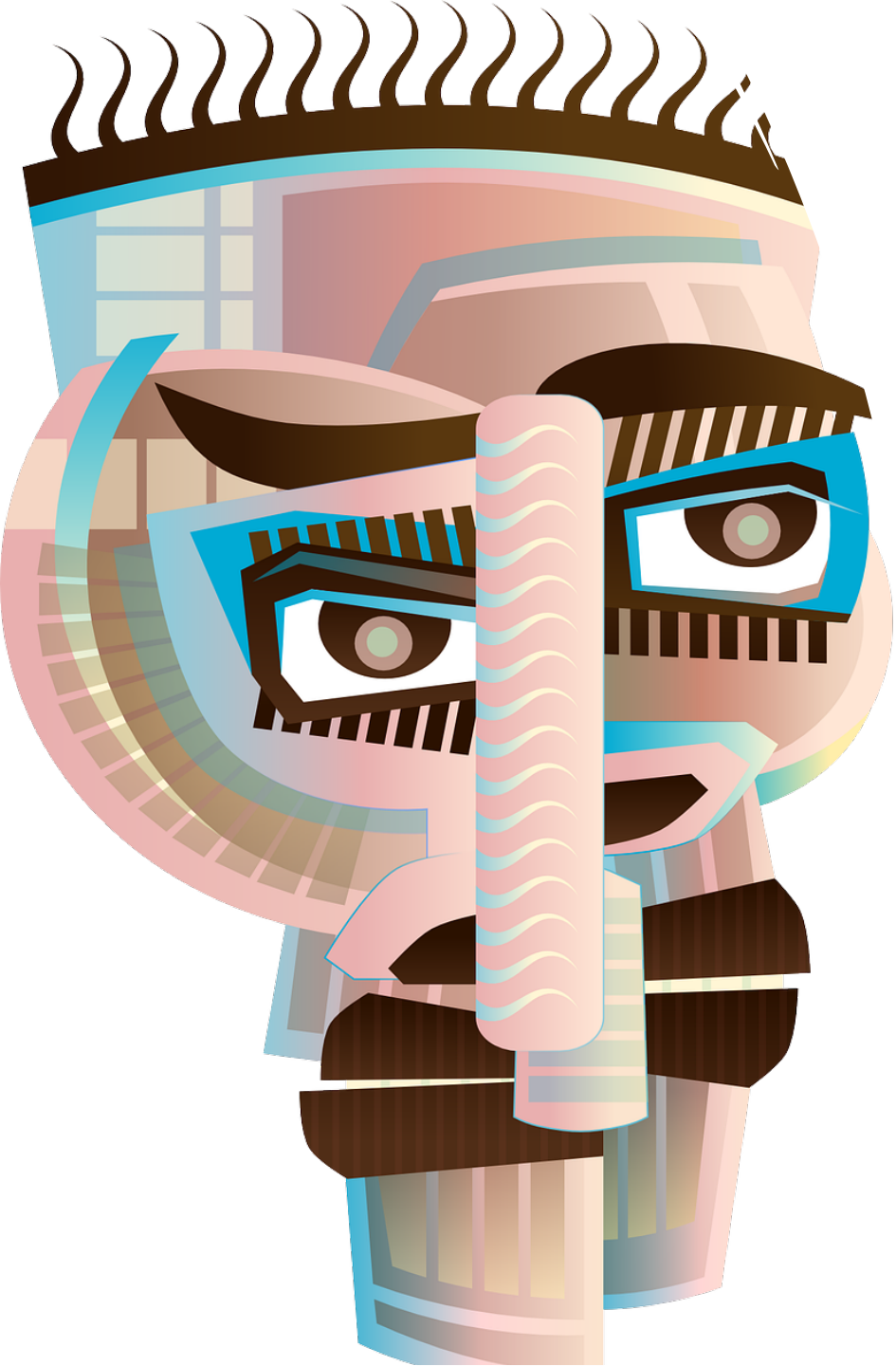
Analysing and creating

Use **DALL·E 3** to generate images inspired by different artistic movements (e.g., Impressionism, Cubism, Surrealism).

Print or project the images alongside brief **descriptions** of each style.

Students analyse the AI-generated artwork to identify **stylistic features.**

In small groups, create a short presentation comparing the **AI interpretations to classic examples** from the movements.

Critically evaluate how AI creates outputs to mimic and reinterpret artistic styles. How reliable are these outputs?

Metacognitive Domain

1. Discovering

AI facilitates rapid information gathering and idea generation.

It accelerates the research process by providing diverse insights.

2. Interrogating and Refining

Involves iterative questioning to refine AI-generated insights.

Encourages critical engagement with AI content to ensure quality.

3. Articulating

Focuses on creating precise prompts to achieve more accurate AI outputs.

Reflects the importance of clear communication in working with AI systems.

4. Iterative Learning

Engaging in a cycle of continuous refinement and evaluation using AI.

Promotes adaptive learning strategies.

Discovering, interrogating, refining

Perplexity AI: Evaluating Research Sources

Analysing Media Bias in News Coverage

- Use Perplexity AI to generate a summary of media perspectives on a current event.
- Include links to the sources used by the AI.
- Design a task where students evaluate the reliability and bias of the sources, for example:
- Students analyse the AI summary, identifying potential biases or gaps in coverage.
- Groups present findings and suggest refinements to the AI's output, such as including alternative perspectives.

Literary studies

Wordtune: Refining Literary Analysis

Analysing Symbolism in Shakespeare's Macbeth

- Use Wordtune to generate multiple interpretations of a quote (e.g., "Out, out brief candle").

- Provide students with these interpretations and ask: Which interpretation best fits the context of the play? How could the interpretations be improved or expanded?

- Students refine one interpretation, using textual evidence to support their reasoning. Share and compare interpretations in a class discussion.

Iterative learning

Suno.ai: Iterative Music Composition

Composing a Soundtrack for a Historical Documentary

- Use Suno.ai to generate a basic soundtrack for a specific documentary theme (e.g., the Harlem Renaissance).

- Demonstrate how changing prompts (e.g., "Add jazz elements to a nostalgic theme") influences the output.

- Students experiment with Suno.ai to generate music for their documentary themes.

- After the first draft, students refine their prompts to achieve the desired tone or complexity.

- Present and critically analyse how iterative refinement improved their compositions.

Affective Domain

1. Collaborating

Positions AI as a cognitive partner in co-creating knowledge.

Encourages teamwork between humans and AI.

2. Ethical Reasoning

Navigates ethical considerations and academic integrity when using AI.

Builds awareness of potential misuse or ethical dilemmas.

3. Reflective Thinking

Critically assesses AI's limitations and adapts strategies accordingly.

- Encourages learners to evaluate how AI influences their thinking.

4. Meliorating (Tools and Technologies)

Combines AI and non-AI tools to enhance learning outcomes.

Acknowledges the complementary nature of traditional and AI methods.

5. Meliorating (Information)

Integrates AI outputs with traditional sources for depth and reliability.

Balances AI-generated insights with credible, established knowledge.

Human and AI collaborating

Canva: Co-Creating Historical Infographics

Creating an Infographic on the Causes of World War I

- Use Canva's AI tools to create a draft infographic highlighting key causes (e.g., alliances, militarism, imperialism).

- Share the draft with students as a base for further development.

- Students work in pairs to refine and expand the infographic by adding additional causes or relevant examples, including visuals, quotes, or primary source excerpts.

- Present and critique the final products, reflecting on how AI supported their collaboration.

Ethical reasoning

Blend Canva and Traditional Art: Exploring Creative Ethics

Originality in Art: AI vs. Human Creativity

- Use Canva AI to create a draft poster inspired by an art movement (e.g., Futurism).
- Provide traditional art supplies for students to recreate or enhance the AI-generated design manually.
- Pose the question: "Is an artwork less valuable if it's AI-generated? Why or why not?"
- Students combine their artistic skills with the AI's output to create a unique piece.
- Facilitate a class discussion on the ethical implications of using AI in creative industries, emphasising originality and attribution.

Using AI for Learning: Bloom's Taxonomy for Leveraging Generative AI Tools

Knowledge	Comprehension	Application	Analysis	Evaluation	Creation
Identifying trends	Associating responses	Implementing strategies	Analysing text output	Evaluating reliability	Generating new content/ GPTs etc.
Recognising patterns	Interpreting graphs/ tables that have been generated	Integrating insights	Comparing outputs	Assessing biases	Creating video from script
Recalling data	Explaining concepts	Choosing between specific outputs	Investigating errors	Critiquing results	Designing experiments
Categorising inputs	Clarifying instructions	Testing functionalities	Exploring alternatives	Judging accuracy	Creating dialogues
Listing possibilities	Discussing applications	Applying in real-world	Deconstructing ideas	Rating usefulness	Creating examination-style questions
Describing processes	Translating languages	Utilising for research	Examining logic	Prioritising information	Formulating new questions
Retrieving information	Designing graphics	Operating interfaces	Dissecting arguments	Reflecting on outcomes	Developing concepts
Locating answers	Converting formats	Practising simulations	Querying databases	Reviewing performance	Innovating solutions
Outlining topics	Comparing viewpoints	Customising responses to different audiences	Mapping knowledge gaps	Validating sources	Synthesising ideas
Processing Data in to different formats	Illustrating examples	Customising responses for - different audiences	Breaking down problems	Selecting best options	Conceptualising designs
Editing	Planning for essays or articles	Troubleshooting issues	Organising knowledge	Using feedback to improve	Creating differentiated versions of tasks

Thank you

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