Mariemont Technology Implementation Philosophy

At Mariemont city schools we believe in…

- *Focusing on active use of technologies, not passive.*

- *Aligning our teaching and learning with our characteristics of Highly Engaged Students and Highly Effective Teaching.*

- *Integrating technology as a learning tool when it will enhance and transform the classroom instruction.*

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iPads are <u>**Active**</u> tools used to transform learning.

Our classroom instruction is designed to utilize **Active** technology implementation and try at all costs to avoid **Passive** technology implementation.

- ***Passive***: use of technology generally occurs when children are consuming content, such as watching a program on television, a computer, or a handheld device without accompanying reflection, imagination, or participation.

- **Active**: use occurs when children use technologies such as computers, devices, and apps to engage meaningful learning or storytelling experiences.
    - Examples :
        - Sharing their experiences by documenting them with photos and stories
        - Recording their own music
        - Using an app to deepen their learning of a content area, reinforcing teaching moments, and align with standards.
        - Augmented Reality
        - Virtual Reality

If technology is being used in a **Passive** way then we should reevaluate the purpose of the implementation.

iPads are learning tools and should be utilized for active learning. iPads should not be:

- Used during indoor recess
- Used during lunch.
- Offered as a FREE time option.

Technology is aligned to our Characteristics.

Our use of technology in the classroom is based on our Highly Effective Teaching Characteristics and Highly Engaged Student Characteristics, both of which are based in pedagogical research on teaching and learning. We crafted these characteristics from the research of educational leaders (a listing of researchers and research is available on our website and within Destination 2026 documentation). If technology allows us to reach any of those characteristics more effectively or efficiently, we want to use it.

Mariemont City Schools Characteristics of Highly Effective Teaching and Highly Engaged Student *(Including Technology implementation questions and examples)*

The ENGAGED student . . .

…**is CURIOUS, CREATIVE, and demonstrates PASSION through his/her learning and experiences.**

o Works independently within and outside of classroom time (learning does not stop when bell rings) and creates something with his/her knowledge that he/she is willing to share.

o Seeks relevance and makes connections to the learning (personal connections, connections to real-world current issues, connections to other academic subjects).

o Seeks/demonstrates understanding rather than the "right answer".

o Challenges preconceived notions and ideas and seeks alternative approaches to learning.

Technology Instruction Asks: "How can this tool/device inspire curiosity, creativity, and passion?"

Example:

- Students use various apps/programs to create digital storytelling products using multimedia. (i.e. iMovie, Clips, Book Creator, Garage Band, Stop Motion)

- Using the Everyone Can Create Curriculum provided to staff for creative, inspiring ways to use the built in apps and tools.

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…demonstrates SELF-AWARENESS, INDEPENDENCE, and OWNERSHIP of his/ her learning.

o Clearly communicates and demonstrates what he/she does and does not know and works to develop weaknesses and hone strengths.

o Uses various methods for self-evaluation and reflection (rubrics, graphing, checklists, narratives, conferencing) and makes adjustments to learning as needed.

o Leads and collaborates with peers to demonstrate and enhance learning.

o Manages time and tasks appropriately.

Technology Instruction Asks: "How can this tool/device give a student ownership of his or her learning?"

Example:

- Apps such as Seesaw provide students a space to demonstrate their understanding and a place to reflect on their work over a course of time.

- The use of Gizmos (Math and Science simulations) allows for students to strengthen skills in areas of need through self-evaluation.

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…values RELATIONSHIPS and understands the importance of meaningful COMMUNICATION and COLLABORATION.

o Actively engages with peers with respect and kindness.

o Appreciates and accommodates the different learning styles and abilities of peers when collaborating.

o Provides honest and constructive feedback to peers to help facilitate learning.

o Contributes to team tasks in a meaningful manner to accomplish a larger goal.

Technology Instruction Asks: "How can this tool/device help a student to communicate and collaborate?"

Example:

- Using online applications such as Padlet or Google Classroom, students can participate in online discussion from anywhere/anytime.

- These applications can provide a space for students to collaborate on one shared file and peer edit without having to be in the same place at the same time.

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…**takes responsible academic RISKS and possesses RESILIENCE.**
o Accepts criticism and applies feedback to learning without taking it personally.
o Embraces failure as a part of the learning process and does not hesitate to "do over".
o Challenges him/herself, the status quo and previously held beliefs and assumptions by asking thoughtful questions and offering different perspectives.
o Does not hesitate to go first, take the lead, try something new/different.

Technology Instruction Asks: "How can this tool/device allow a student to take safe risks and learn from failure?"

Example:
- Through the use of Apple Classroom a teacher can monitor student progress as it happens and provide feedback to the student without turning in for a grade or sharing with their classmates.

- STEM classes encourage resilience. When students are coding, for example, there is a lot of trial and error. Students must re-evaluate their work and try again.

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…is GLOBALLY COMPETENT and understands other perspectives and cultures.
o Displays empathy for differences among others by questioning in a positive manner, communicating in multiple ways, and making personal connections.
o Seeks to involve and be involved with the community and the world through experiences in and out of the classroom and in and out of Mariemont.
o Is curious about the world and how he/she fits in and strives to maintain awareness of universal aspects of human nature by making connections and looking deeper through questioning, research, seeking additional information and making comparisons to themselves.
o Is open minded and non-judgmental about other cultures and perspectives during discussions and experiences.

Technology Instruction Asks: "How can this tool/device allow students to become globally competent by making the world and community more accessible?"

Example:

- With guidance from the classroom teacher, students can use the app Flipgrid to connect with classrooms all over the world. They can build a digital pen pal relationship where they learn about different cultures, traditions, geography from those who live there.

- Take Virtual Reality "trips" to places that they may not otherwise be able to see. Learn how people live in all areas of the world, and develop empathy by seeing the reality that many face in other countries.

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…**is a CRITICAL THINKER who EXPERIMENTS, QUESTIONS, and SOLVES problems.**

o Predicts and identifies problems and looks for and tries multiple paths to the solution.

o Uses higher level questioning and creativity to drive learning and can support thinking with evidence.

o Examines and employs possible solutions and gives him/herself permission to take risks without fear of failure.

o Relates, re-examines and reflects upon learning using self-monitoring or peer evaluation in order to improve.

Technology Instruction Asks: "How can this tool/device foster critical thinking and experimentation within our students?"

Example:

- The iPad is becoming a critical tool to extend learning to a student-led interactive role in learning. Science is best understood by demonstrating processes and phenomena. In order to engage students in otherwise abstract concepts, students need to create products that show their unique understanding and perspective about the scientific world around them. The iPad allows students to do JUST that, multiple times & multiple ways. Students can demonstrate understanding through video, annotations, and AR filters. Lab data is no longer relegated to bar graphs and data tables. The iPad allows students to synthesize results in a variety of methods unavailable with typical laptops.

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… **Builds strong content KNOWLEDGE, effectively FILTERS information, and demonstrates learning in AUTHENTIC ways.**

o Proves content knowledge by creating, explaining and showcasing learning in various authentic ways in the classroom and the community.

o Applies learning to real world experiences and can articulate how the learning was applicable to the experience.

o Investigates, questions and examines information for credibility and relevance and can SUPPORT findings.

o Applies content knowledge to other areas of study by making cross curricular connections

Technology Instruction Asks: "How can this tool/device help students demonstrate learning in authentic ways?"

Example:

- Students are creating mini-documentaries that involves research, story writing, plot structure, information source analysis, and learning video production skills. Students produce and share their documentary with an authentic audience by posting to a class website.

- Students use Magic Move in Keynote to create interactive presentations.

- Students use SeeSaw to explain/show/share their individual understanding of the lifecycle of precipitation with images, interactive tools, and their voice. The learning is shared with their families and teacher.

- Creating a modern-day newspaper that details events from the Revolutionary War - Students are able to research information, and present it in a way that is more interactive and engaging.

The HIGHLY EFFECTIVE teacher …

...establishes and communicates clear, purposeful LEARNING TARGETS.
o Learning target is aligned to content standards, specific to the current lesson, and clearly articulated to students in "kid friendly" language.
o Teacher establishes the purpose for learning, its relevance, and connection to future learning.
o Lesson activities align to the learning target.
o Teacher regularly reinforces the learning target throughout the lesson and reminds students of what they should be learning.

Technology Instruction Asks: "How can this tool/device help students understand where they are going in their learning and how to get there?"

Example:
- Digital organization using learning management systems (LMS's) such as Blackboard and workflow systems such as Google Classroom, SchoolWork, and Seesaw.

- Modules and sequential organization using google apps for education allows for teachers to assist in teaching structure, calendaring, and task/goal completion.

- Additionally, students learn how to manage their time by prioritizing what they need to complete

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... flexibly and creatively applies his/her CONTENT KNOWLEDGE and KNOWLEDGE OF BEST PRACTICE when designing his/her instruction to maximize student learning (opportunities for guided instruction, differentiated learning activities, project/problem-based learning, inquiry-based learning).

o Teacher uses the gradual release instructional model that includes a balance of activities both teacher-led and student-led.

o Teacher creates opportunities for students to explore content deeper through strategic questioning, critical thinking, project-based and/or inquiry learning.

o Teacher uses a variety of research-based instructional strategies and the learning is spaced appropriately to meet the needs of diverse learners, differentiate instruction, and respond to student questions and interests.

o Teacher incorporates the use of appropriate, relevant, and innovative tools and resources to enhance instruction and deepen learning.

Technology Instruction Asks: "How can this tool/device motivate and inspire students to deepen their learning?"

Example:

- The use of Augmented reality to transform traditional learning opportunities...

  ◦ Walking through Downtown New York City instead of looking at a map

  ◦ Have an animal come to life in front of you that you've been studying.

  ◦ Walking up to a piece of art work otherwise not available to you.

  ◦ Coloring and labeling earth's crust and use AR app to make it come to life.

- The teacher can flip the classroom by providing content in videos that students watch before class. During class, the students can put the content to use, through creation, investigation, etc.

- Teachers can easily differentiate through the use of tools such as Schoolwork, Google Classroom, and Seesaw.

...**MODELS strong and weak work for demonstrating mastery of the intended learning.**

o Students have a clear understanding of expectations and criteria for the product they are being asked to create, problem they are being asked to solve, and/or project they are being asked to complete.

o Teacher shows students samples of strong and weak work and/or models successfully completing a task, solving a problem, etc.

o Students are given time to complete the assigned task(s) with guidance from the teacher and/or peers, and the teacher appropriately facilitates this work by answering questions, modeling thinking, and/or offering suggestions.

o Teacher encourages mastery of the intended learning through opportunities to re-work, re-do, and re-try until the desired outcome is achieved.

Technology Instruction Asks: "How can this tool/device help students demonstrate mastery of their learning?"

Example:

- Teachers are able to use the Apple TV screen mirroring function to model for students strong work and weak work from their screen or a student(s) screen.

- Teachers are able to create screen recordings of their iPad screen to share with students for anytime/anywhere learning. Khan Academy style. Students can then respond with their own screen recording explaining their thinking.

- Using an app like screencastify to explain "how to" do something- students can also use the app to explain their thought process. Teachers can then post comments back to the students all within the app.

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...**collaborates with students to set challenging, yet appropriate, LEARNING GOALS.**

o Teacher has established challenging learning goals for each student using relevant assessment data and structures classroom activities and assignments to assist in reaching these goals.

o Learning goals are standards-based, align to learning targets, and encourage mastery of content.

o Students are involved in creating their learning goals and can articulate these goals to others.

o Learning goals are flexible and responsive to student progress and performance on assessments.

Technology Instruction Asks: "How can this tool/device be used to challenge each individual student?"

Example:

- Teacher uses data from math and reading programs such as IXL and Reading A-Z to pinpoint gaps in learning and provide intervention (both remedial and enrichment).

- Teacher can create leveled texts and assessments based on student levels daily.

- Teachers are able to provide workshop style instruction that allows for differentiated grouping and activities.

...**facilitates productive and purposeful COLLABORATIVE LEARNING.**

o Teacher defines clear expectations for the collaborative learning (i.e. group member roles, expected outcomes, etc.) activity and continuously offers feedback/prompts during the process.

o Students have individual accountability for the work created through the collaborative learning activity.

o The collaborative learning activity results in outcomes more meaningful than an individual learning activity would likely produce (i.e. complex problem solving, evidence of peer review, critical thinking & discussion, etc.).

o Teacher creates opportunity for variety in the collaborative learning – outcomes and products; learning groups; types of collaboration (i.e. face-to-face, virtual, digital, etc.).

Technology Instruction Asks: "How can this tool/device encourage collaborative learning?"

Example:

- Teachers use google docs to allow students to collaborate on science labs. Conducting research, experiments, and discovery that is shared in a common document for peer review.

- Students have choice in their assignments, leading to more personalized learning.

...**gives frequent, ongoing, meaningful FEEDBACK to students and creates opportunities to receive feedback from students about the effectiveness of his/ her instructional practice.**

o The specific and timely feedback from teacher to student aims to fill the gap between what students understand and what the teacher wants them to understand and requires action by the students.

o Teacher gives students feedback in a variety of formats (e.g. grades, written, verbal, etc.) and focuses on what students have done correctly more than what they have done incorrectly.

o Teacher structures opportunities for students to provide feedback to one another through the use of targeted "look fors" and rubrics.

o Students give feedback to the teacher about what they know, what they understand, where they make errors, when they have misconceptions, when they are not engaged, etc.

Technology Instruction Asks: "How can this tool/device be used to provide meaningful real-time feedback?

Example:
- Teacher can use the live editing features to provide comments and feedback on student writing while they are working on the document.

- By using learning apps that have built in assessments, students receive feedback right away instead of waiting for the teacher to grade and passback.

- Feedback through SeeSaw, Schoolwork, Google Docs, etc from teacher to student.

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...**supports students to have an accurate understanding of their own learning through the use of FORMATIVE and SUMMATIVE ASSESSMENTS as well as SELF-ASSESSMENTS.**
o Teacher uses a variety of assessments to gauge student understanding and plan instruction.
o Students are given opportunities to self-assess, can identify strengths/weaknesses in their learning, and understand how they are progressing toward reaching their learning goals.
o Teacher provides differentiated learning experiences for students based on formal and informal assessment results.
o Students can articulate what will be assessed and how they will be expected to demonstrate their learning

Technology Instruction Asks: "How can this tool/device be used to assess student learning?"

Example:

- To formatively assess students, teachers can use Kahoot, google forms, and other immediate feedback tools.

- To summatively assess students, teachers can use performance based assessments such as recording a student "performance reading" via clips, SeeSaw, or GarageBand.

SAMR model is a framework to transform learning by implementing technology.

When designing lesson plans we encourage teachers to use "SAMR", Substitution, Augmentation, Modification, and Redefinition as a framework for moving through degrees of technology adoption to find more meaningful uses of technology in teaching and move away from simply using "tech for tech's sake". Invariably, there will be situations for lessons that will be better served with pencil and paper.

Substitution is technology acts as a direct tool substitute with no functional change.

Augmentation is technology acts as a direct tool substitute with functional improvements.

Modification is technology allows for significant task redesign.

Redefinition is technology allows creation of new task, previously inconceivable.

Substitution and Augmentation fall under the *"enhancement"* of classroom tasks, to build skill and ability. Modification and Redefinition fall under the *"transformation"* of classroom tasks.

- *We believe substitution is necessary to build skills that are needed for success, however should not be used a consistent way to implement technology. During this phase we should ask ourselves what we stand to gain by replacing traditional tools with technology. If we are not aiming to transform learning through using technology we need to either not use technology or move to the modification and redefinition phase of the framework.*

(examples below)

SAMR Primary Example

Substitution
If you are teaching a lesson about animals in a certain region you can have students access images and information from online/digital databases about how their animal adapts to the region they are living in. Provide links and or QR codes for students to access.

Augmentation
Students choose an animal and work in groups on a shared google presentation (or Keynote) to research their animal and present their findings to the class.

Modification
Students have their teacher put their presentations on a blog, online classroom, or SeeSaw to elicit feedback and peer to peer discussion. Share the link to professionals in the field.

Redefinition
Students use FaceTime or Skype in the classroom to meet live with a science museum or zoo director to compare/contrast animal adaptations in their region with other animals in other regions. Using the same tools, discuss with another classroom around the world animals in their region.

SAMR Secondary Example

Substitution
If you are teaching a government lesson on the Constitution, you might use an electronic or web-based version of the document instead of a hard copy because of the interactivity. Links to other Students might also answer questions about the Constitution using a Microsoft Word instead of filling out a worksheet.

Augmentation
A student might augment a presentation on, say, the 14th Amendment with a video clip of how equal protection under the law was enforced during school desegregation. It could also include interactive links to relevant supreme court decisions, such as Plessy v. Ferguson or Brown v. Topeka Board of Education. Student might also include using Keynote, PowerPoint, Prezi, Slides, or a similar program to present information about an article or amendment to the class.

Modification
A student presenting research on the 14th Amendment might create his or her own unique graphic organizer for the class that not only includes the usual multimedia resources but represents a new product or synthesis of existing material. As another example, a group of students might collaborate in a cloud-based workspace to propose a modern definition of equal protection under the law and solicit feedback on their proposals from classmates.

Redefinition
After completing their group work and soliciting feedback from classmates (both tasks that could be completed "offline" although arguably not with the same experience as in the modified format), students could utilize technology to network with students several states away to see how regional differences impact how others think about the Constitution. Taking it a step further, students could even interact in real time with citizens in another country to examine key differences in constitutional philosophy and law.