

International School of Kenya Technology Plan 2019-2022



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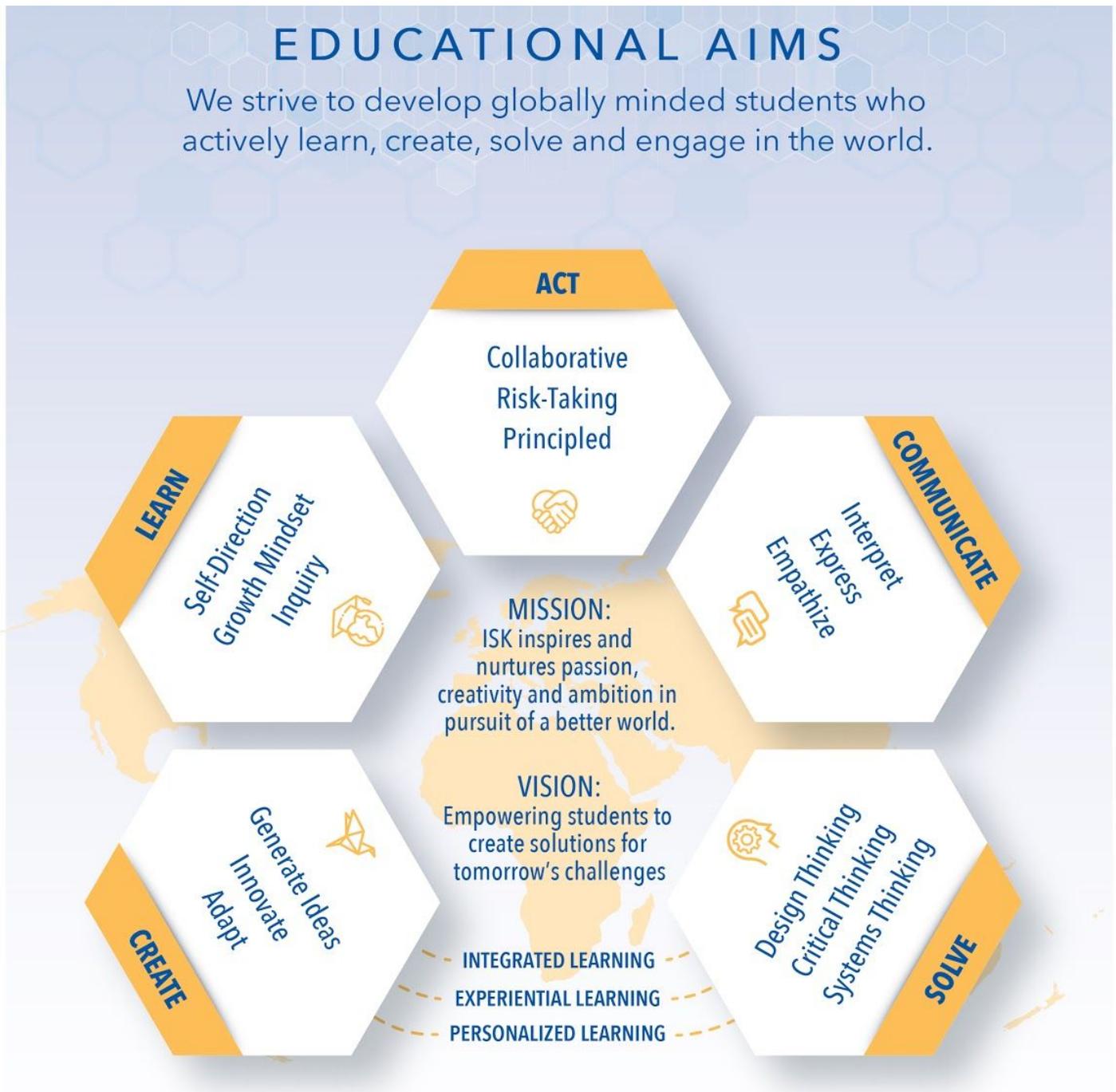
Vision, Mission, and AIMS

ISK Mission: ISK inspires and nurtures passion, creativity and ambition in pursuit of a better world.

ISK Vision: Empowering students to create solutions for tomorrow's challenges.

Technology Mission: To cultivate a culture of innovation amongst teachers, students and our community. ISK provides ICT resources, expertise, and learning opportunities needed to develop the robust ICT capability required for rich and vigorous participation as global citizens.

ISK AIMS



Each of the above Aims will be referenced throughout this document in abbreviated form:

- **L** - Learn
- **S** - Solve
- **A** - Act
- **CR** - Create
- **C** - Communicate

Information Communication Technology (ICT) Capability

Introduction

At ISK, students develop lifelong ICT capability as they learn to use ICT effectively and responsibly in their learning. Students use ICT to:

- competently access, communicate, remix, and create knowledge and concepts;
- investigate and solve relevant problems;
- work collaboratively in all learning areas at school and in their lives beyond school;
- explore and innovate using design and computational thinking;
- participate ethically and responsibly in a digital environment;
- understand ICT systems and contribute to new ways of doing things as technologies evolve.

Recognizing that technology is multidisciplinary by nature and has applications in any environment, ISK promotes lifelong success by integrating technology throughout the teaching and learning processes.

Standards for ICT Capability

ICT capability is based on the assumption that technologies and digital tools enable the student to create learning pathways to carry out tasks, solve problems, and generate new processes. Students perceive ICT systems as adaptive tools that they use and remix creatively to accomplish learning tasks, rather than systems that require following rigid, standard procedures.

ISK combines the strengths of International ICT Standards and the ISK AIMS to provide authentic contexts in which students build ICT capability. The five ICT Standards for ISK are stated in the language of a learner's ambitions and goals:

- **Creator and Innovator**
- **Investigator and Problem-Solver**
- **Communicator and Collaborator**
- **Computational Thinker**
- **Global Digital Citizen**

ICT Capability across the curriculum and within set Technology Curriculum

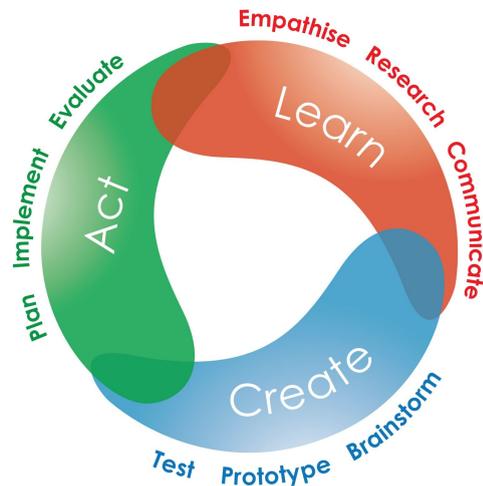
Learning areas across the curriculum provide the content and contexts within which students develop and apply the knowledge, skills, behaviors, and dispositions that comprise ICT capability. Students develop the ability to transfer these across environments and applications. They learn to use ICT with confidence, while understanding its possibilities, limitations, and impact on individuals and communities. They learn to innovate with ICT, creating new ideas and generating unique processes for the future.

HS STEM Courses and MS Elective Courses provide specialized instructional opportunities for students who desire exploration and mastery of more advanced technological proficiencies required for future careers.

ICT opportunities will be reviewed and revised regularly to ensure that there is alignment and consistency in opportunities for all students, and to respond to the demands for increased involvement with emerging technologies.

Information and Communication Technology Standards for Students

The ISK Design Cycle is the foundational process used to achieve ICT Standards.



Five interrelated standards that are linked to the ISK Educational Aims guide learning with ICT:

- Creator and Innovator **(CR) (A)**
- Investigator and Problem-Solver **(L) (S)**
- Communicator and Collaborator **(C) (S)**
- Computational Thinker **(L) (S)**
- Global Digital citizen **(L) (A)**

Creator and Innovator

Students use a variety of technologies within a design process to create and innovate. Students:

- CR-1: Generate original ideas, designs, processes and solutions;
- CR-2: Evaluate and use a variety of devices, software, and online tools;
- CR-3: Prototype and present alternative solutions;
- CR-4: Implement solutions innovatively across various disciplines.

Investigator and Problem-Solver

Students use technology to identify authentic problems, research responsibly, synthesize learning, and develop possible solutions. Students:

- PR-1: Empathize and communicate with various stakeholders
- PR-2: Plan and execute focused information/data searches for investigations;
- PR-3: Generate, organize, analyze and evaluate validity of research and data;
- PR-4: Explain and implement solutions in tasks and challenges.

Communicator and Collaborator

Students use digital tools to broaden their perspectives, increase empathy, and work effectively in teams. Students:

- CC-1: Select, plan, and participate in technology-facilitated communications;
- CC-2: Exchange ideas and solve problems in collaborative learning communities;
- CC-3: Learn, explain thinking, and/or teach through communications technologies;
- CC-4: Participate in collaborative online ventures that create and share group learning.

Computational Thinker

Students employ algorithmic thinking to propose and automate solutions to authentic problems and systems. Students:

- CT-1: Recognize patterns and break down complex problems into steps (decomposition);
- CT-2: Apply fundamental principles and concepts of computer science, including synthesis, abstraction, logic, algorithms, and data representation;
- CT-3: Analyze problems in computational terms, and have repeated experience of designing and writing computer programs to solve and automate them;
- CT-4: Use technology to create models and simulations to investigate and/or explain systems.

Global Digital Citizen

Students act in ways that are safe, legal, and ethical while learning and working in an interconnected digital world. Students:

- DC-1: Use systems, such as Copyright and Creative Commons, to acknowledge intellectual property rights for all media and to share own work;
- DC-2: Apply personal and digital information security protocols routinely;
- DC-3: Create and monitor a personal digital footprint responsibly;
- DC-4: Identify the impacts of current and emerging ICT in society.

Integration Planning Technology References

ACARA | The Australian Curriculum. Australian Curriculum, Assessment and Reporting Authority (ACARA)
<https://www.australiancurriculum.edu.au/f-10-curriculum/technologies/> The Australian Curriculum is licensed under Creative Commons
Gov. UK. Department of Education (2013). *National curriculum in England: design and technology programmes of study*:
<https://www.gov.uk/government/publications/national-curriculum-in-england-design-and-technology-programmes-of-study/national-curriculum-in-england-design-and-technology-programmes-of-study> (accessed 4 October 2013)

International Society for Technology in Education (2016). *National Educational Technology Standards (NETS) and Performance Indicators for Students*: <http://www.iste.org/standards/standards/for-students> (accessed 2016)

Link Landscape pages here.

- [Information & Communication Technology \(ICT\) Horizontal Learner Profiles by Grade Span](#)
- [Information & Communication Technology \(ICT\) Program Implementation Timeline Information](#)
- [Technology Plan Implementation Timeline](#)
- [Tech Plan Estimated Budget Summary](#)

ICT Horizontal Learner Profiles by Standards and Grade Spans

- These Grade Span Level Profiles are updated to reflect alignment with the 2016 ISTE Student Technology Standards Profiles, and will be linked to Digital Strategies being developed for the Foundation Module of the Learning Board (LB)
- Skills will also be suggested by grade level digital strategies to support ES teachers in designing age-appropriate learning activities.

Strand (Elements)	Capability by end of Grade 2 (LES)	Capability by end of Grade 5 (UES)	Capability by end of Grade 8 (MS)	Capability by end of Grade 12 (HS)
<p>Creator and Innovator</p> <p><i>Students use a variety of technologies within a design process to create and innovate.</i></p>	Set personal learning goals that stretch current creative talents and open pathways to develop others.	Set learning goals to create, reuse, and repurpose digital and non-digital artifacts to solve a problem, seeking and using feedback.	Articulate personal learning goals that include using a cyclic design process to investigate, design, prototype, test, reflect, and improve innovations.	Design personal learning goals that stretch current talents and open pathways and transfer ICT learning across disciplines for innovation.
<p><u>Students:</u></p> <p>CR-1: Generate original ideas, designs, processes and solutions;</p> <p>CR-2: Evaluate and use a variety of devices, software, and online tools;</p> <p>CR-3: Prototype and present alternative solutions;</p> <p>CR-4: Implement solutions innovatively across various disciplines</p>	Select digital and non-digital tools to learn by taking things apart, creating or remixing, tinkering, and using the design cycle.	Select digital and non-digital tools to learn by taking things apart, creating or remixing, tinkering, and innovating using the design cycle.	Create, reuse, revise and re-purpose digital and non-digital artifacts for a given audience, seeking and using feedback to improve work.	Design and create digital artifacts or processes for a given audience, with attention to successfully serving a client's purposes and needs.
	Prepare simple plans, design, and test prototypes of solutions or answers to questions. Use feedback to revise plans.	Learn how a design process works to generate ideas, consider solutions, plan to solve a problem or create innovative products.	Document the use of an iterative design cycle that begins with a thorough investigation of the users' needs to produce a prototype for testing.	Produce and publish creative works and projects using a range of devices to add value to the world or to achieve new solutions. Seek and use feedback.

<p>Investigator and Problem-Solver</p> <p><i>Students use technology to identify authentic problems, research responsibly, synthesize learning, and develop possible systems and solutions.,</i></p> <p><u>Students:</u></p> <p>PR-1: Empathize and communicate with various stakeholders</p> <p>PR-2: Plan and execute focused information/data searches for investigations;</p> <p>PR-3: Generate, organize, analyze and evaluate validity of research and data;</p> <p>PR-4: Explain and implement solutions in tasks and challenges</p>	<p>Locate and record information from a given set of digital sources. Discuss ways to determine truth, value and reliability of digital information.</p>	<p>Select digital tools to collect, organize and analyze data to evaluate theories or test hypotheses.</p>	<p>Evaluate, select, and utilize information/media sources and digital tools based on the appropriateness for specific tasks.</p>	<p>Demonstrate analytical problem-solving, design thinking, and computational thinking in relevant problem-solving activities.</p>
	<p>Choose tools that help with the research process to find, record and analyze data and graphics that help solve problems.</p>	<p>Choose tools for the research process to gather, classify and display information in meaningful ways.</p>	<p>Use the research process to collect and analyze information/data and evaluate resources for accuracy, perspective, credibility and relevance.</p>	<p>Use advanced search tools and techniques, simulations, and digital models to locate or generate precise data and information that supports the development of new understandings.</p>
	<p>Choose tools to represent, explain, and reflect on results of investigations.</p>	<p>Learn searching techniques and practice how to evaluate sources for accuracy, perspective, credibility and relevance.</p>	<p>Create and use databases and structures efficiently to organize, analyze, extract, and represent data to solve problems across disciplines.</p>	<p>Design, modify and manage complex digital solutions for a range of audiences and purposes.</p>
	<p>Practice strategies to persevere in solving problems</p>	<p>Demonstrate strategies to persevere in solving complex problems</p>	<p>Share strategies to persevere in solving increasingly complex problems.</p>	<p>Persevere in investigating, solving, and presenting solutions to complex authentic problems.</p>

<p>Communicator and Collaborator</p> <p><i>Students use digital tools to broaden their perspectives, increase empathy, and work effectively in teams.</i></p> <p><u>Students:</u></p> <p>CC-1: Select, plan, and participate in technology-facilitated communications;</p> <p>CC-2: Exchange ideas and solve problems in collaborative learning communities;</p> <p>CC-3: Learn, explain thinking, and/or teach through communications technologies;</p> <p>CC-4: Participate in collaborative online ventures that create and share group learning.</p>	<p>Choose ICT tools to safely share and exchange information and perspectives with age-appropriate audiences.</p>	<p>Choose digital tools to safely share, exchange information, and collaborate with other learners with different backgrounds.</p>	<p>Use electronic communication tools to explore and guide inquiry through multicultural perspectives with other learners.</p>	<p>Routinely interact, collaborate, and publish with peers and experts, employing a variety of digital environments and media formats.</p>
	<p>Collaborate with others to develop solutions and safely publish them in a variety of ways (visual, audio, written).</p>	<p>Build a network of experts and peers within school policy and customize digital environments to enhance learning.</p>	<p>Build and utilize a network of experts and peers from different communities (within school policy) and customize digital environments to enhance learning.</p>	<p>Participate in collaborative online ventures, individually and in teams, communicating effectively with multicultural audiences.</p>
	<p>Identify and try different team roles in collaborative work.</p>	<p>Organize teams so that members' roles are defined. Try different team roles in collaborative work.</p>	<p>Participate in teams by assuming different roles and taking on different responsibilities that ensure team success. Reflect on participation.</p>	<p>Participate in teams that may include members collaborating online to gain expertise and perspectives in solving problems. Reflect on the process.</p>

<p>Learner and Computational Thinker</p> <p><i>Students employ algorithmic thinking to propose and automate solutions to authentic problems and systems.</i></p> <p>Students:</p> <p>CT-1: Recognize patterns and break down complex problems into steps (decomposition);</p> <p>CT-2: Apply fundamental principles and concepts of computer science, including synthesis, abstraction, logic, algorithms, and data representation;</p> <p>CT-3: Analyze problems in computational terms, and have repeated experience of designing and writing computer programs to solve and automate them;</p> <p>CT-4: Use technology to create models and simulations to investigate and/or explain systems.</p>	<p>Break down problems into smaller steps and record them.</p>	<p>Break down complex problems into steps to create and modify directions for finding digital solutions more easily.</p>	<p>Practice defining and breaking down problems to solve through patterning, data analysis, modeling, and algorithmic thinking.</p>	<p>Design, use, and evaluate computational abstractions that model the state and behavior of real-world problems, and document client interactions.</p>
	<p>Use small steps to draw or write instructions on how a problem can be solved more easily using repeated patterns.</p>	<p>Explore concepts related to repeated patterns and algorithmic thinking through practical experience in writing and debugging computer programs that accomplish a task.</p>	<p>Use programming languages to design debug, and demonstrate possible solutions to a variety of problems or learning game experiences.</p>	<p>Use two or more programming languages, at least one of which is textual, to solve a variety of computational problems.</p>
	<p>Recognize patterns and understand basic coding concepts to create and debug simple programs.</p>	<p>Learn how to use computer programming to create models, tell stories, show how something works, or make learning games.</p>	<p>Transfer programming skills to use new languages and systems that can solve and automate solutions to problems.</p>	<p>Document innovative use of an design cycle, evaluating and explaining the strengths and weaknesses of alternative designs to meet a client's needs. Reflect on the importance of empathy and feedback.</p>

<p>Global Digital Citizen</p> <p><i>Students act in ways that are safe, legal, and ethical while learning and working in an interconnected digital world.</i></p> <p><u>Students:</u></p> <p>DC-1: Use systems, such as Copyright and Creative Commons, to acknowledge intellectual property rights for all media and to share own work;</p> <p>DC-2: Apply personal and digital information security protocols routinely;</p> <p>DC-3: Create and monitor a personal digital footprint responsibly;</p> <p>DC-4: Identify and evaluate the impacts of current and emerging ICT in society.</p>	<p>Understand the concept of digital ownership and how to respect the ideas and work of others</p>	<p>Practice digital security strategies for protecting digital information and for being safe, respectful and legal online.</p>	<p>Practice and advocate for a range of ways to use technology safely, respectfully, responsibly, and securely, including protecting personal online identity and privacy.</p>	<p>Independently apply and advocate for appropriate strategies to protect rights, identity, privacy and emotional safety of self and others online.</p>
	<p>Practice safe, respectful, and cooperative use of online tools and materials.</p>	<p>Recognize the importance of digital ownership and practice citing intellectual property in work.</p>	<p>Learn and apply practices that comply with legal obligations regarding ownership and use of digital products, resources, and services.</p>	<p>Demonstrate compliance with legal obligations regarding the ownership and use of digital products, resources, and services.</p>
	<p>Understand the concepts of public Internet, privacy, and digital footprints.</p>	<p>Learn to manage and safely move data as digital technology changes.</p>	<p>Experience current and emerging ICT systems, learning how to manage data and safely move it between systems.</p>	<p>Manage digital data and processes comfortably between desktop, mobile, cloud environments, and other emerging ICT systems.</p>
	<p>Recognize that technology can affect societies positively and negatively.</p>	<p>Discuss the impacts of current and emerging technology, including how digital waste affects societies.</p>	<p>Identify impacts of current and emerging technology on societies; discuss ways to create equitable access and manage digital waste.</p>	<p>Understand responsibilities in creating and utilizing emerging technologies, their effects on societies, and equitable access.</p>

ICT Program Implementation Timeline Information

	2019-2020	2020-2021	2021-2022
Program Development and Tech Integration	<ul style="list-style-type: none"> ● Technology Integration Team to work together on specific goals: <ul style="list-style-type: none"> ○ Simple form to determine technology learning needs of teachers at beginning of year; ○ Digital Strategies evaluation and further development; ○ Rubric for level of Technology Integration; ○ Evaluation/Rating of Tech Integration Exemplars; ○ Apps suggestion and approval process; ○ Plan Tech T2T sessions ● Work with divisional leaders to Implement the ISK K-12 Common Sense Digital Citizenship Program ● Technology Integrators assist teachers as they choose digital strategies to be included in Unit Planners ● Technology Coaches assist teachers in implementing digital strategies and document progress in planning with teacher teams. ● TIC: Rebuild Tech ToolKit and link to Intranet ● Continue to collect evidence of student learning and begin process of rating according to a rubric 	<ul style="list-style-type: none"> ● Set Goals for the Technology Integration Team at beginning of the year. ● Work with divisional leaders to evaluate implementation of the ISK K-12 Common Sense Digital Citizenship Program; ● Tech Integrators evaluate use of portfolios divisionally and report needs; ● Plan T2T and other professional opportunities for teachers and Tech. ● Use Analytics to get data about Digital Strategies entered into Unit Plans and tagged by students in portfolios. <ul style="list-style-type: none"> ○ Report out results ○ Create an action plan as needed; ● Audit of the K-12 tech integration program with emphasis on: <ul style="list-style-type: none"> ○ Digital Citizenship; ○ Levels of Technology Integration ○ Teacher perceived expertise with technology and with Technology Integration ○ 1:1 programs; ○ use and assessment of ISK Digital Strategies ○ Use of Exemplars ○ Shared devices programs; 	<ul style="list-style-type: none"> ● Set Goals for the Technology Integration Team at beginning of the year. ● Review the Information from the Audit and end of 2020-2021 and set goals; ● Review the use of MakerSpaces and Design/Fab Labs for effectiveness and future planning.

	<ul style="list-style-type: none"> • Tech Coaches plan and implement appropriate stages of student portfolios in LB • Review evidence of student learning to improve effective use of MakerSpace, Design/Fab Lab for Learning Paths. • Audit of the K-12 tech integration program with emphasis on: <ul style="list-style-type: none"> ○ Digital Citizenship; ○ Computational Thinking and coding; ○ Use of Design Cycle; ○ Innovative learning in Design Labs and MakerSpaces; 	<ul style="list-style-type: none"> • Set goals based on results of Audit. • Tech Integrator evaluate use of portfolios divisionally and report needs; 	
Assessment / Tracking System	<ul style="list-style-type: none"> • Learning Board implementation: all teachers enter units in Foundations Module, and test Feedback and Reporting modules. • Expand use of the portfolio module as capability increases • Share successful ICT assessment strategies in toolkit and Padlet. 	<ul style="list-style-type: none"> • Full Learning Board implementation • Evaluate early stage effectiveness of LearningBoard; 	
Materials / Resources Needed	<ul style="list-style-type: none"> • Committee of interested people for Tech Integration • Time for audit and other initiatives 	<ul style="list-style-type: none"> • Committee of interested people to perform and evaluate Audit • Time for audit and other initiatives 	
Co Curricular Options	<p>ES:</p> <ul style="list-style-type: none"> • ES First Lego League Junior • 4th- 5th grade robotics option • Previous year's offerings reviewed and new to be determined by ES. <p>MS:</p> <ul style="list-style-type: none"> • STEM 	<p>ES:</p> <ul style="list-style-type: none"> • ES First Lego League Junior • 4th- 5th grade robotics option • Previous year's offerings reviewed and new to be determined by ES. <p>MS:</p> <ul style="list-style-type: none"> • STEM 	<p>ES:</p> <ul style="list-style-type: none"> • Previous year's offerings reviewed and new to be determined by ES. <p>MS:</p> <ul style="list-style-type: none"> • STEM • Robotics • Programming

	<ul style="list-style-type: none"> ● Robotics ● Programming ● MS Lego League ● 3D design and printing ● Independent STEM Projects <p>HS:</p> <ul style="list-style-type: none"> ● Robotics-Botball ● 3D design and printing ● Independent projects 	<ul style="list-style-type: none"> ● Robotics ● Programming ● MS Lego League/Botball ● 3D design and printing ● Independent STEM Projects <p>HS:</p> <ul style="list-style-type: none"> ● Robotics-Botball ● 3D design and printing ● Independent projects 	<ul style="list-style-type: none"> ● MS Lego League/Botball ● 3D design and printing <p>HS:</p> <ul style="list-style-type: none"> ● Robotics-Botball ● 3D design and printing ● Independent projects
Materials / Resources Needed for Co-curricular	<ul style="list-style-type: none"> ● Funding for supplies to develop rich tech co-curricular experiences. 	<ul style="list-style-type: none"> ● Funding for supplies to develop rich tech co-curricular experiences. 	<ul style="list-style-type: none"> ● Funding for supplies to develop rich tech co-curricular experiences.
Integration Training / Professional Learning (PL)	<ul style="list-style-type: none"> ● Training on using Google Classroom and PreK-2 Solution instead of Moodle. ● Training on LearningBoard for all modules that we are going to use; ● Training to implement the LB portfolio module ● Sharing and development of students' and teachers' PLNs to include appropriate global connections; ● Include all tech coaches in training of WeVideo, SoundTrap, Easel.ly, Explain Everything, Book Creator ● Examine inclusion and use of the ICT Digital Strategies in curricula and transdisciplinary units. 	<ul style="list-style-type: none"> ● Training on LearningBoard so that it is fully functional. ● Sharing and development of students' and teachers' PLNs to include appropriate global connections; ● Evaluate the inclusion and use of the ICT Digital Strategies in curricula and transdisciplinary units. 	
Materials/ Resources Needed	<ul style="list-style-type: none"> ● Scheduled time for training with LearningBoard ● Time during divisional meetings to share digital strategies 	<ul style="list-style-type: none"> ● Scheduled time for training with LearningBoard ● Time during divisional meetings to share 	

Technology Plan Implementation Timeline

	2019-2020	2020-2021	2021-2022
School-wide Equipment and Infrastructure	<ul style="list-style-type: none"> Improve WIFI coverage and bandwidth to the remaining areas Upgrade node switches Evaluate and weed / upgrade servers as needed Continue Classroom/MPR minimum tech equipment (mounting projectors/speakers) Equipment is added in Design lab to support integration of the Design Model Scheduled Equipment Replacement 	<ul style="list-style-type: none"> Evaluate and weed / upgrade servers as needed Evaluate wired and wireless networking for updates required Continue Classroom/MPR minimum tech equipment (mounting projectors/speakers) Scheduled Equipment Replacement 	<ul style="list-style-type: none"> upgrade wired / wireless network as required Continue Classroom/MPR minimum tech equipment (mounting projectors/speakers) Scheduled Equipment Replacement
School-wide Technology support	<ul style="list-style-type: none"> No Change in ISK contracted employees 	<ul style="list-style-type: none"> No Change in ISK contracted employees 	<ul style="list-style-type: none"> No Change in ISK contracted employees
School-wide Instructional Staffing	<ul style="list-style-type: none"> Assistant for HS Design labs to improve safety in the area. 	<ul style="list-style-type: none"> HS Tech Integrationist 	<ul style="list-style-type: none"> No Change
School-wide technology software and resources	<ul style="list-style-type: none"> Whole school software licensing / annual subscription renewals Classroom / Department Resources (software, online resources, & texts) as per Classroom / Departmental Budgets iPad / Chromebook Apps support for whole school Resources to support Design Lab learning 	<ul style="list-style-type: none"> Whole school software licensing / annual subscription renewals Classroom / Department Resources (software, online resources, & texts) as per Classroom / Departmental Budgets iPad / Chromebook Apps support for whole school Resources to support Design Lab learning 	<ul style="list-style-type: none"> Whole school software licensing / annual subscription renewals Classroom / Department Resources (software, online resources, & texts) as per Classroom / Departmental Budgets iPad / Chromebook Apps support for whole school Resources to support Design Lab learning

<p>Design Lab Initiatives</p>	<ul style="list-style-type: none"> ● Design Labs Phase 4: Evaluation of how Design Lab is being used for learning. ● Convert ES Computer Lab to ES Makerspace <ul style="list-style-type: none"> ○ Purchase equipment ○ Rearrange lab space ○ Move existing desktops to ES common areas 		
<p>Library</p>			
<p>Training / Professional Learning</p>	<ul style="list-style-type: none"> ● Continue support channels from previous years ● Consider new ways of supporting teachers and students. 	<ul style="list-style-type: none"> ● Continue support channels from previous years ● Consider new ways of supporting teachers and students. 	<ul style="list-style-type: none"> ● Continue support channels from previous years ● Consider new ways of supporting teachers and students.

Tech Plan Estimated Budget Summary

	2019-2020	2020-2021	2021-2022
Human Resources	<p>Instructional Staff:</p> <ul style="list-style-type: none"> Director of Technology Educational Technology Coordinator - assisting with HS Integration ES ICT Teacher/ Specialist with TA MS ICT Teacher / Integration Specialist HS ICT Teacher HS Part-time IT Teacher Design / Fab Lab Technician / TA Makerspace TA <p>Support Staff:</p> <ul style="list-style-type: none"> Network Systems Manager 2 Technicians Level 1- (Systems, ISK Database Management and Servers) 3 Technicians Level 2 – Support, Ipad Management) 2 AV Technicians – Events, Peripherals, Multimedia 	<p>Instructional Staff:</p> <ul style="list-style-type: none"> Director of Technology Educational Technology Coordinator - assisting with HS Integration ES ICT Teacher/ Specialist with TA MS ICT Teacher / Integration Specialist HS ICT Teacher HS Part-time IT Teacher Design / Fab Lab Technician / TA Makerspace TA <p>Support Staff:</p> <ul style="list-style-type: none"> Network Systems Manager 2 Technicians Level 1- (Systems, ISK Database Management and Servers) 3 Technicians Level 2 – Support, Ipad Management) 2 AV Technicians – Events, Peripherals, Multimedia 	<p>Instructional Staff:</p> <ul style="list-style-type: none"> Director of Technology Educational Technology Coordinator - assisting with HS Integration ES ICT Teacher/ Specialist with TA MS ICT Teacher / Integration Specialist HS ICT Teacher HS Part-time IT Teacher Design / Fab Lab Technician / TA Makerspace TA <p>Support Staff:</p> <ul style="list-style-type: none"> Network Systems Manager 2 Technicians Level 1- (Systems, ISK Database Management and Servers) 3 Technicians Level 2 – Support, Ipad Management) 2 AV Technicians – Events, Peripherals, Multimedia
Costs			
Operational Summary	<ul style="list-style-type: none"> Communications (Internet) Licenses and Software Spares/ Tools Consumables Freight Maintenance / Maint. contracts 	<ul style="list-style-type: none"> Communications (Internet) Licenses and Software Renewal of 3 year Internet Filter license (\$62,640) Spares/ Tools Consumables Freight Maintenance Maintenance contracts 	<ul style="list-style-type: none"> Communications (Internet) Licenses and Software Spares/ Tools Consumables Freight Maintenance Maintenance contracts

Costs	\$373,848	\$437,000	\$385,000
Capital	<ul style="list-style-type: none"> • Computer equipment • Network upgrades • Completion of Wireless upgrade • Server upgrades • Classroom technology 	<ul style="list-style-type: none"> • Computer equipment • Server upgrades • Classroom technology 	<ul style="list-style-type: none"> • Computer equipment • Network upgrades • Server upgrades • Classroom technology
Costs	\$247,875	\$300,000	\$300,000
Budget Totals			

ISK One to One Program

Vision

A 1-to-1 program is an essential element for success of our technology visions of how students learn in the 21st century. The opportunities for our students to increase access to information, collaborate through social interaction, and create and share digital content exponentially increase in a 1-to-1 environment.

The High School Device

The ISK technology team recommends the adoption of the MacBook Pro or Macbook Air as the recommended model for our HS 1-to-1 program. Basis for this decision is as follows:

Rationale:

- ISK predominantly uses “Mac” throughout the school
- Technology support is already trained in supporting Macs
- Teachers all are issued MacBooks and are familiar with the operating system and applications
- A uniform device will facilitate ease in planning lessons and supporting students during classes

Requirements and procedures for student laptop:

- A minimal required package of software will be required.
- Families will purchase devices, giving the students an added incentive to be responsible and accountable for their laptop.
- Provisions will be put in place for students transferring in during the school year, such that we will have some loaners available or a student may use a PC computer while a Mac is sourced.
- During school hours and whenever connected to the ISK network students will be required to adhere to the all ISK related student policies and the ISK Responsible Use Agreement.

Required Software:

- Standard [package that comes with MacBooks](#)
- Adobe reader
- Safari, Firefox and Chrome Browsers
- Java
- Adobe Flash
- Additional software may be required for specific courses

The MS & ES Device

Rationale

The ISK Technology Integration Specialists have recommended iPads as a 1-to-1 device, since iPads are an ideal tool for our younger students to be creative. iPads are easy for students to manage, they have a built in camera for video and still pictures, microphone, and tools that allow for rapid remixing. iPads also allow the user to freehand draw, print / write directly into applications. They are compact durable and have long battery life. iPad apps also offer a wide variety of educational software suitable to MS and ES levels.

After evaluation of the Grade 7 and 8 program by teachers and students, it was decided to provide a 1:1 Chromebook program for Grade 7 and 8 students. The main reasons for this change are:

- The Grade 8 Capstone Project requires more access to a keyboard;
- Some of the G Suite applications work better on a Chromebook than on an iPad;
- Many of the apps available on the iPad are becoming available on the Chromebook;

Device Ownership

ISK provides ES and MS students access to iPads or Chromebooks and a suite of educational apps.

Software (Apps)

A complete list of current Apps can found in the software section of this document.

Library Planning Summary

Definition of the Library Spaces:

For the purpose of this document, the Library is considered those spaces which the librarians are currently responsible for supervising and maintaining: the main space, the Group Study rooms, the Library Lab, the ES Library and Picture Book Room, the Library Office and Workroom.

Current Hardware Status (also included in full hardware summary):

- Library software: Follet Destiny
- Desktop Computers: iMacs
 - 2 Circulation desk computers
 - 16 ES student computers in the ES teaching area:
 - 8 MS Student Computers in the Lobby:
 - 11 HS Student Computers in the Lobby:
 - 17 Library Lab computers:
- Laptops:
 - 20 Laptops (in cart) MacBook Pro
 - 3 Laptops for Alexandria access
 - 2 Librarians MacBook Pro
 - 84 Kindles
- Printers (3)
 - ES Printer at ES Circulation desk [HP LaserJet P2015dn]
 - LibraryKyocera at Main Circulation Desk [FS-6525MFP-Kyocera]
 - LibraryColor - Kyocera TASKalfa 3050ci KPD L in Library Lab
- 4 Projectors (ES, Reference, Study Room 1 and Library Lab)

Technology Use Forms and Agreements

All forms and agreements for staff and students are available online at the ISK Website. Links to these agreements are provided below.

Staff Agreements and Forms

[Responsible Use Agreement](#)

[Admin Rights to Assigned Computer](#)

[ISK Code of Ethics](#)

[Social Media Guideline](#)

[Equipment Checkout](#)

[Summer use of Laptop](#)

[Wireless Access for Personal Devices](#)

Student Agreements and Forms

[Student and Parent iPad Agreement](#)

[Responsible Use Agreement](#)

[Wireless Access For Personal Devices](#)

IT Staff Agreements and Forms

[System Administrator Acceptable Use](#)

[Technicians Acceptable Use](#)

[Confidentiality Protocol](#)

Planned Classroom Standard Tech Equipment

Classrooms Standard

- **LCD projector** – ceiling mounted, power required in ceiling. Each projector must have ports for HDMI, VGA, S-video/Component Video, and PS2. VGA cord is required from ceiling mounted location to computer position.
- **Projection Screen**
- **Document Camera**
- **Speakers** - mix of desktop speakers and portable bluetooth speakers appropriate for the classroom environment
- **Computer or Laptop**
- **Wireless Access** (Campus Wide)
- Convenient Access to a **Printer** – one network printer within each pod/block of classrooms
- Ability to Control and Annotate Projected Desktop (This may be done through Smartboard, Apple TV, AirServer software, iPad app or other emerging technologies)
- Multiple Connection Points (in classrooms)

Current Software

School-Wide		
Adobe CCE for K-12	iBooks	Notes
Audacity	iDVD	Numbers
Automator	Image Capture	Pages
Burn	iMovie	Photo Booth
Chess	iPhoto	QuickTime Player
GarageBand	Keynote	Safari
Google Chrome	Maps	TextEdit
Google Drive	Microsoft Office 2016	VLC
ICT Labs Software Installed		
<u>ES Lab</u>	<u>MS Lab / Library Cart</u>	<u>HS Lab / Library Lab / Design Lab</u>
Algodoo	Algodoo	123D Design
Animation-ish Classroom Edition	Animation-ish Classroom Edition	Algodoo
Anime Studio Debut	Anime Studio Debut (10 licenses)	Animation-ish Classroom Edition
Aperture	Aperture	Anime Studio Debut
AppInventor	AppInventor	Aperture
AudioScore Lite	AudioScore Lite	AppInventor
Autodesk	Autodesk	Arduino
Blender	BryteWaveK12	AudioScore Lite
BryteWaveK12	ChemAxon	Autodesk
Comic Life	Comic Life 2	Blender
Comic Life 2	Dropbox	BlenderPlayer
Dropbox	EV3 Curriculum	BryteWaveK12
Enlight	EV3 Education (Updated)	ChemAxon
Evernote	Evernote	Comic Life
FaceTime	FaceTime	Comic Life 2
FileMaker Pro 14	FileMaker Pro 14	Dropbox
Firefox	Firefox	Enlight
Flv Crunch	Flip Player	EV3 Curriculum
Follet Shelf App	Flip4Mac	EV3 Education (Updated)
Font Book	Flv Crunch	Evernote
GCompris	Follet Shelf App	FaceTime
Gimp	Font Book	FileMaker Pro 14
Google Earth	GCompris	Final Cut Pro
Google SketchUp 8	Gimp	Firefox
GSP5	Google Earth	Flip Player
HandBrake	Google SketchUp 8	Flv Crunch
iBooks Author	GSP5	Follet Shelf App
Inspiration 9 IE	HandBrake	Flip4Mac
Internet Everywhere	iBooks Author	Font Book
Internet Everywhere 3G+	Inspiration 9 IE	GameSalad
Kid Pix Deluxe 3D	Introduction to Programming EV3	GCompris
Kidspiration 3 IE	Internet Everywhere	Gimp
Kindle	Internet Everywhere 3G+	

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Subscriptions/Licensing

Tech Office Netgear WC License (150 AP) Ruckus SmartZone (80 AP) Mojo Helpdesk Paragon NTFS for Mac OS X PaperCut Web Hosting Service - Finalsite PowerSchool	School-Wide Turnitin Moodle HS Naviance	SSS (managed through SSS Department) BrainPop ESL Headsprouts Spelling City RazKids Reading A to Z
Library Follet Destiny NoodleTools BrainPop	MS IXL Hapara TeacherDashboard	

Selection of Educational iPad Apps

Current Hardware Summary

Equipment Summary

All Classrooms

Projector, Document Camera, Speakers, Computer or Laptop

Commons Level 0

- 2 Computer Labs with Projectors
- 1 MS MakerSpace with Projector
- 1 Robotics Lab with Projector
- 35 Computers in General Area
- 3 OPAC Stations (MacBooks)
- 3 Projectors in Common Area
- 1 Projector in Study Room
- Laptop Cart (20 units)
- Kindles - Inventory by Library (84)

iPads

- ES, ES-SSS and ES Teachers (355 total)
- HS - 5
- MS, including distributed units to students and carts - (285 total for 2017-18)
- Check Out - 2
- Storage / replacement 25 units

Laptop Carts

- 3 ES Chromebook Carts for - 335 units
- 4 MS Chromebook Carts for - 228 units
- Library Cart - 20 Units

Laptops / Chromebooks

- Student Use – 83 MacBooks,
 - 38 - loaner cart(Macbooks >5 years old)
 - 20 - library cart
 - 25 - exam cart
 - 5 -opac
 - Under repair -16
 - Not assigned 12
- Student Use – 317 Chromebooks,
- Staff Assigned - 172 Macbooks,

Desktop iMacs

- Student Use, in labs and common areas 188
- Staff Assigned 118
- Other loaners / spares - 13

Mac Minis

- Support Staff - 2

Servers

- MAC Servers(X server) - 4
- MAC Minis (as servers) - 11
- Windows based servers - 2

Printer and Copiers

- Networked Printers - 55 (B/W - 50, Color - 5)
- Networked Copier/Printer (Leased) - 14 (B/W - 12, Color - 2)
- Small Office Printers - 9 (B/W - 9, Color - 0)

Digital Cameras Recorders

- Digital Cameras - 37
- Video Cameras - 9
- Audio Recorders - 6
- Document Cameras - 74
- LCD Projectors - 148