Chief Executive's Award for Teaching Excellence (2022/2023) Excellence Indicators for Teaching Practices for the <u>Technology Education Key Learning Area</u>

Foreword

The *Excellence Indicators for Teaching Practices for the Technology Education Key Learning Area* are compiled for use as reference in assessing nominations for the Chief Executive's Award for Teaching Excellence (CEATE) (2022/2023).

In drafting the Indicators, we have consulted a number of references, including curriculum documents (see References on page 15 and 16).   The Indicators have been formulated and structured in a way that reflects the complexities of teachers' work and the diverse nature of teachers' competencies.

For the purposes of the CEATE, teaching excellence means teaching practices that are –

(i)   outstanding and/or innovative, with proven effectiveness in enhancing students' motivation and/or in helping students achieve the desired learning outcomes; or
creatively adapted from exemplary teaching practices elsewhere to suit the local (i.e. school-based and/or student-based) context, with proven effectiveness in enhancing students' learning outcomes;
(ii)   based on a coherent conceptual framework, showing reflective practices;
(iii)   inspiring and can be shared with colleagues to improve the quality of education; and
(iv)   instrumental in achieving the learning targets of the Technology Education Key Learning Area (KLA) (i.e. developing technological literacy in students through the cultivation of technological capability, technological understanding and technological awareness to deal with the challenges of the future).

The Indicators fall within four domains, namely, (1) Professional Competence, (2) Student Development, (3) Professionalism and Commitment to the Community, and (4) School Development.　The first two domains focus on recognising teaching excellence and the other two on fostering teachers' professional development and building a culture of teaching excellence.

The Indicators are to be used only as a framework for recognising excellent teaching practices; they are not intended to prescribe a rigid model of excellence for every teacher.　The examples of excellence cited for each indicator are provided for illustration only and should not be regarded as a checklist.　We hope that the Indicators will not only serve as an assessment tool, but may also highlight the qualities of an accomplished teacher in the area of Technology Education, so as to motivate teachers to pursue professional excellence.

All awardees must possess the essential qualities of a professional teacher, such as professionalism and loving concern for students.　Each nomination will be assessed according to the four domains mentioned above by adopting a **holistic approach** based on professional knowledge and judgment.　However, as the focus of CEATE is on learning and teaching, we are looking for exemplary and effective teaching practices that are inspiring and can be shared with peers.　In assessing group nominations, we will also consider the effectiveness of teamwork as measured by the contribution of each group member, interactions among group members, and how the concerted efforts of group members have contributed to the desired outcomes.

Assessment Working Group
Chief Executive's Award for Teaching Excellence (2022/2023)
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Excellence Indicators for Teaching Practices for the
Technology Education Key Learning Area

1. Professional Competence Domain

Area	Performance Indicator	Examples of Excellence
Curriculum	1.1 Curriculum Design and Organisation	The teacher is able to: • plan and develop a broad, balanced, systematic and flexible school-based curriculum by making appropriate adaptation to the central curriculum of Technology Education, with a view to developing technological literacy in students through the cultivation of technological capability, technological understanding and technological awareness (i.e. adopting positive values and attitudes towards technology and its application); • align himself/herself with new educational trends, deliver an open, flexible and up-to-date Technology Education curriculum, promote the learning of innovation and technology for all, and provide students with equal access to comprehensive and balanced learning experiences in technology education; • plan a holistic school-based Technology Education curriculum, select a combination of modules covering different learning elements (including core and extension learning elements), enhance the vertical and lateral coherence of the curriculum, effectively plan and implement STEAM[1] education, strengthen students' abilities to integrate and apply knowledge and skills (including "hands on" skills) to unleash their potential in innovation and solving problems in an authentic context, taking into full consideration the school context and its strengths, including students' needs, interests and abilities, teachers' expertise, available equipment and lesson time allocation;

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[1] STEAM is an acronym combining the first letters of five academic disciplines, namely Science, Technology, Engineering, Art and Mathematics. In the local curriculum context, STEAM education is implemented under the curricula of science, mathematics and technology through hands-on and minds-on activities both inside and outside the classroom of relevant subjects and cross-curricular learning, including scientific investigation, design-and-make activities, project learning, etc.

Area	Performance Indicator	Examples of Excellence
		• purposefully and meaningfully integrate the learning elements within the Technology Education KLA or across KLAs with a view to connecting the knowledge and skills of different subjects; help students understand technology in the context of daily life, apply generic skills and computational thinking in an ever changing environment, and effectively develop their creativity, critical thinking skills, communication skills and problem-solving skills so that they can tackle real problems in life; • take a diversified approach to curriculum design and purposefully plan life-wide learning activities to capture the interest of different students, cater for their diversity and ensure that their learning is in pace with the times; promote learning in authentic situations and real practices by participating in technology-related learning activities such as visiting various organisations or participating in competitions, with a view to enhancing students' understanding of the application of technology in daily life, widening their exposure to technological development and fostering their entrepreneurial spirit; and • flexibly incorporate the Four Key Tasks into different learning activities under the curriculum of Technology Education KLA and the cross-KLA curricula to help students learn how to learn; provide them the opportunities to acquire and apply media and information literacy, develop their capability and attitudes in handling different media information ethically and effectively and prepare them for lifelong learning.

Area	Performance Indicator	Examples of Excellence
	1.2 Curriculum Management	The teacher is able to: • understand the latest developments in technology education and curriculum at the local, national and international levels, and incorporate relevant content into the school Technology Education curriculum; • take a leading role in working closely with members of his/her subject panels and other KLA teachers to devise a holistic plan for the development of a school-based Technology Education curriculum and STEAM education, and make flexible use of "learning time"[2] and lesson time in holding various learning activities both inside and outside the classroom with a view to ensuring vertical and lateral coherence of the Technology Education curriculum; • establish an effective Planning, Implementation and Evaluation mechanism, collect appropriate evaluation data to monitor curriculum implementation and evaluate effectiveness based on evidence, and take forward specific follow-up measures to review and refine the curriculum in a timely manner so that curriculum planning, learning and teaching and evaluation are closely tied in with each other, with a view to informing curriculum planning as well as learning and teaching strategies and improving the overall quality of learning and teaching; • establish a mechanism for collegial exchange and knowledge management, maintain close communication and collaboration with team members, and appropriately collect, develop, share and leverage good practices, with a view to improving learning and teaching effectiveness; and make flexible and effective use of internal and external resources to cater for learner diversity and enrich students' learning experiences; and • make flexible and effective use of various technology education resources to cater for learner diversity, with a view to facilitating student learning through practice and exploiting their potential in technology.

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[2] "Learning time" refers to a student's learning time which includes lesson time, school time other than lesson time (e.g. recesses, lunch breaks, after school, open days, exam days), and outside-school learning time (including school holidays).

Area	Performance Indicator	Examples of Excellence
Teaching	1.3 Strategies and Skills	The teacher is able to: • select balanced learning elements from the curricula under Technology Education KLA, and meticulously design meaningful and effective teaching and learning process that emphasises both theory and practice, with a view to developing the technological literacy of students; • master appropriate and diversified teaching strategies and techniques, pay attention to the learning needs and performance of students and co-construct knowledge with them to create a harmonious and inspiring atmosphere of learning, so as to effectively stimulate students' curiosity for and interest in technology; • adopt learner-centred pedagogies to allow students to integrate and apply technological knowledge and skills in problem-solving and create inventions through "hands-on" and "minds-on" activities; • create meaningful learning contexts that enable students to apply knowledge, skills and experiences with specific purposes in mind; • provide a flexible schedule for learning progress and review and revise teaching strategies in a timely manner to cater for learner diversity and allow students with varying levels of competence to progress at their own pace; • make effective use of information technology to foster interactive learning through which students can access extensive information including information networks on the knowledge, skills and application of technology, collect different ideas and disseminate information through individual or a combination of media, such as drawing, pictures, videos, so that students can explore different learning resources, and maintain interaction, enhance learning motivation and address students' diverse needs to foster their whole-person development when face-to-face interaction between teachers and students is not feasible; - • flexibly adopt the e-learning approach to help students learn by experiencing; use electronic media to provide instant feedback to students and promote self-directed learning, with corresponding measures to enhance students' media and information literacy;

Area	Performance Indicator	Examples of Excellence
		- enable students to construct and connect knowledge, concepts and skills under the Technology Education KLA and/or across different KLAs (such as STEAM education) through project learning for the purposes of consolidated learning and integrated application; - use the language of instruction skillfully and accurately, deliver fluent and lively lessons and give clear instructions and demonstrations to deepen students' understanding of the subject matter; ask questions at different levels to prompt students to think and to encourage them to learn through enquiry; and provide timely and specific feedback to clarify concepts and facilitate students' improvement; and - demonstrate good classroom practices, pay attention to and care about students' learning needs and performance, and guide students' learning in a safe and orderly learning environment.

Area	Performance Indicator	Examples of Excellence
	1.4 Professional Knowledge and Attitudes	The teacher is able to: • grasp thoroughly the subject content and planning of the Technology Education curriculum, master related pedagogical and assessment skills, and make effective use of such knowledge and skills in teaching; • keep abreast of technological developments including the implications and applications of new technologies, serve as a role model for students by demonstrating the skills and attitudes required for exploring new technologies, and continuously update and enrich their teaching; • play a vital role in actively promoting professional exchange, sharing, reflection and review among teachers in the Technology Education KLA; and make contributions to the profession by connecting subjects and learning elements within the KLA, and actively reflecting on and updating subject knowledge; • contribute as an educator who proactively reflects on his/her teaching practices to effectively integrate education or learning theories with teaching practices for informing learning and teaching and thus promoting continuing development and refinement of the school; • create an engaging and dynamic learning environment for students and take on multiple roles during the learning and teaching process, engaging students in learning communities where they construct knowledge as learning partners among themselves and with teachers, so as to nurture them as self-directed lifelong learners; and • demonstrate a genuine commitment to teaching with a strong sense of responsibility; care about and respect students' uniqueness; have appropriate expectations of his/her students, and recognise and value their potential and achievements; and build trust and rapport with students.

Area	Performance Indicator	Examples of Excellence
Performance Assessment	1.5 Assessment Planning and Use of Information	The teacher is able to: • establish a purposeful and holistic assessment mechanism to assess students' performance in the aspects of knowledge, skills and attitudes, with a view to aligning with curriculum planning, assessment concepts, learning contexts, students' learning progress and other student-based or school-based factors and catering for learner diversity; • gather evidence of student learning in terms of knowledge, skills and attitudes by effectively employing the strategies of "Assessment as Learning" and "Assessment for Learning" to reflect the effectiveness of STEAM-related learning activities; • incorporate assessment into the learning process and ensure that assessment can reflect all the important learning components, including knowledge, concepts, processes, awareness, generic skills, values and attitudes; • record assessment results systematically and make effective use of these results to monitor students' progress, cater for learner diversity and evaluate pedagogical practices, with a view to informing pedagogical planning and design, and charting the direction of learning; • give timely, effective and positive feedback to students to help them sustain their momentum in learning and identify their strengths and weaknesses, guide them in building on their strengths and overcoming their weaknesses, and cater for their diversity; and • capitalise on student self-assessments and peer assessments or other e-assessment tools to facilitate students' self-reflection and review of their learning progress, thus reinforcing and improving their learning.

2. Student Development Domain

Area	Performance Indicator	Examples of Excellence
Student Development	2.1 Values and Attitudes	The teacher is able to: • set a role model for students, help them realise the importance and development of technology, and the positive and negative impacts that technologies may have on humanity and the environment, with a view to cultivating positive values and attitudes in them; • introduce different contexts to related topics and appropriate learning and teaching activities to help students perceive an issue from multiple perspectives, and consider and apply positive values and attitudes when solving problems and tackling the challenges brought by today's changing world; • infuse media and information literacy into the Technology Education KLA to provide an authentic context to help students use information ethically, adopt positive values and attitudes (e.g. integrity, respect for others, law-abidingness and empathy), and establish themselves as informed and responsible citizens; • enhance students' interest in learning and develop their self-directed learning ability and attitude, with a view to preparing them for lifelong learning; • develop students' curiosity and inquisitiveness as they learn about technology through classroom and life-wide learning activities, so that they can find solutions that benefit the community; • help students understand the qualities of entrepreneurial spirit, acquire safe and healthy work habits, and develop a healthy lifestyle and financial literacy; and • encourage students to keep an open mind, respect others' views, and collaborate and share ideas with others readily.

Area	Performance Indicator	Examples of Excellence
	2.2 Knowledge and Skills	The teacher is able to: • provide opportunities for students to have a good grasp of technological knowledge, technological processes and the impact of technologies, and provide them with timely updates to keep them abreast of the rapid changes in technological development; • strengthen students' ability to integrate and apply knowledge and skills; help them develop innovative ideas and provide opportunities for them to integrate knowledge and transfer skills across disciplines; nurture their creativity, collaboration and problem-solving skills as required in a world with rapid technological development; and foster their entrepreneurial spirit; • include authentic problems as the context of study to inspire students' invention of products, services or systems using resources through hands-on and minds-on attempts, and transfer their skills to other domains with a view to improving people's daily lives; • encourage students to use appropriate learning strategies and various resources to achieve their learning goals, such as using information technology to gather, sort and analyse information; and develop their basic coding skills and computational thinking; • help students master reading strategies and understand the language features and usage specific to the Technology Education KLA so that they can convey their innovative ideas to others effectively; and • help students build a solid foundation of knowledge, arouse their interests in technology, and foster their creativity and entrepreneurial spirit by promoting STEAM education, with a view to better preparing them for further studies and employment.

3. Professionalism and Commitment to the Community Domain

Area	Performance Indicator	Examples of Excellence
Professionalism and Commitment to the Community	3.1 Contribution to the Profession and the Community	The teacher is able to: • demonstrate good moral character and positive values, observe rules and the law, and serve as a role model by setting a good example for others; • strive to enhance professional competence, proactively reflect on teaching practices, and pursue continuous self-improvement; • perform the three professional roles of a teacher, namely a "caring cultivator" who supports students' all-round growth, an "inspirational co-constructor" who constructs knowledge together with students, and a "committed role model in teaching profession" who shows his/her professionalism; • demonstrate a good understanding of and actively align with the latest developments in technology education and education policies, improve and promote the school-based Technology Education curriculum by effectively incorporating new ideas and teaching practices that are in line with the prevailing education or learning theories, and develop or build a professional learning community of technology education; • daringly innovate and readily share exemplary teaching plans and practices with peers as reference; • promote the culture of educational research by taking part in research and writing articles on relevant subjects, conducting action research, planning or organising effective learning and co-curricular activities, and benefit students and the school with the findings/outcomes; • actively participate in and organise local, national or international professional development training, sharing and exchange activities within and outside the school, and pursue continuing education; produce exemplary teaching materials, and support cross-subject, cross-school or cross-territory collaboration for sharing teaching experiences and establishing communities of learning and practice, with a view to promoting professional exchange; and

Area	Performance Indicator	Examples of Excellence
		• proactively and enthusiastically organise or participate in the activities of subject societies, professional institutions, education-related community service groups or professional organisations, and offer constructive suggestions to government organisations or advisory bodies on the formulation, implementation and review of education policies, with a view to promoting education development and giving back to society.

4. School Development Domain

Area	Performance Indicator	Examples of Excellence
School Development	4.1 Support to School Development	The teacher is able to: • collaborate with peers to set out specific and clear division of duties among themselves and perform their respective functions in realising the school's vision and mission and promoting the continuous professional development of technology education in school, in the light of the latest developments in the prevailing education policies and their impacts on school development; • promote a collaboration and sharing culture among teachers in the school, and assist in building a professional learning community for peers to share good teaching practices and experiences, with a view to improving the learning and teaching in the Technology Education KLA; • assist in continuous school development with the ideas, products and systems developed from the teaching and learning process of technology education; • actively support home-school collaboration with a mechanism for close and effective communication and collaboration in place to foster mutual trust with parents for the benefit of student learning and creation of a collaborative school environment; • make good use of external resources by sharing and cooperating with local and non-local professional bodies, tertiary institutions, government and non-government organisations, with a view to enhancing community collaboration and student learning; and • build on the strengths of the school and other conducive factors to promote STEAM education and share good teaching practices with other teachers through various channels, such as showcasing the fruits of STEAM education, and discussing how integrated and cross-disciplinary learning experiences can be offered to students through collaboration.

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