Comprehensive AI Assessment Framework (CAIAF)

Level	Description	Ethical Considerations	Applications and Field-Specific Adjustments			
			K-12		**Higher Education**	
			Primary Education	**Secondary Education**	**Undergraduate**	**Graduate**
Level 1 **No AI (Human-Only)**	The assessment is completed entirely without AI assistance. This level ensures that students rely solely on their knowledge, understanding, and skills. **AI must not be used at any point during the assessment.**	- **Transparency:** Clearly communicate that no AI tools are permitted during the assessment. - **Equity and Inclusivity:** Ensure equal conditions for all students by preventing AI use. - **Pedagogical Alignment:** Focus on assessing unaided student capabilities. - **Accountability:** Require all work to be completed by the student without AI assistance. - **Privacy and Data Protection:** No digital data is collected or analyzed.	- Traditional pen-and-paper assignments with no AI involvement. - Drawing and handwriting exercises. - Physical science experiments without AI tools.	- Written essays and exams completed without AI assistance. - Manual data collection for science projects. - Handwritten lab reports.	- Lab reports and research papers completed manually. - Traditional coding assignments without AI assistance. - Manual statistical analysis using calculators or non-AI software.	- Theses and dissertations written without any AI tools. - Manual literature reviews and citation management. - Research proposals developed entirely by the student without AI assistance.
			- **Range of Use:** All tasks must strictly adhere to no AI use. This includes traditional exams, handwritten essays, physical science experiments, oral presentations, and group discussions that rely solely on students' abilities. - **Emphasis on:** Safety and ethical considerations. - **Focus on:** Building foundational skills and manual problem-solving abilities.		- **Range of Use:** All academic work must be completed without AI assistance. This encompasses written exams, lab reports, in-class presentations, and comprehensive research projects done manually to ensure personal accountability and academic integrity. - **Emphasis on:** Academic integrity and self-reliance. - **Focus on:** Developing critical thinking and personal accountability.	
Level 2 **AI-Assisted Idea Generation and Structuring**	AI can be used in the assessment for brainstorming, creating structures, and generating ideas for improving work. **No AI content is allowed in the final submission.**	- **Transparency:** Require students to disclose the use of AI for idea generation. - **Equity and Inclusivity:** Provide all students with access to similar AI tools for idea generation. - **Pedagogical Alignment:** Support creative thinking and idea development. - **Accountability:** Ensure students retain responsibility for the final content, with no AI-generated content in the final submission. - **Privacy and Data Protection:** Ensure AI tools handle data securely.	- Using AI tools to brainstorm ideas for creative writing assignments. - AI-assisted mind mapping for story development. - Utilizing AI to create simple project outlines.	- Utilizing AI to generate outlines and structure essays. - AI-assisted brainstorming for science fair projects. - Using AI to create timelines for history projects.	- AI-assisted brainstorming sessions for project proposals. - Using AI tools to structure research papers. - Developing presentation outlines with AI support.	- Employing AI for article scanning and structuring research frameworks. - Using AI to generate research hypotheses drafts and project plans. - AI-assisted templates of survey instruments and experimental setups.
			- **Range of Use:** AI tools can assist in brainstorming and organizing ideas. This includes generating topic ideas, creating outlines for essays, mapping out storyboards, and planning project frameworks. Final content must be created by students without AI assistance. - **Emphasis on:** Developmental appropriateness and teacher guidance. - **Focus on:** Encouraging creative thinking and structured planning.		- **Range of Use:** AI can aid in initial idea generation, research proposal structuring, literature review organization, and hypothesis formation. Students must ensure that the AI's role is limited to the idea and structural phases, with no AI-generated content in the final submission. - **Emphasis on:** Fostering advanced applications and critical thinking. - **Focus on:** Supporting research development and hypothesis structuring.	
Level 3 **AI-Assisted Editing**	AI can be used to make improvements to the clarity or quality of student-created work to improve the final output, but no new content can be created using AI. **AI can be used, but your original work with no AI content must be provided in an appendix.**	- **Transparency:** Require students to disclose the use of AI in editing. - **Equity and Inclusivity:** Ensure equitable access to similar AI tools for editing. - **Pedagogical Alignment:** Enhance writing and clarity while maintaining original content. - **Accountability:** Ensure students take responsibility for the final output by providing both original and AI-edited versions. - **Privacy and Data Protection:** Ensure secure handling of student data by AI tools.	- AI tools for basic grammar and spell-checking in writing assignments. - AI-assisted improvements to sentence structure in essays. - Simple vocabulary enhancement suggestions from AI.	- AI-assisted editing to improve clarity and coherence in essays. - Using AI for advanced grammar checks and style enhancements. - AI tools to help with citation formatting and checking.	- Using AI for refining lab reports and enhancing clarity in presentations. - AI-assisted editing of research proposals and term papers. - Utilizing AI tools for revisions and proofreading.	- Advanced AI tools for editing research papers and ensuring adherence to academic standards. - Using AI for comprehensive style and formatting checks. - AI-assisted review of dissertation chapters for coherence and clarity.
			- **Range of Use:** AI tools can be used for basic to advanced editing. This includes spelling and grammar checks, improving text clarity and coherence, enhancing style, and suggesting better word choices. Students must provide both the AI-edited and original versions for comparison. - **Emphasis on:** Safety and ethical considerations. - **Focus on:** Enhancing clarity and coherence in student writing.		- **Range of Use:** AI can assist in refining research papers, thesis drafts, and essays. This includes comprehensive grammar and style editing, improving argument coherence, and ensuring adherence to academic standards. The original and AI-edited versions must be submitted together. - **Emphasis on:** Ensuring academic integrity and self-regulation. - **Focus on:** Refining academic writing and meeting high scholarly standards.	
Level 4 **AI Task Completion, Human Evaluation**	AI is used to complete certain elements of the task, with students providing discussion or commentary on the AI-generated content. This level requires critical engagement with AI-generated content and evaluating its output. **You will use AI to complete specified tasks in your assessment. Any AI-created content must be cited.**	- **Transparency:** Clearly define and disclose the AI's role in completing specific tasks. - **Equity and Inclusivity:** Provide equal access to similar AI tools for task completion. - **Pedagogical Alignment:** Integrate AI while requiring critical evaluation by students. - **Accountability:** Ensure students critically engage with and evaluate AI outputs. - **Privacy and Data Protection:** Ensure data privacy and secure AI tool use.	- Simple AI tasks evaluated by teachers to ensure understanding. - AI-generated flashcards for vocabulary practice, reviewed by teachers. - AI-assisted math problem solving with teacher oversight.	- AI-generated summaries or problem sets reviewed by educators. - AI tools to assist in lab data analysis, with teacher evaluation. - AI-generated practice quizzes for standardized tests, reviewed by teachers.	- AI-assisted data analysis tasks with human evaluation to ensure accuracy. - Using AI to generate preliminary research findings, validated by professors. - AI tools to create draft reports, with final revisions by students.	- AI-generated research models or simulations critically evaluated by supervisors. - AI-assisted analysis of large datasets, with results interpreted by students. - AI tools for preliminary literature review, with comprehensive review by students.
			- **Range of Use:** AI can complete specific tasks such as generating summaries, conducting basic data analysis, and solving straightforward problems. Teachers must evaluate these outputs to ensure student understanding and engagement with the material. - **Emphasis on:** Developmental appropriateness and teacher facilitation. - **Focus on:** Engaging students in critical evaluation of AI outputs.		- **Range of Use:** AI can assist in complex tasks like data processing, initial drafts of reports, and preliminary research analysis. Students must critically evaluate and interpret AI-generated outputs, which are then reviewed by educators to ensure comprehension and accuracy. - **Emphasis on:** Encouraging student-led activities and complex AI integrations. - **Focus on:** Promoting comprehensive understanding and critical analysis of AI-generated data.	
Level 5 **Full AI Integration**	AI should be used as a 'co-pilot' to meet the requirements of the assessment, allowing for a collaborative approach with AI and enhancing creativity. **You may use AI throughout your assessment to support your own work and do not have to specify which content is AI-generated.**	- **Transparency:** Inform about the extent and nature of AI use throughout the assessment. - **Equity and Inclusivity:** Ensure all students have access to similar AI tools for full integration. - **Pedagogical Alignment:** Deepen understanding and explore AI capabilities. - **Accountability:** Ensure students demonstrate understanding of AI contributions. - **Privacy and Data Protection:** Implement strong data protection measures.	- Fully AI-driven educational games and learning activities. - AI-assisted interactive storytelling sessions. - AI tools for personalized learning pathways in subjects like math and reading.	- Comprehensive AI tools for project-based learning and presentations. - AI systems for adaptive learning and individualized tutoring. - AI-assisted simulations for science and social studies.	- Extensive use of AI in capstone projects and collaborative research. - AI tools for immediate feedback on assignments and projects. - Using AI to facilitate group work and project management.	- Full integration of AI in complex research projects, from data collection to analysis and interpretation. - AI tools for advanced modeling and simulations. - Fully AI-driven assistance in collaborative research across different fields.
			- **Range of Use:** AI is fully integrated into learning activities, including interactive educational games, adaptive learning modules, and collaborative projects. AI supports various stages of the learning process, fostering creativity and deeper understanding. - **Emphasis on:** Safety and ethical considerations. - **Focus on:** Enhancing learning through interactive and collaborative AI tools.		- **Range of Use:** AI is extensively used in comprehensive research projects, collaborative assignments, and advanced data analysis. This includes continuous AI assistance throughout the project lifecycle, enhancing the depth and quality of academic work. - **Emphasis on:** Developing critical thinking and self-regulation. - **Focus on:** Utilizing AI for sophisticated academic projects and collaborative research.	
Level 6 **Advanced AI Integration**	AI tools are used as advanced personal assistants and for real-time interactions during the assessment process. This includes AI capabilities such as interpreting camera images, providing instant feedback, and engaging in live dialogues to assist students dynamically. **AI operates alongside the student continuously, facilitating a highly interactive and adaptive learning experience.**	- **Transparency:** Clearly communicate the real-time and personal assistant roles of AI. - **Equity and Inclusivity:** Ensure equitable access to advanced AI tools for dynamic learning experiences. - **Pedagogical Alignment:** Support real-time, adaptive learning experiences. - **Accountability:** Ensure students demonstrate understanding and proper use of real-time AI assistance. - **Privacy and Data Protection:** Ensure robust data protection and privacy measures for real-time AI interactions.	- Interactive AI tutors providing personalized learning experiences. - Real-time feedback from AI during interactive lessons. - AI-driven virtual field trips with real-time interactivity.	- Advanced AI systems for adaptive learning and individualized feedback. - Real-time AI-assisted debates and discussions. - AI tools for real-time collaborative writing and peer review.	- Real-time AI assistants for lab work and research activities. - AI-driven interactive study sessions and tutorials. - Advanced AI tools for real-time data visualization and analysis.	- Cutting-edge AI tools for real-time data analysis, hypothesis testing, and advanced research methodologies. - AI assistants for dynamic research collaboration and project management. - Real-time AI tools for live academic seminars and discussions.
			- **Range of Use:** AI acts as a real-time tutor, providing interactive and personalized learning experiences. This includes adaptive learning paths, immediate feedback, and dynamic content adjustments based on student performance. - **Emphasis on:** Safety, developmental appropriateness, and teacher facilitation. - **Focus on:** Providing personalized, adaptive learning experiences through AI.		- **Range of Use:** AI tools support real-time research activities, advanced data analytics, and continuous interactive learning. This includes real-time hypothesis testing, adaptive research methodologies, and interactive AI assistants managing complex academic tasks. - **Emphasis on:** Advanced applications and independent learning. - **Focus on:** Utilizing real-time AI tools for dynamic research and continuous academic support.	
Possible Future Levels	Placeholder for Future AI Integration Levels	Ethical principles for future levels will continue to emphasize these five principles and maybe more.	Applications and field-specific adjustments for future levels will be specified based on emerging AI capabilities and educational needs.			