Examples on Application of Artificial Intelligence in Learning and Teaching in Key Learning Areas/Subjects (June 2026)

Examples on Application of Artificial Intelligence in Learning and Teaching
English Language Education Key Learning Area

English Language

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Enhancing students' motivation and engagement through immersive language learning experience
- Promoting assessment as learning by leveraging AI to provide instant feedback on language use
- Catering for learner diversity by enabling students to demonstrate their learning in different modalities

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Module:** Changes **Unit:** Now and then, a changing world, technology **Learning Elements/ Objectives:** • To use the simple present tense and the simple past tense to compare objects, people or places now and then • To develop empathy and gratitude	• Interviewing an AI avatar role-playing a child in the past; incorporating the use of the simple present tense and the simple past tense into the interaction • Writing a reflective journal to compare past and present lifestyles; using an AI-powered writing companion during the process to provide instant feedback (e.g. on the use of tenses)	• Use AI to enrich students' learning experiences while maintaining an emphasis on authentic classroom interactions (e.g. peer feedback, group discussion, teacher guidance) • Use AI-generated assessment items or feedback alongside other evaluation methods, as relying solely on AI can limit the validity and reliability of assessment (e.g. overlooking creative or open-ended responses, misjudging

			progress without considering individual learning contexts)
Secondary (KS4)	**Module:** Nature and Environment **Unit:** Protecting the Environment **Learning Elements/ Objectives:** • To present and evaluate views and arguments (e.g. through visual storytelling) • To develop critical thinking skills	• Conducting research on environmental issues using different tools (e.g. search engines, AI chatbots); comparing and evaluating information gathered for bias, reliability, and relevance using a structured framework (e.g. the CRAAP test*) • Creating multimodal texts (e.g. infographics, posters, photopoetry) of their choice using generative AI to promote environmental awareness and sustainability	• Teach students to use AI critically and ethically (e.g. by explicitly modeling critical thinking strategies, cross-checking output with trusted sources, citing source(s) appropriately) • Don't assume all students share equal readiness to use AI, as differences in age, maturity, language proficiency and IT skills may affect their ability to benefit, and provide timely guidance and support as appropriate

*CRAAP stands for **C**urrency, **R**elevance, **A**uthority, **A**ccuracy and **P**urpose, a widely used research tool to evaluate the credibility of information sources

Examples on Application of Artificial Intelligence in Learning and Teaching
Mathematics Education Key Learning Area

Mathematics

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- To promote inquiry-based learning, personalised learning and self-directed learning through leveraging interactive learning resources or dynamic learning activities generated by AI tools

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Module:** Number Strand **Unit:** 4N6 Fractions (II) (P.4) **Learning Elements/ Objectives:** Express a fraction in the lowest term	• Teachers use AI to generate web-browser-assessable interactive learning resources, allowing students to engage in self-directed learning activities after class. • The interactive learning resources randomly present ten questions about reducing fractions to their lowest terms. Students are required to complete the questions within a time limit and enter their answers. Students receive instant feedback after submitting their answers. • When instructing the AI to generate the interactive learning resources, teachers can set task-specific criteria for the interactive assessment to generate questions of varying levels of difficulty according to the performance of students and timely provide	• Teachers must review whether the content of AI-generated interactive learning resources aligns with curriculum requirements, and whether the expression of texts and pictures in questions, prompts, etc., is consistent with the usual teaching. • Teachers need to provide AI with sufficient instructions based on the topic's learning content and expected learning difficulties to generate questions of varying difficulties and review whether the generated learning

		guided prompts, with an aim to cater for learner diversity. • After each attempt, data related to the number of correct and incorrect answers will be provided automatically. After collecting students' performance, teachers can discuss learning difficulties with students in class and provide feedback accordingly. Teachers can also modify the interactive learning resources to address students' learning needs and provide more targeted reinforcement exercises.	resources could effectively promote student learning. • Teachers should address students' learning needs by the interactive learning resources to include questions, prompts, or explanations with pictures or diagrams, helping students grasp relevant mathematical concepts more effectively. • After students' use of interactive learning resources in the classroom or at home, teachers should follow up on student performance during lessons, and provide sufficient support and feedback to enhance students' thinking skills and understanding of the learning content.
Secondary (KS4)	**Module:** Number and Algebra Strand **Unit:** More about graphs of functions **Learning Elements/ Objectives:** • sketch and compare graphs of various types of	• Teachers use AI-powered tools to generate dynamic interactive learning activities in a format compatible with graphing software commonly used by Mathematics teachers (such as Desmos). For example, they can generate interactive graphs with built-in adjustable sliders, allowing teachers to flexibly display examples of various graphs of functions based on students' abilities, and thereby enriching the teaching content and	• AI could efficiently generate templates of interactive learning activities, but teachers must review, adapt, and ensure their alignment with specific learning and teaching objectives, as well as student learning needs.

	functions including constant, linear, quadratic, trigonometric, exponential and logarithmic functions • understand the transformations of the function $f(x)$ including $f(x)+k$, $f(x+k)$, $kf(x)$ and $f(kx)$ from tabular, symbolic and graphical perspectives.	supporting students' exploration and thinking. The use of AI can reduce the technical threshold and production time required to create these interactive graphs. • Through these dynamic interactive learning activities, students can observe and compare the graphs of different functions (such as trigonometric functions, exponential functions and logarithmic functions), noting the differences in their shapes and characteristics, and explore the transformations of functions. • Teachers may also employ AI to offer students personalised hints during investigatory activities, facilitating their understanding of related mathematical concepts. • Teachers should discuss with students the observation they have made from the interactive graphs, provide feedback to students, and recap on what they have learned together.	• The interactive graphs generated by AI should be designed for active learning, not just observation. Teachers should design activities that require active thinking and participation, instead of pure passive observation. Using AI-generated interactive graphs, teachers can have students conduct guided explorations, ask them to formulate predictions (e.g., "What will happen if a is negative?"), and engage them in collaborative analysis of differences among types of functions.

Examples on Application of Artificial Intelligence in Learning and Teaching
Science Education Key Learning Area

Biology (S4-6)

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Using generative artificial intelligence tools to visualise abstract concepts and complex data and transform them into interactive experiences, thereby enhancing students' understanding of biological concepts and cultivating their scientific inquiry skills.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Module:** II. Genetics and Evolution **Unit:** b. Molecular genetics **Learning Elements/ Objectives:** • Outline the process of protein synthesis • Distinguish between chromosome and gene mutation • Understand the application of knowledge of	**<u>Students consolidate prior knowledge (active learning)</u>** • The teacher first teaches the steps of protein synthesis in human cells, including the principles of transcription (using DNA as a template) and translation to produce specific proteins. The teacher then consolidates the biological concepts through appropriate learning and teaching activities. • The teacher shows students two sets of DNA sequences without revealing which represents the normal sequence and which represents the mutated sequence. • The teacher guides students to apply the principles of transcription and translation, encouraging them to use scientific reasoning skills to make predictions and deduce whether	• Before using AI for learning, **<u>teachers should arrange learning activities that allow students to build and apply relevant prior knowledge</u>**, and should not overlook the conceptual construction process essential to students. • Teacher-student interaction and student-student interaction in scientific discussions, along with questioning and feedback, can promote deep learning in science. While using AI to assist students' learning, **<u>teachers should not overlook the important process of</u>**

	molecular genetics in society	the two sequences will lead to the synthesis of the same protein.	**classroom discussion when arranging lessons**.
		Students use AI to simulate DNA transcription, translation and polypeptide folding (constructive learning) • The teacher guides students to input the two sets of DNA sequences into a generative AI tool to simulate transcription, translation, and polypeptide folding. This enables students to visualise the learning process and observe the resulting protein and red blood cell structures.	• **Teachers should set clear constraints on the feedback content generated by AI tools.** For example, tools can be configured to generate content using biological vocabulary and terminology that align with curriculum requirements. Teachers may also guide students to instruct the AI tool to generate different modes of output (e.g. text and images) to personalise the results.
		Scientific discussion (interactive learning) • The teacher provides a codon table and images of normal red blood cells and sickle-shaped red blood cells. Students evaluate the authenticity and accuracy of the AI-generated molecular genetics simulation results by comparing them with textbook information or other reliable sources. • Students discuss the AI tool's feedback with their peers and refine their prompts by adding more specific details, thereby deepening their understanding of relevant biological concepts in "Molecular Genetics".	• **Teachers should remind students that the analyses and conclusions generated by AI tools are for reference only.** Students must express their understanding and explain their scientific reasoning process in their own words, thereby developing them into ethical and responsible users of AI tools.

		Students submit the prompts used and screenshots of the AI-generated images as learning evidence.	

Examples on Application of Artificial Intelligence in Learning and Teaching
Science Education Key Learning Area

Chemistry (S4-6)

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Assisting students in conducting constructive and interactive learning activities using artificial intelligence (AI) and facilitating them to understand abstract concepts and microscopic-level phenomena in Chemistry.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Module:** Topic VI **Unit:** Microscopic World II **Learning Elements/ Objectives:** • Predict and draw three-dimensional diagrams to represent shapes of (i) molecules with central	**<u>Students to consolidate prior knowledge (active / constructive learning)</u>** • When teaching this topic, teachers may first ask students to predict and hand-draw the molecular structural diagrams (including lone pairs of electrons) and the three-dimensional molecular shape of selected molecules (e.g. CH_2O, SO_2, PH_3).	• Before using AI for learning, **<u>teachers should arrange learning activities that allow students to build and apply relevant prior knowledge</u>**, and should not overlook the conceptual construction process essential to students.

	atoms obeying octet rule; and (ii) molecules with central atoms not obeying octet rule and with no lone pair of electrons (such as BF_3, PCl_5 and SF_6)	**<u>Scientific discussion (interactive learning)</u>** • During the lesson, teachers may support students in analysing and engage them in group discussions to determine whether the molecule is polar based on its shape and structure.	• Teacher-student interaction and student-student interaction in scientific discussions, along with questioning and feedback, can promote deep learning in science. While using AI to assist students' learning, **<u>teachers should not overlook the important process of classroom discussion when arranging the lessons.</u>**

		Students to revise their answers using AI (active / constructive learning)
		• Teachers may ask students to upload their hand-drawn structural diagrams and written explanations to a generative AI tool, and instruct the AI tool to indicate **only** the possible types of errors and checking steps (e.g. number of lone pairs of electrons, molecular shape), without providing the correct answer directly.
		• Teachers may preset output constraints for the generative AI tool. For example:
		  ○ it should only identify and explain specific errors in students' answers related to molecular shape, molecular polarity and intermolecular forces, and may only provide hints on relevant chemical principles and checking steps; and
		  ○ it should not directly provide the correct structural diagram or complete answer.
			• **Teachers should establish clear guidelines for students on the use of AI**, helping them understand that the role of AI is to "assist learning" rather than "replace thinking".
			• **Teachers should teach students how to interact effectively with AI**, facilitating their effective application of AI in constructing and deepening understanding of scientific concepts (e.g. reminding students to provide information related to the curriculum or the context of scientific problem before asking AI questions).
			• Before allowing students to use AI tools, **teachers should clearly establish output constraints for the AI tools** (e.g. restricting the tools from directly providing answers; requiring the tools to identify misconceptions only).

		Scientific discussion (interactive learning) • In groups, students discuss the feedback generated by AI, and compare and verify it against the results from simulation programmes (e.g. PhET). After the discussion, students revise their previously drawn molecular diagrams and written scientific explanations, reflecting on and comparing the conceptual differences before and after revision. • Students submit their answers before and after revision as evidence of learning. [Note: Discussing and revising scientific explanations and scientific visual representations can deepen students' understanding of related concepts in Microscopic World II.]	• **Teachers should review the scientific concepts being taught and select or integrate different teaching tools for effective instruction**, with AI tools being only one of the options (e.g. teachers may combine computer simulations with AI tools to enrich students' learning experiences). • **Teachers should remind students not to plagiarise AI-generated content**. Teachers may arrange for students to discuss AI feedback and revise their answers in assignments, allowing them to express their understanding and reasoning processes through discussion. • AI should be regarded as an auxiliary tool for student learning and should not replace students' scientific reasoning process. **Teachers may require students to indicate in their assignments how they used AI to obtain hints and revise their answers**, thereby enabling teachers to understand

			students' learning and fostering their responsible use of AI.
		<u>Extended learning</u> As an extended learning activity, teachers may use generative AI tools along with the suggested learning activities above and ask students to upload images of their hand-drawn molecular structural diagrams for molecules such as BF_3, SF_6, and H_2O, as well as their written explanations accounting for the gradation in boiling points of these molecules.	• **<u>Teachers should exercise professional judgment in reviewing the content and feedback generated by the AI in response to students' submission.</u>** Meanwhile, teachers should guide students to think critically about AI-generated content and verify it using credible sources of information.

Examples on Application of Artificial Intelligence in Learning and Teaching
Science Education Key Learning Area

Physics (S4-6)

Purpose(s) of application of artificial intelligence (AI) in learning and teaching in the following examples:

- Use generative AI to assist students in creating adaptive physics simulation programs, thereby facilitating their application of the physics concepts they have learnt to critically evaluate the accuracy of the AI-generated simulation programs.
- …
- …

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Topic: Kinetic theory** **Learning Elements/ Objectives:** • Realise the random motion of molecules in a gas • Realise the gas pressure resulted from molecular bombardment • Interpret gas expansion in terms of molecular motion	**<u>Consolidate Students' Prior Knowledge (Active Learning)</u>** • Teachers first teach the fundamental knowledge of kinetic theory (e.g. gas molecules are performing ever random motions, and pressure arises from collisions of gas molecules with the container walls). Corresponding exercises are designed to help students develop relevant prior knowledge and consolidate their understanding of these scientific concepts.	• Before incorporating AI into learning, teachers should design activities that allow students to first establish and apply the necessary prior knowledge. They should not neglect the important process of concept building that students need.

	• State the assumptions of the kinetic model of an ideal gas	**<u>Students Use AI to Generate Physics Simulation Programs (Constructive Learning)</u>** • Teachers ask students to predict and sketch how gas molecules move and collide inside a sealed container based on their understanding of kinetic theory, and to select some parameters of gas molecules for investigation (e.g. velocity, quantity, kinetic energy). • Teachers then ask students to submit the relevant prompts to a generative-AI tool to **<u>create an interactive simulation</u>**. Students observe the simulated motion of gas molecule, and interact with the simulation by adjusting the parameters, thereby visualising the abstract phenomenon.	• **<u>Teachers should clearly explain to students the limitations of AI outputs</u>** (e.g. the possibility of generating inaccurate information or biased results), and **<u>remind them to interpret the outputs of AI physics simulations with a scientific mindset</u>**. (Note: Students should adopt a critical and sceptical attitude towards scientific data generated by AI, and recognize that real-world scientific experiments can be used to validate the simulation results generated by AI.) • **<u>Teachers should set clear guidelines for students' use of AI</u>** and ensure that they understand AI's role is to "assist learning" rather than "replace thinking." • **<u>Teachers should guide students on how to interact with AI</u>**

		<u>Scientific Discussion (Interactive Learning)</u> • Teachers engage students in thinking and group discussions in class, prompting them to determine whether the gas molecules in the simulation program conform to physical laws and principles. (e.g. teachers may ask students to analyse and compare the AI-generated simulation results based on the assumptions of the ideal gas molecular motion model.) • Teachers may also organise students into discussion groups to share and test one another's AI-generated simulation programs. Using their knowledge of kinetic molecular theory, students can then evaluate each other's programs to assess how well they simulate real physical phenomena.	**<u>effectively</u>**, promoting the use of AI to build scientific concepts and deepen understanding. (e.g. encourage students to first provide relevant course materials or context related to the scientific problem before posing any questions to AI.) • Teacher-student and student-student interactions through scientific discussions, questioning, and feedback can promote deep scientific learning. While using AI to support student learning, **<u>teachers should not neglect the important process of classroom discussions in their lesson planning</u>**.

		Evaluate the Physics Simulation Program (Constructive Learning) • By applying the appropriate physical laws and principles to evaluate the molecular motion in the AI-generated simulations, identify errors, and explain them, students can recognise that although generative AI tools have the advantage of creating programs through everyday language instructions, the accuracy of the resulting simulations is limited and may not fully align with actual physical laws. • Teachers do not need to provide a simulation program as the "standard" or model answer. Instead, the teaching focus should be placed on developing students' ability to critically evaluate and compare data. For example, after peer discussions, teachers may ask students to revise their own AI-generated simulation programs and compare their original misconceptions with their revised understanding, thereby deepening their grasp of key concepts in kinetic molecular theory.	• **Teachers must exercise their professional judgment in reviewing the content and feedback generated by AI based on students' uploaded answers**. At the same time, teachers should guide students to think critically about the AI-generated content and verify it using credible and reliable sources. • **Teachers should clearly remind students that although AI simulation systems can speed up the process of scientific inquiry, real-world scientific experiments remain essential. Students must recognise that actual scientific data serves as vital evidence for establishing scientific theories, and that AI-powered simulations cannot completely replace authentic scientific**

			inquiry or experimentation.

Examples on Application of Artificial Intelligence in Learning and Teaching
Science Education Key Learning Area

Primary Science

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Using generative artificial intelligence (Generative AI) to assist students in conducting guided scientific inquiry, thereby facilitating their understanding of scientific phenomena and developing their ability for scientific reasoning.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Theme:** Solar System in the Universe **Topic:** The Sun and the Eight Planets **Learning Elements/ Objectives:** • 5EC3 Recognise the eight planets in the solar system and their basic characteristics • 5EC4 Recognise the overview of the universe and be aware that the Milky Way is one of the many galaxies	**Students consolidate prior knowledge (active learning)** • During the lesson, the teacher poses a question for students to ponder: "What conditions must a planet meet for humans to live there?" • After students give their answers (e.g. oxygen, water, suitable temperature, gravity, energy sources), the teacher inputs them into an AI tool to compile the "conditions for a habitable planet", outputting explanations using appropriate scientific language. • After students read the AI's explanations, the teacher facilitates a whole-class discussion, invites students to vote on 5 to 6 "conditions for a habitable planet," and asks students to	• Enabling students to interact with nature, ask questions, make observations, thereby cultivating curiosity and interest in science through authentic scientific phenomena is a core philosophy of Primary Science. **When planning to integrate AI into instruction, teachers should avoid excessive use and must not employ AI "for the sake of using it". The focus of instruction should remain on hands-on activities, teacher-student scientific dialogue and peer**

		state whether they agree with the scientific explanations produced by the AI. **Students discuss scientific solutions with AI (constructive learning)** • The teacher has each group of students choose two planets, other than Earth, to investigate whether they meet the "conditions for a habitable planet." • Students may use AI to assist their inquiry, but they need to interact with the AI according to questioning guidelines set by the teacher. For example, students may only ask the AI about environmental or physical data of other planets (e.g. temperature, presence of a solid surface), and the teacher may also limit the number of queries. • Students need to discuss the information provided by the AI to formulate a conclusion regarding whether the selected planets are suitable for human habitation.	**discussion, as these constitute valuable experiences in scientific learning.** • **Prior to AI-assisted student discussion, teachers should clearly set the output specifications for the AI tools** (e.g. restricting the tool from directly providing answers, limiting the number of student queries). • **Prior to implementation, teachers should test the AI's outputs for scientific accuracy, check for any errors or oversimplifications.** Teachers should also provide timely interventions during the lesson and adjust the lesson design to ensure that it aligns with the cognitive level and learning goals of Primary 5 students. • **When discussing AI-generated information with students, teachers need to guide them to recognise potential biases or**

			inaccuracies which may exist in the AI's outputs.

Examples on Application of Artificial Intelligence in Learning and Teaching
Science Education Key Learning Area

Science (S1-3)

Purpose of application of artificial intelligence in learning and teaching in the following example:

- **Facilitate students to read personalised science journal with the use of generative AI**, through adjusting the content of the journal to enhance students' understanding, and designing meaningful learning activities to further promote students' scientific thinking, data analysis, and reasoning.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS3)	**Theme: Living Things and the Environment** **Unit: 6.3 Biodiversity and conservation** **Learning Elements/ Objectives:** • Recognise that some human activities (e.g. deforestation, destruction of habitat and hunting) may threaten the survival of some species and lead to biodiversity loss	**<u>Consolidating Students' Prior Knowledge (Active Learning)</u>** • Teachers teach foundation scientific knowledge related to biodiversity first, and uses science exercises to consolidate students' understanding of the topic. **<u>Using AI to facilitate Science Journal Reading (Active Learning)</u>** • Teachers select appropriate science articles (e.g. Science Journal for Kids), use AI tools to adapt the journals into teaching materials suitable for junior science, and generate "skill-based" assessment tasks and detailed solution based on the content of the journals.	• Before using AI in learning, **<u>teachers should arrange learning activities for students to establish and apply relevant prior knowledge</u>**, and should not neglect the necessary concept-building process for students. • Teachers should select relevant, reliable, and authentic science articles for reading; **<u>teachers should not rely entirely on AI for lesson preparation and delivery,</u>**

	• Recognise the importance of environmental conservation and the protection of wildlife	• Teachers ask students to read the prepared materials, guide students to interact with the AI chatbot to understand the scientific knowledge, experiments, concepts and vocabulary in the articles, and finish the prepared "skill-based" assessment tasks. Reference webpage: https://www.edb.gov.hk/en/curriculum-development/kla/science-edu/use-ai.html **Scientific Discussion (Interactive Learning)** • After students complete the science reading task, teachers guide them in group discussion to summarise the scientific investigation information in the science journal, including stating the hypotheses proposed by scientists, listing the experimental procedures, and identifying variables in the controlled experiments. Besides, teachers may ask students to discuss why the experimental results could support or refute the scientists' hypotheses. • After students have considered the scientific investigation and related experiments in the science article, teachers may also guide them to propose another scientific method to investigate the same question.	**neglecting their professional judgment and selection.** • **Before allowing students to interact with AI, teachers should explain to them that the purpose of using AI is to "assist learning" instead of "replace thinking"**. • Teacher-student and student-student interactions through scientific discussions, questioning and feedback can promote deep learning in science. While using AI to support students' learning, **teachers should not overlook the process of classroom discussion in their lesson planning**. • Before allowing students to use AI tools to assist in thinking about different

		• Students may encounter difficulties when proposing an alternative scientific method. Teachers may guide students to input their initial scientific ideas into an AI chatbot, allowing them to ask about the feasibility of their ideas or seek hints to further refine their proposed scientific method. Then, students submit both their original and revised answers to teachers as evidence of learning.	scientific methods, **teachers should clearly define the output specifications of the AI tools** (e.g. restricting the tool from directly providing a complete scientific method, allowing the AI tools to provide directional suggestion only, or requiring the tools to evaluate the scientific methods inputted by students and point out only any incorrect concepts or procedures.). • **Teachers should teach students how to interact effectively with AI. They should emphasise that students should come up with preliminary solutions on their own, and then seek AI assistance to refine those solutions, instead of simply relying on AI to generate solutions directly.**

Examples on Application of Artificial Intelligence in Learning and Teaching
Technology Education Key Learning Area

Business, Accounting and Financial Studies

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Using artificial intelligence (AI) to assist learning, combined with student-centered and interactive teaching methods, to enhance students' learning motivation and cultivate self-directed learning skills.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Topic:** Accounting Ratios **Module:** 2(a) Financial Accounting (Accounting Strand); 3(b) Financial Management (Management Strand) **Learning Elements/Objectives:** Calculate and apply accounting ratios	• Students complete the accounting ratio calculation assignment before class. • During the lesson, students are divided into groups, using AI tools to check their answers. • Students compare their calculation results with answers generated by AI tools, analyse the similarities and differences, and assess the accuracy of AI-generated answers to refine the AI prompts. • After discussion, each group shares their results. • The teacher summarises and emphasises that students must master the basic knowledge of the topic, so that they can judge whether the generated answers are accurate when using AI tools to assist learning, and consolidate their knowledge	• Students may use different AI tools to check the accounting ratio calculation. Teachers should try the AI tools in advance to understand the differences and limitations of each tool in handling accounting analysis and ratio calculation so that they can guide students to make objective comparisons in class. Teachers need to remind students not to rigidly apply the prompts they have acquired to other accounting topics. Students must adjust the prompts according to different business scenarios

		of accounting ratio calculation and related concepts during the process of AI prompts refinement. Additionally, teachers should remind students that as AI systems' operation uses statistical models, the same inputs may produce different outputs in the process. • After the lesson, students can apply the AI prompts to assist the learning of other accounting topics.	and financial statement structures, and continuously verify the results generated.

Examples on Application of Artificial Intelligence in Learning and Teaching
Technology Education Key Learning Area

Design and Technology

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Make good use of artificial intelligence to help students understand the different dimensions of design considerations and to foster the development of more diverse design ideas.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS3)	**Module:** Design and Innovation – Products for the Elderly **Unit:** (K6) Production Process **Learning Elements/ Objectives:** • Investigation of different areas and proposing solutions to the problem. • Evaluation of the solution to determine whether it meets the goals	**Understanding users' design needs:** • Students use AI tools to analyse information and data collected from users (e.g. the elderly) to help organise and summarise their needs. This broadens their understanding of the design context from multiple perspectives, enabling them to make better-informed design decisions. **Developing design concepts and evaluating design solutions:** • Students use AI tools to explore design details for their own preliminary design solutions (e.g. walking aids, visual aids), such as generating different shapes for handle designs, button layouts and material selections, to broaden the diversity of design solutions.	• Teachers should equip students to become active learners and emphasise their role in decision-making in the design process. They should also encourage students to engage directly with users throughout the process to ascertain whether the design meets user needs. • Teachers should ensure students possess the necessary fundamental design knowledge before using AI tools to assist in the design process, and should guide them to critically assess, analyse and evaluate content generated by AI.

		• Teachers guide students in assessing AI-generated alternatives and analysing their strengths and weaknesses from various perspectives (e.g. ergonomics, safety, manufacturability). • Through prototyping and testing, students can evaluate whether design variations generated by AI align with user needs. This enables them to understand the role and limitations of AI throughout the design process.	• Teachers should nurture students' creativity and critical thinking skills as core teaching objectives. They should also emphasise that students must not present AI-generated design solutions as their own work, in order to uphold academic integrity and professional ethics.

Examples on Application of Artificial Intelligence in Learning and Teaching
Technology Education Key Learning Area

Health Management and Social Care

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Use generative artificial intelligence (AI)-assisted learning to promote students' self-directed learning and enable flexible and diverse learning modes, thereby cultivating students' innovative and critical thinking

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Module:** Health and Wellbeing **Learning Elements:** Holistic health, healthy lifestyle **Objectives:** ● Use different indicators to keep track of the physical, mental, and social health ● Apply concepts such as nutrition, energy balance, stress management and healthy social support network to explore the concept of healthy lifestyle	● **My Health Status:** Students collect data from wearable devices/apps to keep track of their physical, mental, and social health. They use an AI platform to analyze and synthesise the data to examine their overall health status, and discuss the advantages and limitations of using AI for health management. ● **Case Study:** Students use AI to generate cases of persons with different health needs, such as the management of weight, stress and interpersonal conflicts, and ask AI to generate suggestions for each target groups to help them establish a healthy lifestyle. Students work in group to discuss, verify (e.g. the accuracy of data sources) and review the AI suggestions (e.g.	● Avoid relying on medical or health advice generated by AI. Make good use of AI as one of the sources of health information or tools to develop high-ordered thinking. ● Avoid requiring or allowing students to submit content or suggestions directly generated by AI , or to treat the generated health information as true without verification. Students should have critical thinking to discern the health information. ● Ensure that the use of AI for collecting personal health data complies with the Personal Data (Privacy) Ordinance,

		whether they provide incorrect or misleading directions based on false information), and propose how to optimise the AI's suggestions. This evaluation competence enables students to assume a leading role in human–AI collaborative learning.	thereby cultivating students' understanding of and respect for privacy.

Examples on Application of Artificial Intelligence in Learning and Teaching
Technology Education Key Learning Area

Home Economics / Technology and Living

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- To enhance students' interest in learning, develop their ability to integrate and apply knowledge and skills, and cater for learner diversity, thereby nurturing critical thinking and self-directed learning skills.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS3)	**Module:** Skills in Food Preparation and Processing **Unit:** Pastry making **Learning Elements/ Objectives:** • Basic terminologies used in the recipe, methods of weighing and measuring ingredients • Working habits and organisation of work in food preparation • Explore the scientific principles behind pastry making	• The teacher uses AI as a tool for creative presentation, turning traditional text-based teaching materials such as recipes into step-by-step illustrated flowcharts that guide students through practical activities, which helps cater for learner diversity. • With AI assistance, teachers design guiding worksheets that help students explain the scientific principles behind each key step, strengthening the connection between practical activities and theoretical knowledge. • After practical activities, students change a variable (such as replacing water with milk, increasing the number of eggs, or lowering the baking temperature) and use AI to predict outcomes, so as to verify the variable's impact on the result. The teacher	• AI cannot replace the skills developed through the practical activities in food preparation. • Given that students possess foundational knowledge, teachers should guide them to reflect on the suggestions generated by AI, evaluate their accuracy and rationality, thereby strengthening their critical thinking and problem-solving skills, further promoting self-directed learning.

	• Basic principles and adaptation of safety and hygiene practices	then facilitates discussions in which students evaluate whether the AI's predictions are reasonable, cultivating their critical thinking and communication skills. • Students need to use AI in the real world to solve authentic tasks, learning through practice. For example, students can learn how AI shapes their output by inputting and revising prompts in AI tools, thereby developing a mindset for effective collaboration with AI and accelerating their skills development.	

Examples on Application of Artificial Intelligence in Learning and Teaching
Technology Education Key Learning Area

Information and Communication Technology

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Use generative artificial intelligence (GenAI) tools to assist teachers in creating programming tasks of varying difficulty levels, teach and demonstrate debugging techniques to students, and provide feedback on students' programs.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Module:** Computational Thinking and Programming **Unit:** Program Development **Learning Elements/ Objectives:** • Understand and use sequence, selection and iteration (nested loop is not required) constructs to create a program. • Produce a programming solution for a given problem.	**Teachers use GenAI tools to visually demonstrate debugging steps to students, enabling them to further deliberate on and master debugging techniques through classroom discussion.** • Before the lesson, teachers use GenAI tools to generate programming tasks of varying difficulty levels. • During the lesson, teachers engage students in completing programming tasks. • After the lesson, teachers use GenAI tools to review students' submitted programs, trace the execution of the code, and generate debugging steps along with suggested code revisions. • Teachers should professionally and carefully evaluate the suggestions generated by GenAI	• Teachers should avoid using AI-generated debugging analyses directly as the final grade. Instead, they should take into account students' oral presentations, performance in class discussions, and hands-on processes to verify students' genuine understanding of program logic and debugging techniques. • Teachers should not outsource the responsibility of code review entirely to AI tools. When using AI to trace code and generate suggestions, they

		tools to ensure the accuracy and appropriateness of the content. • During the lesson, teachers provide feedback to students using visually presented debugging steps and codes that have been adapted to suit students' ability levels. • Students think and discuss/present orally the program logic, errors, and proposed improvements. • In class, teachers guide students to examine and identify errors in GenAI outputs (e.g. insufficient boundary cases when testing the program), emphasising the importance of human judgement and helping students understand the limitations of artificial intelligence. • After discussing and understanding the step-by-step logical explanations and suggestions generated by GenAI, students revise the code within the given framework and complete the task.	should review the content professionally and carefully. • Teachers should guide students to understand and deliberate on AI-generated suggestions, thereby strengthening their critical thinking and self-directed learning skills. • Teachers should make students aware that they cannot rely entirely on AI-generated results for debugging, as AI has its own blind spots and limitations (e.g. due to a lack of real-world contextual understanding, there may be insufficient boundary cases when testing the program).

Examples on Application of Artificial Intelligence in Learning and Teaching
Technology Education Key Learning Area

Primary Computational Thinking – Coding Education

[Example 1]

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Enable students to integrate artificial intelligence (AI) technology into coding activities for creation, thereby enhancing their problem-solving and innovation abilities, and cultivating a responsible attitude in the use of AI.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Module:** Space Exploration (Experience the use of image recognition technology in AI during coding activities) **Unit:** Computational Thinking – Coding Education **Learning Elements/ Objectives:** • Use video detection features (e.g. image recognition) to create an interactive coding project.	• Teachers guide students to identify problems; students process project content, observe the relationship between data value changes and output on computer program, and develop problem-solving and solution design skills using a mind map. • Teachers use AI to help design "unplugged" classroom activities, enabling students to understand the application of conditional statements and operators to establish a foundation concept in making logical judgement.	• Coding with the use of a video camera involves both image and personal data. Teachers should clearly explain the purpose of collecting image data and establish a shared understanding with students on the proper use of personal information to ensure that privacy is protected.

	• Understand application of conditional statements and operators. • Use AI tools to support understanding of programming skills and assist creative work. • Apply coding knowledge and skills, as well as computational thinking to design coding projects that express students' creative ideas.	• Teachers guide students to explore the use of image recognition technology in AI, devise solutions to use computer programs to recognise and respond to video motion changes for changing a character or background. By adjusting the detection range of video motion, students will understand how these adjustments affect the motion detection sensitivity. • Enhance students' ability to use AI platforms for creative work; students can use prompts to generate creative characters, edit projects or create stories.	

[Example 2]

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Allow students to integrate AI and robotics into coding activities for constructing an automation system. At the same time, guide students to adopt a prudent attitude towards using AI, enhance their innovative thinking, and further explore the capability to apply AI in solving real-world problems.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Module:** Project Study in Intelligent Handling Systems (Robotic Arm) **Unit:** Computational Thinking – Coding Education **Learning Elements/ Objectives:** • Enable students to incorporate AI and robotics into coding activities, thereby developing creativity, innovative thinking, and problem-solving skills. • Allow students to apply coding and AI in real-life contexts, understanding how technology changes	• Teachers use real-life scenarios of intelligent handling systems to guide students in identifying the input, process, and output framework of intelligent handling systems. • Teachers guide students in connecting physical objects as a system, assembling devices for input, process, and output purposes, including AI devices, motors, robotic arms, expansion boards, etc. • Students learn about the characteristics and applications of different types of motors, the control of motor angles via coding, and understand the operational principles of the robotic arm and the concepts of modular design.	• Students should understand that the accuracy of AI recognition models may be affected by insufficient training data, diversity of images, and changes in the environment. Teachers should develop students' ability to assess AI technology. • When using different AI devices, teachers should carefully assess their accuracy. • When preparing teaching content or conducting classroom activities, teachers who use AI to extract

	everyday life and developing digital literacy.	• Students use pre-set data to train systems to explore AI, machine learning, and object recognition tools to assist in coding and system development, thereby understanding that machines can simulate human learning and decision-making to solve problems.	information should carefully examine the accuracy of the results and, as necessary, explain to students that recognition models may produce errors for a variety of reasons.

[Example 3]

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Through the pictograph recognition project, inspire students to apply AI in the preservation of historical culture, and cultivate interdisciplinary integration capability.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Module:** Discovering Chinese Treasures – AI Pictograph Decryption **Unit:** Computational Thinking – Coding Education **Learning Elements/ Objectives:** • Understand how AI can learn to recognise objects through large volumes of data, and the importance of data diversity for the accuracy of machine learning models. • Use AI for recognising pictographs to enhance students' interest and understanding of Chinese	• Teachers guide students in using AI to understand the relationship between pictograph images and their meanings. Students collect a diverse set of pictograph images, adjust their format, size, and annotations to improve the efficiency and accuracy of model training. • Teachers instruct students to train models, input images for training, test recognition accuracy, and embed the finished model into an AI camera for real-time image processing and providing more accurate recognition results. • Teachers guide students to connect physical objects for coding, linking microcontroller, AI camera, and expansion board, to achieve automated pictograph recognition and decryption, with results displayed on screen.	• Teachers must clearly explain the limitations of AI machine learning models to students, develop students' digital literacy, and avoid indiscriminate trust in machine decisions. Teachers should also help students understand the limitations of AI in interpreting cultural context and meaning. • When collecting data for training AI machine learning models, teachers should instruct students to understand and respect copyright and privacy (for example, avoiding the use of photos containing identifiable faces in model training), and

	culture through exploration, and to help students cultivate attitudes of respect and appreciation for traditional culture.		clearly explain the purpose of data collection. • Teachers should review the accuracy of the models, the appropriateness of teaching activities, and student learning outcomes, using these as a basis for the ongoing optimisation of teaching practices in using AI.

Examples on Application of Artificial Intelligence in Learning and Teaching
Personal, Social and Humanities Education Key Learning Area

Citizenship, Economics and Society

Purposes of application of artificial intelligence in learning and teaching in the following example: Creating simulated media information through artificial intelligence tools to develop students' capability to conduct data cross-checking as well as proper values and attitudes, thereby enhancing learning and teaching effectiveness

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS3)	**Theme:** Personal and Social Development **Module:** 1.1 Self-understanding and Life Skills **Learning Elements / Objectives:** • To examine, analyse and evaluate information contents carefully and rationally	**<u>Students utilising generative artificial intelligence tools to conduct data cross-checking</u>** - Students work in groups, using different generative artificial intelligence tools to investigate the issue: "During the COVID-19 pandemic, places such as Vietnam and Thailand would suspend the supply of rice to Hong Kong". - Students from different groups then share their findings with one another. The teacher introduces the "USER — Understand, Search, Evaluation, Response" framework to enable students to conduct data cross-checking. The teacher guides students to locate at least two sources of official information using online	• When utilising artificial intelligence to assist student learning, teachers should develop guiding questions that closely align with the teaching objectives. Teachers should also maintain regular classroom interaction, questioning, and feedback to promote deep learning. Teachers must explain that generative artificial intelligence tools can sometimes produce incorrect or confusing content and they should teach students methods for verifying information,

		search engines, and conduct data cross-checking by comparing the outputs generated by artificial intelligence tools with official sources. Students evaluate whether the responses from different tools are reasonable and accurate, so as to understand the limitations of generative artificial intelligence tools and avoid over-reliance on them.	thereby cultivating students' critical thinking.
		<u>Teachers utilising generative artificial intelligence tools to generate media information as reading materials for students' verification</u> - The teacher can further use generative artificial intelligence tools to demonstrate the creation of social media posts, then arrange students to work in groups using different generative artificial intelligence tools to verify the accuracy of the post content. Students apply cross-checking methods to identify errors and misinformation, and propose recommendations for revision. Through this activity, students will cultivate media literacy and ethical attitudes, including critical thinking, empathy, a sense of responsibility, respect for others, and law-abidingness.	• When generating reading materials, teachers should require the generative artificial intelligence tools to closely align with the key learning focuses of the curriculum and comply with the level of understanding of junior secondary students.

Examples on Application of Artificial Intelligence in Learning and Teaching
Personal, Social and Humanities Education Key Learning Area

Economics

Purposes of application of artificial intelligence in learning and teaching in the following examples:

- Utilise artificial intelligence (AI) tools to cater for learner diversity and enhance students' capacity for self-directed learning.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	Topic H: Money and Banking Topic J: International Trade and Finance	• **<u>Generate Tiered Exercises</u>** Teachers can utilise AI tools to generate elementary, intermediate and advanced questions for various topics (especially those involving more mathematical calculations). This allows students of different abilities to learn progressively. Examples of topics include: • Credit creation/contraction (calculating changes in credit creation/contraction and the money multiplier in response to varying reserve ratios) • International trade (calculating which country possesses a comparative advantage in producing a specific good under given scenarios) • **<u>Provide Instant Assessment and Tailored Explanations</u>**	• Teachers must ensure that questions generated by AI tools are accurate and appropriate. • Teachers should note that student data analysed by AI is for reference only. Teachers must integrate their classroom observations of students when designing suitable learning and teaching activities and content, and avoid over-reliance on the feedback provided by AI tools.

		After students submit their answers, AI tools can instantly assess and indicate errors, provide detailed step-by-step explanations, and links to relevant instructional videos to help students quickly clarify misconceptions. Furthermore, teachers can use AI to deliver personalised learning content and questions, further facilitating self-directed learning. • **<u>Support Teachers in Diagnosing Learning Difficulties and Designing Follow-up Activities</u>** Teachers can use AI to analyse the class-wide response data to identify students' common error types, enabling the design of more tailored classroom activities. For instance, based on the data provided by AI, teachers can identify which students have mastered specific concepts and which areas require further reinforcement. Based on this information, teachers can arrange appropriate grouping, pairing students who have mastered the concepts with those who need additional support, allowing them to deepen their conceptual understanding through collaborative discussion while enhancing interpersonal communication and collaboration skills. • **<u>Support Teachers in Developing Authentic Learning and Teaching Materials</u>**	

		Teachers can use generative AI tools to promptly adapt current affairs into case studies or role-play scenarios of varying difficulty levels. This enables students to compare the economic impacts of different policy options. For example, relevant tools can help connect themes from the Government Budget with topics such as “Market and Price”, “Efficiency, Equity and the Role of Government” and “Macroeconomic Problems and Policies”. This supports the development of relevant and engaging learning materials that enhance students’ interest and their ability to apply knowledge from Economics.	

Examples on Application of Artificial Intelligence in Learning and Teaching
Personal, Social and Humanities Education Key Learning Area

Ethics and Religious Studies

Purposes of application of artificial intelligence in learning and teaching in the following example: to tackle teaching challenges and enhance students' interest in studying scriptures

Stage	Theme, Unit and Learning Elements / Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Theme: Environmental Ethics** **Unit:** Unit 2: Personal and Social Issues **Learning Elements / Objectives:** A. Pollution and consumerism B. Use and exploitation of the natural environment C. Biodiversity and conservation D. Global village and sustainability	**Using AI in Ethics and Religious Studies to support the "Share – Reflect – Praxis" pedagogy** This pedagogy originates from Thomas H. Groome, who emphasises sharing religious stories and visions with students and encouraging them to reflect on their own lives, and to adjust their beliefs, values and behaviour accordingly. **1. What is our situation?** Teachers may use AI to analyse anonymous student reflection texts to identify common themes, contradictions or questions, thereby enabling them to adjust their teaching based on students' actual concerns. For example, many	• Teachers shift from "knowledge transmitters" to "process designers", "dialogue facilitators" and "AI content gatekeepers". They should continuously enhance their own subject conceptual analysis skills, questioning and facilitation skills and AI literacy. • Teachers should engage students in explicit discussions about the boundaries of AI use, e.g. when is it permissible to use AI? When is it not permissible? How should its outputs be viewed critically?

		students may have misunderstandings about ecocentrism (B). **2. Why do we act in this way?** Socratic AI dialogue: students may engage in individual dialogue with a purposefully role-set AI chatbot (e.g. by inputting an instruction such as "You are a thoughtful dialogue partner who helps me explore in depth the reasoning behind a particular ethical judgement, e.g. refraining from ordering fast food delivery by asking "why" questions) (A), thereby deepening personal reflection before sharing in small groups. **3. What does our faith tradition say?** Teachers guide students to understand and appreciate the common "stories" (scriptures, traditions, history) and "visions" (hopes, promises, descriptions of a better state of affairs) of faith community (C, D). Teachers may use AI to create resource libraries. For example, by inputting the theme "benevolence" and instructing AI to generate a network of related religious scripture texts, extract core religious concepts related to environmental ethics, case studies of historical figures (e.g. Dr Albert Schweitzer) and	• When analysing text inputs from students, it must be emphasised that all data are fully anonymised, and students should give informed consent to this process for trust building. • Teachers are reminded that AI role instructions need to be carefully designed to prevent AI from becoming a "moral preacher". Instead, AI should always be positioned as a "inquirer" and a "clarifier of reasoning". • AI-generated scripture content, connections or interpretations may contain factual errors or oversimplifications. All AI-generated content must be verified by referring back to the original texts or authoritative commentaries. In this regard, AI's best role is as a "research assistant" and "inspiration generator", rather

		references from other traditional teachings (A, B, C, D). **4. How do religious stories enter into dialogue with social stories?** Teachers may guide students to set up AI as a chatbot with a specific "role" (e.g. "Kant", "Bentham" or "a scientist in favour of genetic modification") to engage in simulated dialogue, facilitating them to synthesise and articulate their understanding (C). Students may input their own reflections on environmental ethics topics and the religious scriptures that support their views, then instruct AI to "identify three points of resonance and three points of tension between this position and the religious scriptures". This directly prompts students to examine their interpretation of the religious scriptures and the basis of their arguments (A, B, C, D). **5. What shall we do now?** Teachers may guide students to instruct AI to transform a general intention ("I want to be more environmentally friendly") into a concrete plan, generating specific, measurable,	than an "interpretative authority". • Focus on the assessment of the learning process, e.g. observing students' depth of questioning in AI dialogues, their ability to integrate faith and life experiences within groups, and the feasibility and depth of reflection of the final action plans they propose.

		context-appropriate action steps, potential obstacles and countermeasures (A, C, D).	

Examples on Application of Artificial Intelligence in Learning and Teaching
Personal, Social and Humanities Education Key Learning Area

Geography

Purpose(s) of application of artificial intelligence in learning and teaching in the following example: Students use generative artificial intelligence (AI) tools to search for and verify information, and to create concept maps. This is integrated with the Think-Write-Pair-Share strategy to facilitate collaborative learning among students.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Examples of Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS3)	Unit: Changing Climate, Changing Environments Learning Objective: • To evaluate the effectiveness of using low-carbon energy as a panacea for combating climate change	Students use generative AI tools to verify articles provided by the teacher Teachers provide an article titled "What are the Impacts of the Increase of Carbon Dioxide in the Atmosphere on the Environment?" Students use generative AI tools, together with precise prompting techniques, to verify the credibility and accuracy of the content. They then paste the analysis results into a document. Students collaborate with their neighbours to apply the "knowledge of climate change" learned in class to evaluate the accuracy of the analysis results, and identify any shortcomings.	• Teachers should select credible and authentic scientific literature that is closely aligned with the core learning points of the curriculum. They should not rely solely on AI to prepare teaching materials, as this may undermine teachers' personal professional judgment and selection. • Teachers should remind students to use precise prompting techniques when searching for information, so as to cultivate their ability to

		Based on the analysis results, students use generative AI tools to generate a concept map, examine whether the lines or connectors between each pair of concepts are accurate, and add appropriate words on the lines to represent the relationship between them.	think clearly and express themselves accurately. • Students must request generative AI tools to reflect on the sources of information and then evaluate the accuracy and credibility of that information to promote enquiry learning and cultivate a critical thinking attitude. • Teachers should guide students in their thinking when they examine the results analysed by generative AI tools, ensuring that students do not evaluate data without proper direction.
		<u>Using the Think-Write-Pair-Share strategy to facilitate collaborative learning among students</u> Teachers may use the Think-Write-Pair-Share strategy to guide students in collaborative learning. First, students must review the search results by generative AI tools for "Is using low-carbon energy the most effective panacea for combating climate change?", contemplate and determine their stance. Then, they write	• When designing learning tasks for information searching, teachers can incorporate the Think-Write-Pair-Share strategy to enhance students' classroom participation and develop their generic skills. • Teachers should prepare discussion forms for students to record evidence of their

		down three reasons to explain “why using low-carbon energy is or is not the most effective panacea for combating climate change” on the Think-Write-Pair-Share discussion form. Students work in pairs and share their viewpoints with their neighbours, record their classmates' ideas on the discussion form, critique each other's choices, and reach a consensus. According to the teacher's arrangement, students share their viewpoints with the whole class, and classmates must record the results of the sharing.	learning, ensuring focused conversations that effectively consolidate understanding. • Students should be reminded to use precise prompting techniques when using generative AI tools to search for information, so as to cultivate students' ability to think clearly and express themselves accurately. • Students must request generative AI tools to reflect on the sources of information, and then evaluate the accuracy and credibility of that information to promote enquiry learning and develop critical thinking skills. • To cultivate students' critical thinking skills and empathy, teachers should guide them to understand each other's arguments and evidence in order to reach a consensus.

Examples on Application of Artificial Intelligence in Learning and Teaching
Personal, Social and Humanities Education Key Learning Area

History

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- To assist students in actively constructing historical knowledge and developing diverse historical literacy with AI tools, and nurture in them proper values and attitudes, thereby enhancing learning and teaching effectiveness.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS3)	**Module**: *History Curriculum Guide (Secondary 1-3)* Topic 2: The Development of European Civilisation **Unit:** The legacy of classical European civilisation and its meaning for today **Learning Elements/ Objectives:** To understand the importance of the Olympic Games in ancient Greece, and produce promotional posters	Promotional Posters Design Activity: • Teacher should first teach the essential historical knowledge about the classical European civilisation of ancient Greece, and guide students to produce promotional posters with AI tools through questioning and follow-up questions, so as to enable students to use historical knowledge to evaluate and enhance the AI-generated products in the enquiry process. Students can demonstrate their learning creatively in a self-directed manner, helping deepen their understanding of the legacy of classical European civilisation and the Olympic spirit.	• Teachers should set clear learning and teaching objectives, apply AI tools rationally and make adaptations to the learning and teaching strategies in History, so as to guide students to experience and understand that AI is only an assistive tool to history learning and nurture in them historical literacy such as distinguishing the authenticity of historical information. • Teachers should guide students to use AI tools to facilitate history learning, such

	with AI tools to promote the Olympic spirit		as using AI tools to assist students of different abilities in organising historical information, arranging historical events in chronological order and analysing various information such as historical maps and charts, thereby catering for learners' diversity and helping them develop historical concepts and skills as well as proper values in using AI tools.
Secondary (KS4)	**Module**: *Senior Secondary History Optimised Curriculum* Compulsory Part: Major Development and Trends in Modern and Contemporary World History **Unit:** 2.2a War and Peace: Major International Conflicts and the Quest for Peace since the 20th century (2.2 The Second World War (WWII) and the postwar international order)	AI-assisted Primary Sources Analysis: • Teachers can conduct group activities with students and set various enquiry questions regarding the international situation in the inter-war period, for example, the dilemma of post-war Europe, the economic prosperity and diplomacy of the United States, the establishment of the Soviet Union and its socialist construction, as well as the formation and development of militarism in Japan, Fascism in Italy and Nazism in Germany, etc., and guide different student groups to use AI-powered research tools and chatbots to analyse their respective enquiry questions, and collect relevant historical sources (such as pictures, comics, statistics and textual information) and conduct other	• While conducting enquiry learning in History, teachers should guide students to use diverse types of historical sources and make comparison with and analysis of the information provided by AI, thereby developing students' historical literacy such as distinguishing the authenticity and reliability of information, and reviewing history from multiple perspectives, and cultivating their proper values and attitudes. In the learning process, students can use prior knowledge and historical

	Learning Elements/ Objectives: To understand the international situation in the inter-war period and examine the cause-and-effect relationship between the relevant international situation and the two world wars with the use of AI tools	relevant learning tasks in the tiered enquiry. With teacher's guidance, different groups make use of their own knowledge to analyse the respective questions, and enquire comprehensively the cause-and-effect relationship between the relevant international situation and the two world wars.	skills and integrate the information provided by AI to construct historical knowledge and demonstrate their learning.

Examples on Application of Artificial Intelligence in Learning and Teaching
Personal, Social & Humanities Education Key Learning Area

Primary Humanities

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Using artificial intelligence enables students to engage in dialogue with historical figures, which creates an "immersive learning environment" when studying history and boosts learning motivation. Personalised learning and immediate feedback also help enhance students' engagement and interest in learning, allowing them to experience the patriotic sentiments of different historical figures.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Example of Topic:** Understand the causes of the Japanese invasion on China and the development during the War of Resistance against Japanese Aggression	Stage 1: Students use AI tools for interactive learning • Teachers set up a teaching scenario, assuming that students have the chance to meet and interview Anti-Japanese War veterans. Students work in groups to draft two to three interview questions, learning about events related to the War of Resistance against Japanese Aggression from the veterans. • Teachers guide students to use the "AI Chat with Veterans" website developed by the Academy of Chinese Studies (a Quality Education Fund project). In groups, students engage in conversation with different AI	• When teaching history-related topics, teachers must carefully select AI tools, ensuring that the information provided by AI-generated characters aligns with historical facts, so as to prevent students from developing misunderstandings about history. • Teachers must review whether the interview questions drafted by students are appropriate and meaningful, ensuring that students can properly use AI tools to learn the topic. Teachers should also guide

		veterans, understand their wartime experiences, and then share the most admirable aspects of the interviewed veteran. Stage 2: Students conduct extended learning with the assistance of AI tools • Students reflect on their learning and, accompanied by family members, use AI tools to make appreciation cards to express their respect for the Anti-Japanese War veterans. After completing the cards, students can post them on the school's display board.	students to use AI ethically, with integrity and honesty. • Teachers should teach students not to rely solely on AI tools. When studying history-related topics, students must ensure the accuracy of historical information, verify whether the content provided by AI tools is correct, and cultivate students' information literacy.

Examples on Application of Artificial Intelligence in Learning and Teaching
Personal, Social and Humanities Education Key Learning Area

Tourism and Hospitality Studies

Purpose(s) of application of artificial intelligence in learning and teaching:

- To create diverse scenarios simulating the tourism and hospitality industry through the use of AI tools, enabling students to actively construct subject knowledge, develop various generic skills, and cultivate proper values and attitudes, enhancing learning and teaching effectiveness.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS3/4)	Module 2 Introduction to Hospitality Accommodation Sector - Main Duties of Front Desk	• Through conversations with AI chatbots, students can simulate the various duties of a front-desk clerk (receptionist) handling check-in registration, check-out settlement and over-booking procedures. Through the interactions, students can learn the appropriate techniques for handling a wide range of situations in the tourism and hospitality sectors, and strengthen their communication skills and problem-solving skills.	• Teachers should establish clear teaching objectives and activity guidelines, and develop students' digital literacy and skills in quality customer service, enabling students to engage in meaningful interaction with AI chatbots.
	Module 2 Introduction to Hospitality Food and Beverages Sector - Ambience of a Restaurant	• Students employ AI tools in combination with subject knowledge, such as the elements that create a restaurant's ambience, to generate restaurant designs. By evaluating, adjusting, and revising the	• Teachers should cultivate students' digital literacy and proper values, guide them in choosing appropriate AI tools to support their learning (e.g.,

		AI-generated results, they strengthen their information-processing skills and creativity.	AI tools that have been authorised by the copyright holder for use), and teach them to respect intellectual property rights (e.g., by properly annotating designs generated by AI tools), and to analyse and verify AI-generated content to prevent false or misleading information.

Examples on Application of Artificial Intelligence in Learning and Teaching
Arts Education Key Learning Area

Music

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Artificial intelligence (AI) should be used as a teaching support tool to enhance students' abilities in creating, listening, and performing, and to broaden the design of teaching and assessment. However, teachers must ensure that AI-generated music does not replace students' authentic experiences in performing and creating music.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Unit:** A Fantasy Sound Journey on Campus **Learning Elements / Objectives:** 1. Describe and analyse the musical elements of different environmental sounds, including rhythm, pitch, and timbre 2. Create electronic music works that correspond to a given musical context	• Adopt AI timbre transfer tools to convert collected audio recordings into instrumental timbres (e.g. flute, violin, saxophone), and describe their characteristics using appropriate musical terminology • Import the converted waveform audio files (WAV format) into a Digital Audio Workstation (DAW), and apply various musical elements to create a musical passage of no fewer than eight bars, based on the theme "A Fantasy Sound Journey on Campus"	• When designing the unit, the learning objectives should first be clearly defined. AI tools should be used only to support processes such as recording conversion, track separation and arrangement, ensuring they do not replace students' direct and practical experiences in listening, singing, performing and ensemble playing. • Before using timbre transfer, track or source separation, or

	3. Perform accurately in an ensemble integrating acoustic instruments with electronic music 4. Evaluate musical works using predetermined assessment criteria.	• Attempt to perform the musical work and identify areas for improvement with reference to the assessment criteria	DAW arrangement, students should possess basic musical knowledge such as rhythm, pitch, timbre, and style. They should be guided to critically analyse AI-processed tracks and materials, understand their effects and limitations, and recognise that AI serves only as a supporting tool for creating and analysis. • AI may be used to convert environmental sound recordings into instrumental timbres, or to import audio recordings into a DAW to assist in creating musical passages of eight bars or more.

Secondary (KS3/4)	**Unit:** Rhythm and Blues (R&B) **Learning Elements / Objectives:** 1. Perform selected excerpts of R&B accurately 2. Describe and analyse the musical elements of R&B, and discuss the relationship between its stylistic features and cultural context 3. Demonstrate improvised singing (ad lib) in the style of R&B 4. Rearrange excerpts of existing songs using the musical features of R&B 5. Evaluate musical works using predetermined assessment criteria	• Adopt AI track or source separation tools to separate the selected R&B excerpt into individual tracks (e.g. vocals, drums, bass guitar, keyboard), describe the characteristics of each individual track and the mixed tracks using appropriate musical terminology, and analyse how the musical elements demonstrate the features of R&B • Perform ad lib over the separated individual tracks (drums and harmonic parts only), demonstrating accurate pitch, balance among parts, expressive delivery and stylistic features • Import the separated individual tracks (harmony only) into a Digital Audio Workstation (DAW), edit selected segments for rearrangement, and integrate the following elements: ➢ Rhythmic patterns with strong backbeat characteristics ➢ Ad lib ➢ Riff	• In music composition and rearrangement activities, priority should be given to AI tools that allow students to edit, rearrange, and modify tracks (editing), rather than to systems that only generate fixed outputs without further editing capability (generative only), in order to foster students' creativity in composing musical motifs, developing musical phrases and applying stylistic treatments. • Artificial intelligence can be used to separate audio into individual tracks such as vocals, drums, bass guitar, and harmonic parts, providing materials for style analysis, ad lib performance, and song adaptation. However, the design of melody, rhythm, and musical expression should remain student-led. • Teachers should adopt diverse assessment methods (e.g.

			reflective reports, creative process records and peer review) and require students to explain their choices and artistic intentions in areas such as prompt design, the selection and modification of tracks, and the design of ad lib and riffs. This helps prevent students from relying solely on 'one-click' automated music outputs. • When AI is used to process recordings, tracks, and student work, copyright and relevant regulations must be observed. Students should be reminded not to present AI-generated music as their own original work or as assessment submissions, in order to uphold academic integrity and professional ethics.

Examples on Application of Artificial Intelligence in Learning and Teaching
Arts Education Key Learning Area

Visual Arts

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Under the premise of "not using AI-generated visual images to replace students' authentic art learning experiences and original work", teachers may use AI to support teaching, develop students' abilities in appreciation, making, and thinking, and enhance the effectiveness of learning, teaching and assessment. AI can also provide personalised learning pathways and resources, as well as simulate authentic learning opportunities, thereby improving students' efficiency in reflection and improvement.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Unit:** Spring Breeze and Splendid Chinese Attire **Learning Elements/ Objectives:** **Visual Arts Knowledge** 1. Use organic lines to depict the fluid, natural, and vibrant forms of plum blossoms, orchids, chrysanthemums, bamboo, and butterflies in traditional Chinese art, and understand their cultural symbolic meanings (Visual Elements) 2. Compare the visual effects created by different combinations of images and patterns of repeated motifs (Principles of Organisation)	• Teachers use AI tools to analyse the expressiveness of lines and the cultural symbolism of natural motifs in the artworks, and incorporate the findings into the teaching materials • Teachers select images from the artworks and use AI to generate different combinations and repeated patterns, guiding students to appreciate and discover the resulting visual effects • Students use AI to merge their initial design drafts with their own photos to preview the visual effect of the	• AI may be used to analyse the similarities and differences among the selected artworks or crafts to assist in developing teaching materials. However, teachers should not rely solely on AI analysis results without exercising their professional judgment and providing guidance. • Use AI to adjust the expressive effects of the artworks (e.g. through different arrangements or colour variations) to stimulate

	Visual Arts Appreciation and Criticism 3. Analyse the expressiveness of lines, combinations and repeated patterns of natural images in Qing Dynasty artworks, *Twelve Beauties of Prince Yong*《雍親王題書堂深居圖屏》 and *Light Blue Kesi Fur-lined Jacket with Phoenix and Plum Blossom Patterns*《品月色緙絲鳳凰梅花皮襯衣》, appreciate the vitality and visual effects they convey, and understand the cultural implications they embody **Visual Arts Making** 4. With the theme "Spring Breeze and Success", use visual images of natural objects to design a short-sleeved, crew-neck top suitable for wearing during the school's Lantern Festival celebrations (Presentation) 5. Use markers to design patterns on a paper template for the short-sleeved, crew-neck top, and paint the finalised design on a pre-made top using fabric markers (Production)	clothing when worn, and then review and refine their designs	student discussion; however, teachers should not over-rely on AI to adjust artworks in pursuit of gorgeous effects, which may cause students to lose sight of the artist's intention and the learning focuses. • Use AI to place design sketches in simulated reality environments (e.g. on a model) to review the effect of art making. Do not use AI-simulated images to replace students' observation, practical work, and art making experience in authentic contexts.

Secondary (KS3)	**Unit:** Sit Together, Talk Together and Share Together: School Garden Bench Design **Learning Elements/ Objectives:** **Visual Arts Knowledge** 1. Understand the feelings brought by forms and textures in design products (Visual Elements) 2. Understand and apply the visual effects created by repetition and balance (Principles of Organisation) **Visual Arts Appreciation and Criticism** 3. Appreciate several classic chair designs, analysing, interpreting, and evaluating the works from perspectives such as aesthetics, function, and community use **Visual Arts Making** 4. Design a bench for the school campus based on an understanding of user needs to facilitate interpersonal communication (Presentation) 5. Use cardboard / fabric / clay to make a scaled-down bench model (Production)	• Teachers select several classic chair designs from different periods and regions, and use AI to design game cards for art appreciation activities, thereby enhancing students' interest and engagement in learning design appreciation • Students design a bench for the school garden to facilitate interaction among students and between teachers and students • To understand user needs, students work in groups to interview different users on the school campus, using AI to design interview questions, and analyse and summarise users' viewpoints to inform their design • Students can use AI to apply suitable materials to their own bench design sketches to test and observe the effectiveness and suitability of these materials. They can then "place" the more suitable design sketches onto an image of the school garden to assess how the design fits into the actual	• AI can be used to design games for art appreciation to make learning more interesting. However, it should not replace the dialogue on art appreciation between teachers and students. • Use AI to draft interview questions to help understand user needs and improve design outcomes. However, students should not completely rely on AI-generated interview questions and neglect personal interactions with users and on-site observations. • Using AI to simulate the effects of different materials on a design can accelerate the design experimentation process. However, the results of AI simulations should not be treated as final outcomes, overlooking material properties and production constraints

		environment, thereby enhancing the effectiveness of learning in context	• Use AI to place design sketches in simulated reality environments to review the effect. However, simulated images should not be used to replace students' observation, experimentation, and art making experiences in authentic contexts.

Examples on Application of Artificial Intelligence in Learning and Teaching
Physical Education Key Learning Area

Physical Education

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- To make effective use of AI for data analysis and the generation of individualised recommendations, thereby enhancing learning effectiveness.
- To enhance students' engagement within and beyond the classroom, facilitating self-directed learning.

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Primary (KS2)	**Module:** Athletics **Unit:** Long Jump **Learning Elements/ Objectives:** • Demonstrate understanding of long jump skills • Perform the whole sequence of long jump smoothly	• Teachers create a dedicated "Long Jump Assistant" chatbot via an AI platform, with pre-set criteria for movement analysis. During the lesson, students can upload videos of their long jump performance in real time. The AI analyses the movements according to the criteria and provides targeted feedback and suggestions for improvement. • Before the lesson, teachers utilise generative AI to design pre-lesson learning and teaching resources for the long jump, such as illustrated demonstrations, short videos, and comparisons of common errors, to help students grasp key learning points and compile them into "Sports Notes".	• The use of AI should align with curriculum goals, with a focus on learning motor and sports skills and the development of physical fitness. • Avoid excessive reliance on AI-generated data at the expense of students' responses and individual learning needs. • AI tools should not replace the professional role of teachers, nor should they diminish teacher-student

		• Students practise the long jump in designated areas, where an AI camera system captures their performance in real time and generates movement analysis reports, providing individualised suggestions for refinement.	interaction and communication. • Teachers should avoid relying on AI-generated reports as the sole basis for assessment. They should also incorporate students' oral presentations, learning logs, or reflections to ascertain their understanding of sports skills.
Secondary (KS3/4)	**Module:** Physical Fitness Activities: Health and Fitness **Unit:** Muscular Strength and Endurance - Circuit Training **Learning Elements/ Objectives:** • Understand the basic concepts of body composition and its relationship with health • Learn to use body composition analysers to conduct data analysis	• Teachers utilise a body composition analyser and height and weight measurement equipment/tools to measure students' height, weight, body mass index (BMI), body fat percentage, and muscle percentage. Based on the analysis results, teachers group students and guide them in setting training goals, as well as using AI to identify suitable circuit training programmes. • Teachers demonstrate how to use AI to search for circuit training programmes targeting specific training effects and explain the relevant training methods. Students search individualised circuit training programmes through AI, which are reviewed by teachers before carrying out the first training cycle.	• Students should be guided to analyse AI-generated training programmes by comparing the feasibility, strengths, and limitations of different training programmes, in order to cultivate their critical thinking skills. • The protection of students' personal data should be ensured through the use of secure and reliable AI platforms. • AI tools should not be regarded as shortcuts for learning motor and sports skills or improving physical fitness. Students should acquire skills through hands-

		• Teachers discuss the pros and cons of different training programmes with each group of students. Students further search improvement programmes by using AI, which are reviewed by teachers before carrying out the second training cycle. • After the lesson, students use AI to search for home-based training methods that help improve body composition. They share their training programmes on a communication platform to receive feedback from teachers and peers. • After a period of exercise/workout, teachers re-measure students' height, weight, BMI, body fat percentage, and muscle percentage to evaluate training effectiveness.	on practice and ongoing adjustments. • Teachers should avoid relying on AI-generated reports as the sole basis for assessment. They should also incorporate students' oral presentations, learning logs, or reflections to ascertain their understanding of training programmes.

Examples on Application of Artificial Intelligence in Learning and Teaching
Citizenship and Social Development

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- Enhancing students' information literacy, strengthening student-student interaction, and catering for learner diversity when utilising artificial intelligence

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary (KS4)	**Theme:** Hong Kong under "One Country, Two Systems" **Topic:** Characteristics of cultural diversity of the Hong Kong society **Learning Elements/ Objectives:** ・Understand the elements of Chinese culture in Hong Kong society and illustrate them with examples. ・Strengthen students' ability to use information technology, including artificial intelligence (AI) literacy.	**1. Review the meaning and examples of Chinese culture** The teacher gauges students' understanding of Chinese culture through questioning and asks them to provide concrete examples of Chinese culture. Students understand the relevant knowledge in the curriculum, read designated materials, and recognise the elements of Chinese culture embedded in the community. The teacher explains that students are required to apply what they have learnt in class by cross-referencing it with information about Chinese culture obtained through AI, and guide students to evaluate the usefulness and accuracy of the AI-generated search results. **2. Utilise AI to formulate proposals for promoting Chinese culture** After mastering the relevant knowledge, students work in groups to use generative AI tools to create	• Teachers should be mindful of whether students use AI inappropriately to replace learning tasks they are supposed to complete by themselves. They should also guide students to evaluate the accuracy of AI outputs, build the awareness and habit of verifying AI-generated content, and cultivate AI literacy. • Teachers should employ immediate oral questioning during student presentations to

	• Understand, appreciate and inherit the traditions of Chinese culture, while appreciating, respecting and embracing cultural diversity.	images promoting Chinese culture, covering aspects such as food, festivals, and clothing, and upload their work to a sharing platform. Each group is required to review the accuracy of the generated images, modify and add or delete content as necessary, and prepare for an oral presentation. The content should include a brief introduction to the cultural aspect, an explanation of the AI-generated images, the elements of Chinese culture represented in the images, and suggestions for using these images to promote Chinese culture to classmates. **3. Sharing and Reflection** The teacher invites each group of students to present; other groups are responsible for recording the key points, highlighting areas of appreciation, and providing suggestions for improvement. Through peer evaluation of the work, students learn to appreciate others' perspectives in an objective, impartial, and empathetic manner. Through questioning and conclusion, the teacher guides students to reflect on the importance of the characteristics of cultural diversity in Hong Kong society, with Chinese culture as the mainstay. The teacher also brings out the message of recognising, appreciating, and inheriting Chinese culture, holding a respectful, inclusive, and appreciative attitude towards different cultures, and becoming responsible users of technology. The teacher can extend the discussion to	guide students in demonstrating their group's thinking process. • Teachers should guide students to use AI tools correctly, reminding them to think critically and protect their personal information.

		cultural stereotypes in AI outputs or issues related to information literacy.	

Examples on Application of Artificial Intelligence in Learning and Teaching
Special Educational Needs

Music

Purpose(s) of application of artificial intelligence in learning and teaching in the following examples:

- To support teachers in preparing learning and teaching resources, and to help students with Intellectual Developmental Disorder (IDD) better understand music knowledge through the use of Artificial Intelligence

Level	Modules, Units and Learning Elements/Objectives (Examples)	Learning and Teaching Activities (Examples)	Reminders on the Application of Artificial Intelligence
Secondary（KS3/4）	**Learning Elements/ Objectives:** • Understanding different musical elements and styles	• Teachers of special schools can use AI platforms to prepare resources for Music teaching in order to help students with IDD understand different musical elements and styles effectively. • When preparing music teaching materials, teachers use AI search functions to find various musical works of the same style and then select suitable pieces for students with IDD for music appreciation. Teachers also use AI to adapt the music into different versions (for example, a single-melody version and a version with accompaniment) to showcase changes in musical elements, such as texture, so as to help students identify and master the characteristics of these musical elements during the appreciation activities.	• Teachers should guide students to respect intellectual property rights and to appropriately acknowledge any references provided by AI tools, in order to develop their AI literacy.

		• During teaching, teachers also guide students to use AI to transform music pieces into different musical styles, helping them analyse and understand how various musical elements are used in those styles.	