

**Winning Projects for Minister's Innovation Award for Year 2024**

S/N	Project	Division/School/ Statutory Board
1.	<p><b>Science Pack - Activity Resource Kits for Learning (SPARKLE)</b></p> <p>The Curriculum Planning and Development Division, Academy of Singapore Teachers, National Institute of Education, and Science Centre have jointly developed an integrated suite of teaching and learning resources in line with the 2023 Primary Science Syllabus. These comprise textbooks, activity books, teaching and learning guides, Science Pack Activity Resource Kits for Learning (SPARKLE) and Student Learning Space (SLS) materials. These resources aim to ignite students' passion in Science through purposeful hands-on learning experiences to 'inspire, inquire and innovate'.</p>	Curriculum Planning & Development Division 1
2.	<p><b>All Ears &amp; FlexiList</b></p> <p>To address the limitations of hardcopy feedback forms, the Digital Excellence &amp; Products Division developed All Ears, a digital platform which features a flexible form builder that incorporates the schools' class lists. The platform was subsequently enhanced with FlexiList to address the limitations of fixed class lists and teaching groups in the School Cockpit and allow custom student lists to be created through SCMobile.</p>	Digital Excellence & Products Division
3.	<p><b>Simpler</b></p> <p>Simpler is a Chrome extension which transforms complex web content into text that better aligns with students' reading levels. By rewriting difficult words and sentences, this tool allows students to engage with literacy content at their preferred reading level, encouraging self-directed learning and fostering motivation to read.</p>	Digital Excellence & Products Division and Special Educational Needs Division
4.	<p><b>Education and Career Guidance (ECG) Exploration Space at WorldSkills ASEAN (WSA) 2023</b></p> <p>The Exploration Space at WSA2023 was designed to enhance students' introspective experience by guiding them to connect with their inner sense of purpose and V.I.P.S. (values, interests, personality, skills). Interactive activities within the Exploration Space revolved around</p>	Student Development Curriculum Division 1

	the theme of Quest, highlighting ECG as a developmental journey of self-discovery, purposeful exploration, and staying relevant in an ever-evolving industry landscape.	
5.	<b>OnePlacement Primary One Registration Portal</b>  OnePlacement is a digital platform that streamlines the registration and posting process during the annual Primary One registration exercise. It has significantly reduced the administrative workload across all primary schools and offers parents a seamless and convenient experience.	Student Placement & Services Division
6.	<b>Bringing the Periodic Table Alive with Augmented Reality (AR)</b>  The team at NUS High School of Mathematics and Science started their innovation journey by tapping on an AR tool, Zappar, to help students better understand Physics concepts. Building on this, the team developed a teaching tool that transformed the Periodic Table into an interactive experience that students can access at their convenience.	NUS High School of Mathematics and Science
7.	<b>Holistic Student Development Dashboard</b>  The team at Pei Hwa Secondary School developed a Holistic Student Development Dashboard to consolidate feedback from teachers across various subjects, information on the students' academic and non-academic development, and potential educational pathways they could pursue.	Pei Hwa Secondary School
8.	<b>Automating Excel Reports with Python</b>  The team at Wellington Primary School developed an automated financial reporting system that consolidates data from multiple platforms, including Integrated Financial Administration and Accounting System 2 (iFAAS2), Integrated Billing, Edusave and Collection System (iBENS), and School Cockpit, using Python programming skills that they picked up in their own free time. The user-friendly system can generate customised financial reports, and track budget utilisation and fee arrears.	Wellington Primary School
9.	<b>Artificial Intelligence-Enabled Marking for Computer-Aided Design Drawings</b>	Institute of Technical

	<p>The Artificial Intelligence-Enabled Marking for Computer-Aided Drawings (AMCAD) is the first automated online system on the market capable of accurately grading CAD exercises. The platform enables students to receive instant feedback on their drawing exercises and correct mistakes in real-time.</p>	Education (Central)
10.	<p><b>Autonomous Concrete Finishing Robot for Built Environment &amp; Construction Industry</b></p> <p>Developed in collaboration with Kajima and JRC, the Concrete Finishing Robot (CFR) was designed to take on a crucial concrete finishing job traditionally performed by skilled workers. The autonomous robot features a unique data-centric expert control intelligence incorporating years of accumulated knowledge and experience in the field.</p>	Nanyang Polytechnic
11.	<p><b>GO-IBA: Green Manufactured Aggregates</b></p> <p>Republic Polytechnic developed a cost-effective and scalable encapsulation technology that transforms municipal solid waste (MSW) incineration bottom ash (IBA) into Ground Granulated Blast Furnace Slag-Ordinary Portland Cement-coated (GO-IBA) aggregates which can be safely used in concrete materials. This innovation could reduce the dependence on natural aggregates and prolong Semakau Landfill's lifespan.</p>	Republic Polytechnic