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alliance

**EDUCATIONAL
TECHNOLOGY AND
INNOVATION READINESS
(ETIR) BENCHMARKING
FOR SCHOOLS**

APRIL 2021

1. INTRODUCTION

One of the first things we do with our new members is create a comprehensive picture of their current educational technology ecosystem. This documents in detail what they have, how they are using it, how they feel about it and what they would like to improve. To assemble this picture we conduct three parallel activities during the review - Discovery, Baselining and Benchmarking.

The activities are described below and this guide provides details on our Educational Technology and Innovation Readiness (ETIR) benchmarking that we perform at every review. If you find it interesting and would like to conduct the survey at your school, then please contact us for the questions.

Discovery

Conducting in depth interviews with key stakeholders to understand what's working, what's not and what they would like to be able to achieve with the school's educational technology. Stakeholders are selected from the whole school community, including pupils and parents.



Baselining

Compiling an inventory of every single technology component in use, or under review. The list includes every system's status, costs, issues, integration points and related projects.



Benchmarking

Analysing how the school is performing in terms of its educational technology use, as well as how it compares with other schools and industries. To obtain a complete view, we approach benchmarking from two angles – people and operational.

People: Our Educational Technology and Innovation Readiness (ETIR) surveys are designed to measure the current capability of students, teachers and school leaders to use educational technology to support modern pedagogy practices and promote innovation.

Operational: We believe that schools should be constantly striving to make the best use of information technology and benefit from the experience of other business sectors. Our Cross Industry Best Practice (CIBP) benchmarking is designed to assess how well schools are doing against global best practice in terms of strategy, people, process, application ecosystem, technology infrastructure, data, and project management.



2. EDUCATION TECHNOLOGY AND INNOVATION READINESS (ETIR) BENCHMARKING

Benchmarking is a useful tool to help schools evaluate their current position and opportunities for improvement. Benchmarking surveys provide schools with essential data to allow the design of effective strategies that positively impact learning, teaching and working in the organisation.

The aim of the ETIR benchmark is to assess how well schools are embracing educational technology and their readiness for innovation.

The EduTec Alliance has developed specific ETIR surveys for each school community; students, teachers and school leaders. The questionnaires are designed to be delivered electronically (via Microsoft Forms) and the responses can be easily analysed using a spreadsheet. For EduTec Alliance member schools, the results are also mapped onto the International Society for Technology in Education (ISTE) standards to provide an alternative perspective.

2.1. METHODOLOGY

The surveys consist of 'real world' questions that relate to the day to day lives of the school's community members. Questions are grouped into topic-based sections and answers are all multiple choice on a scale from 'strongly agree' to 'strongly disagree'. The results can be analysed at the individual, group or school level.

For the student community, there are two age-appropriate versions of the survey to suit Junior School and Senior School pupils. Schools may choose to survey the whole student body or just a sample. Surveying the student community is recommended, as comparison of the results with those of the other communities often reveals useful insights.



Education Leaders

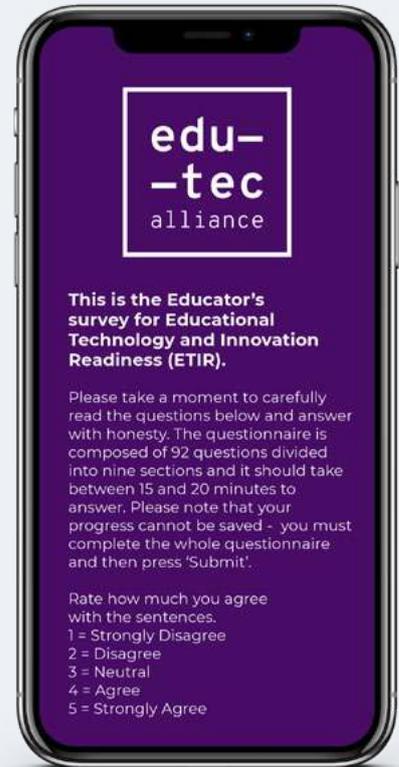
1. Digital Learning Access
2. Staff Readiness for Innovation in Pedagogy
3. Promotion of Digital Citizenship
4. Educational Technology Ecosystem Robustness
5. Organisational Design for Innovation
6. Educational Technology Vision and Strategy
7. Your Ability to Learn and Embed Change
8. Your Ability to Collaborate and Promote Collaboration
9. Ability to Lead Innovation

Educators

1. Ability to Learn, Collaborate and Innovate
2. Promoting Active Learning with Technology
3. Instructional Design Skills
4. Promoting Digital Literacy
5. Modelling and Promoting Media Literacy
6. Modelling and Promoting Digital Citizenship
7. Modelling and Promoting E-safety
8. Data Management Skills

Students

1. Your Ownership of Your Learning Process
2. Your Use of Technology in Class
3. How You are Mentored in Media
4. Literacy and Digital Citizenship



2.2. TAKING THE SURVEY

The number of questions in each community's survey differs depending on the number of measures to be assessed and the detail of information required. Usually, students need 15 minutes to answer all questions, whilst teachers and school leaders normally take around 30 to 40 minutes. We strongly recommend that you set aside the appropriate time for the survey to be performed by each community. It is essential that all participants have enough time to read and reflect upon each question before answering.



TIP

A staff meeting is a good opportunity for teachers to respond to the Educator's survey. Remember to provide an overview of the objectives of the exercise, explaining that the results are useful for self-awareness and for the school to prepare personalised professional development.

2.3. ANALYSING THE RESULTS

Microsoft Forms returns the raw scores in spreadsheet form and these can be aggregated to evaluate the topic-based sections. You can compare individuals, departments and year groups, allowing you to understand where the strengths lie, as well as identifying the weaknesses that need addressing.

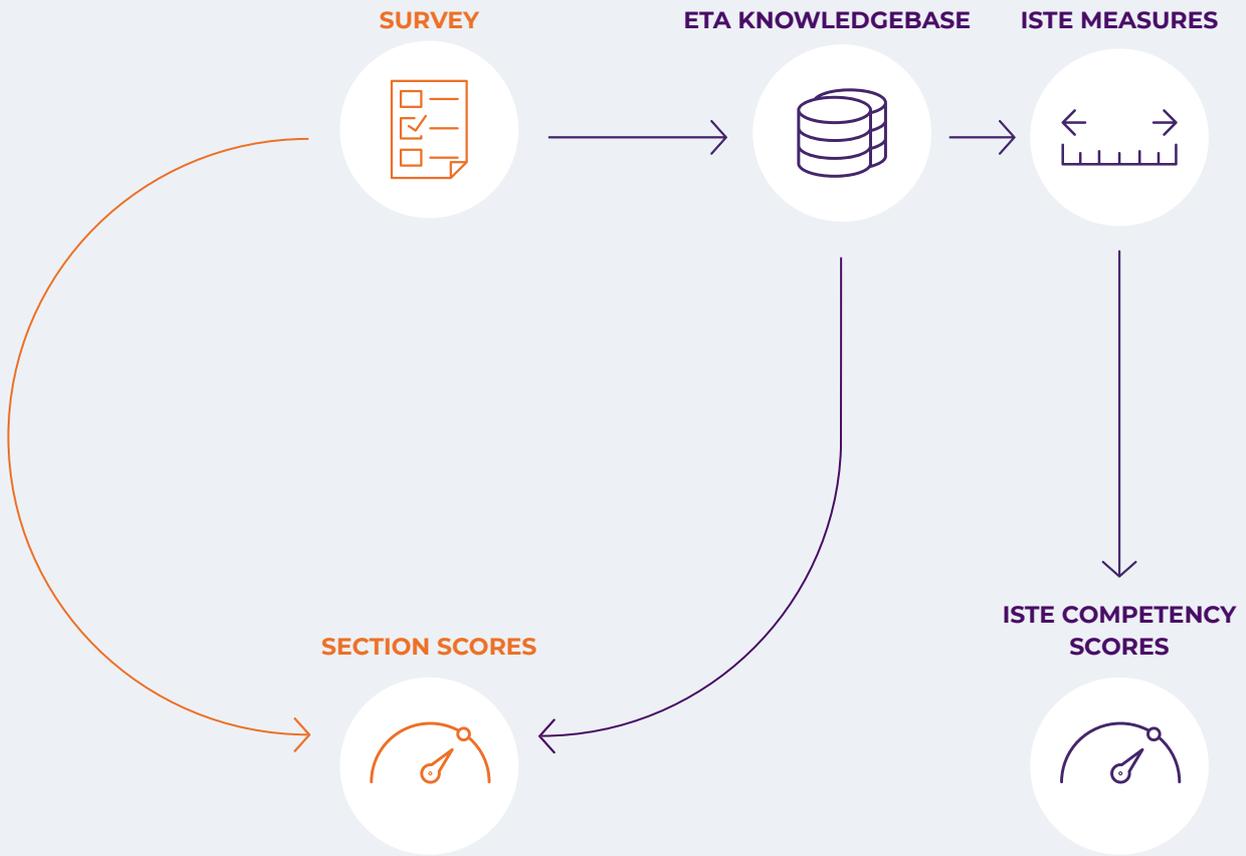
Because all questions are scaled from 1 (strongly disagree) to 5 (strongly agree), the 'Radar Chart' format allows you to visualise patterns within a group of respondents. We've found that averaging the responses in each section to provide a 'topic score' is useful for identifying patterns amongst communities. The 'Frequency Chart' easily allows you to visualise the distribution of scores in a data set – useful for identifying anomalies in respondents' answering patterns.

Your analysis will indicate the strengths of individuals and groups, as well as areas for development, which should be used to personalise staff training where possible. We recommend that surveys are conducted annually to allow you to track progress over time.



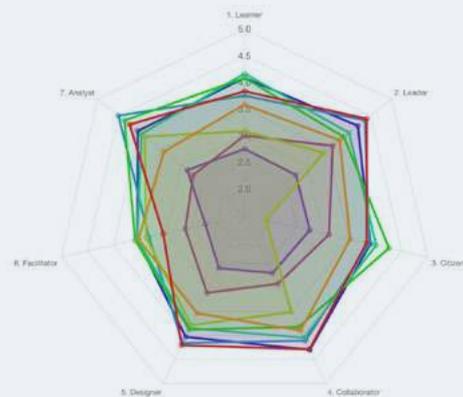
TIP

We have noticed that schools commencing their educational technology journey usually score high on the first survey, a phenomenon that normally occurs due to an overconfidence bias. As staff and students are exposed to new information and ideas concerning educational technology, they start to understand the learning curve to be climbed. In the second-year scores tend to dip, but then gradually improve as the effects of professional development take root.

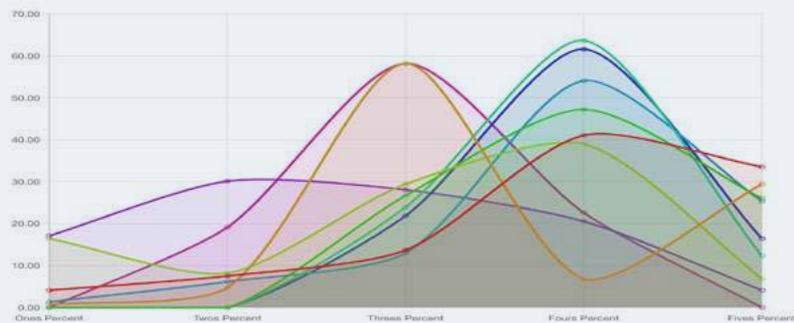


Section Score Radar Chart

ISTE Competency Score Radar Chart



Score Distribution Frequency Chart



3. THE SURVEYS

The ETIR surveys are comprised of real-world questions which students, educators and school leaders can identify with and honestly respond to.

The survey sections for each community are presented below along with a sample of the questions.

If you would like to benchmark yourselves please contact us directly to receive the full surveys in MS Forms format. We can be reached at hello@edutecalliance.com, or you can use the contact page on our website.

3.1. EDUCATION LEADERS

SECTION NUMBER	SECTION TITLE	NUMBER OF QUESTIONS
1.	Digital Learning Access	8
2.	Staff Readiness for Innovation in Pedagogy	11
3.	Promotion of Digital Citizenship	11
4.	Educational Technology Ecosystem Robustness	13
5.	Organisational Design for Innovation	10
6.	Educational Technology Vision and Strategy 54. I have a clear vision for educational technology and digital age learning at our school. 55. Staff, pupils, parents, IT and school leaders share their view on educational technology with the school leadership. They are listened to and their opinion is valued. 56. My teachers and pupils are agents of change, so I put significant effort in making sure they are aligned with the school's vision for educational technology. 57. I constantly communicate the school's vision for educational technology and digital age learning to the school community. 58. The school has a technology strategy in place for how to achieve its vision. 59. All pupils, parents and staff are aware of the school's educational technology strategy. 60. The technology strategy has an implementation roadmap, with a series of approved projects, designated project managers and a clear methodology. 61. The school regularly benchmarks itself against educational technology and cross industry best practices to guide its strategy and measure progress towards goals. 62. We collect data from our systems at regular intervals to make informed changes in our technology strategy. 63. Our technology strategy is revisited annually for refinement and to check for impact and progress. 64. Our educational technology achievements are celebrated with the community.	11
7.	Your Ability to Learn and Embed Change	9
8.	Your Ability to Collaborate and Promote Collaboration	9
9.	Ability to Lead Innovation	10
	Total	92

3.2. EDUCATORS

SECTION NUMBER	SECTION TITLE	NUMBER OF QUESTIONS
1.	Ability to Learn, Collaborate and Innovate	29
2.	Promoting Active Learning with Technology	21
3.	Instructional Design Skills	29
4.	Promoting Digital Literacy	22
5.	Modelling and Promoting Media Literacy	14
6.	Modelling and Promoting Digital Citizenship	6
7.	Modelling and Promoting E-safety	10
8.	Data Management Skills	15
	132. For me, obtaining data on my students and their backgrounds is vital to understanding how each one learns.	
	133. I regularly use technology to gather student data effectively.	
	134. I use digital resources to gather student performance information (data analytics) so I can teach effectively.	
	135. I use the data I gather from students to set their learning targets with them.	
	136. I use data to drive my teaching.	
	137. Technology allows me to analyse students' data to identify strengths, needs, and learning preferences.	
	138. When my students use software that collects their performance data, I make sure use it to address their specific learning needs.	
	139. In my classroom, I use summative assessments to inform instruction and re-teach anything students may have missed before moving to the next unit.	
	140. I use the data I gather from students to communicate with their parents and other educators to seek alignment or support.	
	141. I have all my students' assessment data gathered in one place for analysis.	
	142. I do not access my students' information when I use public Wi-Fi networks.	
	143. I am cautious about keeping my students' information confidential when I access it in shared/public spaces.	
	144. I never share my students' academic information, work, or identifying details with people external to the school without the explicit consent of the student and their parents.	
	145. I understand the privacy policy of the apps and software I work with.	
	146. I never use apps or software that don't feature strong student data management and privacy functions.	
	Total	146

3.3. STUDENTS (SENIOR SCHOOL)

SECTION NUMBER	SECTION TITLE	NUMBER OF QUESTIONS
1.	Your Ownership of Your Learning Process	17
2.	Your Use of Technology in Class 18. I fully understand how a computer works in terms of inputs, storage, processing, and outputs. 19. In my lessons, I learn how automation works. 20. In my lessons we test automated solutions by developing a sequence of instructions in computer programs. 21. I use technology to create different products, such as posters, presentations, eBooks, blogs, etc. 22. In my lessons we communicate our ideas using different resources, such as word clouds, interactive charts, mind maps, flowcharts, infographics, interactive posters and graphs. 23. In my lessons, we explore simulators (like Minecraft) to create or recreate works and present our ideas. 24. When I explore a topic, I am advised to use a variety of tools (such as note taker, aggregation apps, annotation tools, etc) to draw my conclusions and prove my point. 25. In my lessons, we use collaborative digital tools to work on projects together. 26. In the projects we do at school, I use design thinking or other structured methods to explore topics, prototype ideas and create new things. 27. In my school, we can test our ideas in a maker space or on an online simulator. 28. I use apps or software that allows me to try different answers and get immediate feedback to learn from my mistakes. 29. In my school, we use technology to explore real world problems to find feasible solutions. 30. In my school I choose the design software I want to use (like 2D or 3D software and simulators) to bring my ideas to life. 31. When I work on projects at school, I use digital project management tools to define on timeline, scope and responsibilities and work efficiently on projects.	21
3.	How You are Mentored in Media Literacy and Digital Citizenship	17
	Total	146

4. MAPPING TO ISTE STANDARDS

An ISTE standard is composed of between five to seven ‘competencies’, and each competency is assessed using a handful of ‘measures’ (illustrated below). The standards are open source and can be found at www.iste.org

ISTE STANDARDS FOR EDUCATION LEADERS

1. EQUITY AND CITIZENSHIP ADVOCATE



Leaders use technology to increase equity, inclusion, and digital citizenship practices. Education leaders:

- 1a. Ensure all students have skilled teachers who actively use technology to meet student learning needs.
- 1b. Ensure all students have access to the technology and connectivity necessary to participate in authentic and engaging learning opportunities.
- 1c. Model digital citizenship by critically evaluating online resources, engaging in civil discourse online and using digital tools to contribute to positive social change.
- 1d. Cultivate responsible online behaviour, including the safe, ethical and legal use of technology.

2. VISIONARY PLANNER



Leaders engage others in establishing a vision, strategic plan and ongoing evaluation cycle for transforming learning with technology. Education leaders:

- 2a. Engage education stakeholders in developing and adopting a shared vision for using technology to improve student success, informed by the learning sciences.
- 2b. Build on the shared vision by collaboratively creating a strategic plan that articulates how technology will be used to enhance learning.
- 2c. Evaluate progress on the strategic plan, make course corrections, measure impact and scale effective approaches for using technology to transform learning.
- 2d. Communicate effectively with stakeholders to gather input on the plan, celebrate successes and engage in a continuous improvement cycle.
- 2e. Share lessons learned, best practices, challenges and the impact of learning with technology with other education leaders who want to learn from this work.

3. EMPOWERING LEADER



Leaders create a culture where teachers and learners are empowered to use technology in innovative ways to enrich teaching and learning. Education leaders:

- 3a. Empower educators to exercise professional agency, build teacher leadership skills and pursue personalized professional learning.
- 3b. Build the confidence and competency of educators to put the ISTE Standards for Students and Educators into practice.
- 3c. Inspire a culture of innovation and collaboration that allows the time and space to explore and experiment with digital tools.
- 3d. Support educators in using technology to advance learning that meets the diverse learning, cultural, and social-emotional needs of individual students.
- 3e. Develop learning assessments that provide a personalized, actionable view of student progress in real time.

4. SYSTEMS DESIGNER



Leaders build teams and systems to implement, sustain and continually improve the use of technology to support learning. Education leaders:

- 4a. Lead teams to collaboratively establish robust infrastructure and systems needed to implement the strategic plan.
- 4b. Ensure that resources for supporting the effective use of technology for learning are sufficient and scalable to meet future demand.
- 4c. Protect privacy and security by ensuring that students and staff observe effective privacy and data management policies.
- 4d. Establish partnerships that support the strategic vision, achieve learning priorities and improve operations.

5. CONNECTED LEARNER



Leaders model and promote continuous professional learning for themselves and others. Education leaders:

- 5a. Set goals to remain current on emerging technologies for learning, innovations in pedagogy and advancements in the learning sciences.
- 5b. Participate regularly in online professional learning networks to collaboratively learn with and mentor other professionals.
- 5c. Use technology to regularly engage in reflective practices that support personal and professional growth.
- 5d. Develop the skills needed to lead and navigate change, advance systems and promote a mindset of continuous improvement for how technology can improve learning.



ISTE STANDARDS FOR EDUCATORS

1. LEARNER



Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Educators:

- 1a. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.
- 1b. Pursue professional interests by creating and actively participating in local and global learning networks.
- 1c. Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.

2. LEADER



Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators:

- 2a. Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders.
- 2b. Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.
- 2c. Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.

3. CITIZEN



Educators inspire students to positively contribute to and responsibly participate in the digital world. Educators:

- 3a. Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behaviour online that build relationships and community.
- 3b. Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency.
- 3c. Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property.
- 3d. Model and promote management of personal data and digital identity and protect student data privacy.

4. COLLABORATOR



Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators:

- 4a. Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.
- 4b. Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.
- 4c. Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.
- 4d. Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.

5. DESIGNER



Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Educators:

- 5a. Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.
- 5b. Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.
- 5c. Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.

6. FACILITATOR



Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students. Educators:

- 6a. Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.
- 6b. Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.
- 6c. Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems.
- 6d. Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.

7. ANALYST



Educators understand and use data to drive their instruction and support students in achieving their learning goals. Educators:

- 7a. Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.
- 7b. Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.
- 7c. Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.



ISTE STANDARDS FOR STUDENTS

1. EMPOWERED LEARNER



Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

- 1a. Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.
- 1b. Students build networks and customize their learning environments in ways that support the learning process.
- 1c. Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
- 1d. Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

2. DIGITAL CITIZEN



Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

- 2a. Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.
- 2b. Students engage in positive, safe, legal and ethical behaviour when using technology, including social interactions online or when using networked devices.
- 2c. Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.
- 2d. Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

3. KNOWLEDGE CONSTRUCTOR



Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

- 3a. Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
- 3b. Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.
- 3c. Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.
- 3d. Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

5. INNOVATIVE DESIGNER



Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.

- 4a. Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.
- 4b. Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
- 4c. Students develop, test and refine prototypes as part of a cyclical design process.
- 4d. Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

6. COMPUTATIONAL THINKER



Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

- 5a. Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.
- 5b. Students collect data or identify relevant data sets, use digital tools to analyse them, and represent data in various ways to facilitate problem-solving and decision-making.
- 5c. Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.
- 5d. Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

- 6a. Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
- 6b. Students create original works or responsibly repurpose or remix digital resources into new creations.
- 6c. Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.
- 6d. Students publish or present content that customizes the message and medium for their intended audiences.

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

- 7a. Students use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.
- 7b. Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.
- 7c. Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.
- 7d. Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.

7. GLOBAL COLLABORATOR

