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LESSONS LEARNED FROM EMERGENCY REMOTE LEARNING TRANSITIONS IN THE UNITED KINGDOM

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INTRODUCTION

In March 2020, educators across the United Kingdom were informed that schools would transition to remote learning within 48 hours. All students, with the exception of essential workers' children, would remain at home until face-to-face learning was deemed safe again. This emergency transition in response to the COVID-19 pandemic brought with it challenges for teachers and students, many highlighted in recent research literature (e.g., Kubina, et al., 2020; Lucas, Nelson, & Sims, 2020; Peterson, et al., 2020):

- The lack of student devices at home

- The lack of teacher familiarity with instructional technology and remote learning

- The struggle to keep students engaged and motivated

- Young students' lack of experience with devices and signing in to online learning platforms

- The new geographic space between students posing an obstacle to collaborative learning experiences

Although a few months of near-normalcy and face-to-face instruction followed, educators were again mandated to transition to remote learning due to a spike in COVID-19 cases across the United Kingdom in January 2021. This time, however, teachers felt more prepared for the transition back to online learning, having learned valuable lessons during the first transition.

ADDRESSING THE CHALLENGES OF EMERGENCY REMOTE LEARNING TRANSITIONS

The COVID-19 pandemic led to unprecedented long-term school closures around the world. In this paper, we discuss how three schools in the United Kingdom successfully transitioned to remote learning and kept students engaged, productive, and healthy. Through interviews with the instructional technology leader of each school, we gather important findings about remote learning implementation, including lessons learned and recommendations for the future.

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BENHURST PRIMARY SCHOOL

Part of LIFE Education Trust, London
Stella McCarthy, *Acting Deputy Head Teacher and Computing Coordinator*

On Thursday, March 19, 2020, teachers at Benhurst Primary School learned they would transition to remote learning, effective the following day. With such short notice, the faculty decided to meet early on the 20th to decide how they would keep lessons engaging and students learning.

USING SMART LEARNING SUITE

Teachers at Benhurst were already familiar with SMART Learning Suite, after using it during daily face-to-face lessons. With the mandated move to remote learning, teachers easily adapted their use of SMART Learning Suite to synchronous remote instruction that maintained continuity for students. Teachers also made use of asynchronous instruction by posting Student Share Links of SMART Learning Suite lessons to Google Classroom, another platform most teachers at Benhurst were familiar with using. The school remained open to essential workers' children, and teachers provided those students with the same lessons as their peers.

For Benhurst, the main challenge in the first emergency remote learning transition was figuring out how to get students in Reception and Years 1 and 2 involved in learning, as they were not yet familiar with Google Classroom. In fact, these younger students did not know how to use their Google credentials. To solve this problem, Stella and the rest of the staff emailed students' credentials to their families and a parent or other suitable adult helped the children access lessons. Stella's team also created a "how-to'" document for families and followed up by phone to ensure all students had access to lessons as quickly as possible. Their efforts paid off: within the first week of remote learning, 95% of all students were

active in Google Classroom and SMART Learning Suite. To resolve issues with the remaining 5 percent, Stella and other faculty members telephoned the students' homes to find solutions. Most of these students needed a device because the other devices in the home were being used by parents working remotely or older siblings. Fortunately, the school had enough devices to loan, getting the school to 100% student participation. To encourage more reticent learners, teachers occasionally phoned students at home to provide encouragement.

> Within the first week of remote learning, **95%** of all students were active in Google Classroom and SMART Learning Suite.

Teachers used individual Handouts in SMART Learning Suite lessons to give students active learning opportunities while keeping track of their progress and providing feedback. In addition, Stella says, "We supplemented lessons with fun, physical activities, as that's what we would usually do during face-to-face schooling. Many of these activities occurred during Fun Friday--we would give students something fun, active, or artistic and included lots of Physical Education activities to keep students engaged and learning fun. Sometimes we used game-based activities from SMART Learning Suite, such as Monster Quiz. We all loved Monster Quiz because it lifted everyone's spirits in a good-natured, competitive way." Occasionally, letting instruction "take a backseat" to support students' wellbeing is one of the practical suggestions put forth by a Minnesota-based study of COVID-19 remote learning transitions (Peterson, et al., 2020).

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Other days of the week focused on key content areas. For example, "Math Mondays" were devoted to mathematics. Teachers at Benhurst used SMART Recorder to create videos explaining math concepts. They posted these videos to YouTube and embedded them in SMART Learning Suite lessons. These lessons also contained individual Handouts and digital manipulatives (such as base ten blocks), to give students active learning opportunities and equitable access. Benhurst teachers used asynchronous Student Share Links posted within Google Classroom because "we didn't know what time children would be working on lessons, so we wanted to give them all a chance to complete the lessons throughout the day." Teachers also scheduled synchronous lessons at specific times during the week so students could collaborate using SMART Learning Suite's collaborative Workspace feature. Says Stella, "we tried to get students mobile by exploring gardens or local parks so they weren't just sitting in front of the computer all day, sometimes using Workspaces scheduled at particular times so that all students could add to them."

The faculty's dedication and creativity did not go unnoticed--parents flooded teachers' inboxes with messages of appreciation and thanks. Part of a message emailed to the school's Head Teacher reads, "your staff's dedication to the school is always noticed by parents and I'm glad my children are pupils at a school that does the utmost to support them in any way possible. You're all doing a fantastic job!"

CONTINUOUS PROFESSIONAL DEVELOPMENT

The majority of teachers at Benhurst already knew how to use SMART Learning Suite, mainly because Stella held training sessions throughout the school year. In fact, Benhurst is a SMART Exemplary School. However, the school also employs Teaching Assistants (TAs) who are integral to the smooth operation of daily instruction, and perhaps even

more integral to the remote learning transition and its subsequent maintenance. To scale use of SMART Learning Suite across both teachers and TAs, Stella scheduled additional training sessions so TAs could learn how to use the SMART Learning Suite to provide timely feedback on reading comprehension assessments, quizzes, and individual Handouts. This assisted teachers immensely in moving through their lessons.

In addition to training the school's TAs, Stella continued (and still continues) to host teacher training every two months, providing updates on SMART Learning Suite and Google Classroom. "Sometimes it's more of a review and sometimes it's a workshop involving what's new. That way we keep our teachers up-to-date with instructional technology, and especially SMART Learning Suite."

EMERGENCY REMOTE LEARNING, ROUND 2

Students returned to face-to-face instruction in September 2020 for the beginning of the new academic year, though occasionally some children would remain quarantined at home if they or someone in their household tested positive for COVID-19. Teachers continued to use Google Classroom and SMART Learning Suite so students could continue to learn

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whether they were at home or in school. According to Stella, "we planned for the eventuality of some students having to stay at home, so we created lessons that were accessible for everyone." During these periods of "bubble closures", Benhurst also used SMART Learning Suite for live, synchronous lessons in which students connected through video conferencing.

Benhurst was ready when the second remote learning mandate came in January 2021. The staff had stayed ahead of the guidance and expectations about remote education and even published their own updates to parents through the school's website. During this period of remote learning, teachers scheduled daily synchronous lessons for Math and English within a Google Meet in accordance with the school's protocol. This allowed educators to continue teaching the National Curriculum remotely just as they would face-to-face. Using SMART Learning Suite, teachers added manipulatives, key questions, and video voice-overs to explain the lesson. For example, younger students had lessons that included voice-overs for phonics instruction. For well-being, one "fun" activity was provided each day to be completed easily at home. Students were encouraged to upload photographs or videos of their activities to Google Classroom. These well-being activities were not made compulsory; rather, their purpose was to keep spirits high by amusing, delighting, and exciting children's love for learning. Finally, each year level participated in a live Physical Education lesson weekly with the school's Physical Education teacher.

Families continued to be impressed by Benhurst's response to remote learning mandates. One parent wrote, "the majority of us are blown away by your effort and dedication to our kids."

Stella summed up, "a few years ago, before SMART Learning Suite and Google Classroom, we probably wouldn't have been able to meet the challenges of remote learning. Ten years ago, there was no way we could have done it. It's certainly interesting that the pandemic hit

during a technology-rich time the way it did. Technology is now embedded in what we do as educators, and it has never been this way before. It is amazing to see how many educators are now embracing platforms like SMART Learning Suite. We had to adapt, and we did."

> " It is amazing to see how many educators are now embracing platforms like SMART Learning Suite. **We had to adapt**, and we did. "

RECOMMENDATIONS

Based on Benhurst's experiences with remote learning, Stella provides several recommendations for educators worldwide:

- Create and maintain a clear daily routine and lesson structure that involves the standards and curriculum usually taught face-to-face.

- Provide feedback for students that is timely, informative, construction, and positive.

- Provide as much interactivity within each lesson as possible; interactivity could involve game-based activities, digital manipulatives, and collaborative learning tasks.

- Ensure that students' well-being is kept in mind; give students time to talk both within synchronous lessons and one-on-one with teachers.

- Create a clear online safety policy and ensure that students understand how to maintain their safety online.

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KING'S ROCHESTER PREPARATORY SCHOOL

Rochester, Kent
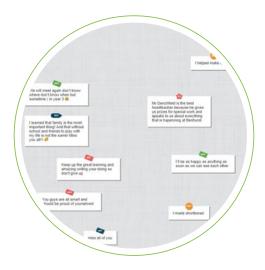**Guy Colnbrook,** *Head of Computing and Digital Learning*

King's Rochester Preparatory School took a slightly different approach to the emergency remote learning transition. In their case, it wasn't quite as much of a surprise. Guy states, "we had known we might need to go remote in March 2020, so we implemented three mandatory staff training sessions so that we would be poised to implement remote learning. This helped us create a smoother transition once the mandate came out." As in other schools across the UK, essential workers' children still attended school face-to-face. King's Rochester had these students participate in the same lessons as remote students to maintain cohesion and continuity.

USING SMART LEARNING SUITE

Teachers at King's Rochester used Google Classroom in combination with SMART Learning Suite and other interactive resources for remote lessons. Fortunately, most students attending the school had devices at home, and those who did not were able to borrow a device from the school.

SMART Learning Suite's game-based activities, such as Super Sort, Fill in the Blank, and Rank Order, were frequently used at the beginning of lessons. These activities helped students learn skills such as sentence structure, for example, by practicing with Fill in the Blank activities. Individual Handouts and Google Documents were also used, especially in writing classes, because teachers could type personalized feedback within each student's Handout or Google Document, giving students opportunities for revision. Synchronously, teachers used collaborative Workspaces for brainstorming and similar activities, especially with older students. King's Rochester

teachers also took advantage of SMART Learning Suite's ad-free YouTube video feature to give students multiple explanations of lesson content. Students were rewarded for their commitment to learning through the school's award system, which gave credits that could culminate in an achievement certificate from the Head Teacher.

The school's daily lesson structure incorporated both synchronous and asynchronous components. Each day began in a Google Meet with a live service from the cathedral or live music, followed by 10 minutes of live chat with teachers and peers. Teachers would then deliver a live SMART Learning Suite lesson, following up with independent practice. Independent practice was easily provided through Student Share Links in Google Classroom.

CONTINUOUS PROFESSIONAL DEVELOPMENT

Following school closure, Guy and his counterpart at King's Rochester Senior School continued to host training sessions for teachers by using Google Meet. Multiple sessions were offered throughout the week in order to suit teachers' schedules. Although teachers were not required to attend, approximately 60 out of 125 teachers attended each session, dubbed affectionately as "Tech Thursday". During Tech Thursdays, teachers learned how to use Google Meet for synchronous SMART Learning Suite lessons and how asynchronous lessons could be provided by Student Share Links. Guy's training sessions have helped teachers improve their attitude toward

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instructional technology. "Many of the teachers used to hate online marking, but now most prefer it! Online marking is easier and more efficient than using a physical book or asking students to turn in papers", he says. Some teachers have even become leaders in educational technology, creating their own "how-to" videos and resources.

EMERGENCY REMOTE LEARNING, ROUND 2

Even after students returned to face-to-face instruction in September 2020, teachers continued to use SMART Learning Suite lessons, especially using game-based activities for lesson starters and reviews. Teachers also continued to use Google Classroom for homework and to post Student Share Links to asynchronous lessons. Despite the return of face-to-face schooling, students occasionally needed to quarantine at home. To ensure these students stayed current with lessons, teachers live-streamed classes. Says Guy, "The whole remote learning experience forced us to think about how we will need to obtain laptops for all teachers so they can be more mobile". Previously, teachers relied mainly on desktop computers. Guy says that although "emergency remote learning was an unpleasant experience, it showed us just how important technology is in education, and just how much we need it to be successful."

With the second round of mandated emergency remote learning in January 2021, King's Rochester was again ready to meet the challenge. The faculty continued the established remote learning routine from the first mandate, but added some well-being activities and family support. Virtual after-school clubs were created, focusing on topics such as cooking, photography, and mindfulness. Teachers planned additional phone calls to check in with individual students and virtual counseling sessions were offered through a secure platform. The school also actively encouraged family support by holding virtual Parents' Evenings.

RECOMMENDATIONS

Based on the remote learning experiences during the past year, Guy makes the following recommendations:

- Allocate five extra minutes at the beginning and end of each synchronous lesson to allow for students signing in and submitting work.

- Provide a range of activities so students are not sitting at a screen for the entire school day.

- It takes time for students to adjust, so teachers must be patient with the initial quality of submitted work as students learn to navigate remote learning.

- Establish routines or rules for synchronous lessons (for example, students mute microphones unless they're speaking or asking a question).

> " Emergency remote learning... showed us just how **important technology is** in education... "

Guy also outlined the main components of successful remote learning for King's Rochester: training and support, hardware, and engaging learning tasks on-screen and off.

- Training and support must be provided for teachers, students, and in some cases, parents.

- Teachers and students must have access to necessary hardware and a stable internet connection.

- Teachers should provide engaging, interactive online activities through platforms such as SMART Learning Suite as much as possible and include off-screen activities that might involve going outside or exercising.

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PENWORTHAM GIRLS' HIGH SCHOOL

Penwortham, Preston
Susan (Sue) Bennett, *Local Leader in Mathematics Education and Secondary Mathematics Teaching for Mastery Lead*

When the COVID-19 pandemic hit the United Kingdom, Penwortham Girls' High School faculty received two days' notice that they would shift from face-to-face to remote learning. Faculty who were teaching face-to-face on Wednesday were fully online by Friday. Even essential worker's children who physically came to school were expected to connect with their teachers and peers through technology. This allowed all students to access the same lessons, just as they had in Benhurst Primary School and King's Rochester Preparatory School.

USING SMART LEARNING SUITE

Fortunately, most teachers at Penwortham were already familiar with SMART Learning Suite and had been using it during face-to-face instruction. The main change teachers made to their lessons was allowing students to access them asynchronously from home. They accomplished this using SMART Learning Suite's Student Share Link feature and posting those links to their learning management system. Students could access these lesson links any time and move through lessons at their own pace. Importantly, teachers could see which students had accessed a lesson and how far they'd moved through it. Individual Handouts, in particular, were an important feature for teachers, as they could not only see students' work but could also provide feedback and prompts to level up students' learning as needed.

Penwortham teachers also used SMART Recorder to create instructional videos. Math teachers specifically used SMART Recorder and SMART Notebook's GeoGebra feature to explicitly teach concepts such as transformation. The videos teachers created were also posted on YouTube, and with SMART Learning Suite,

teachers could embed those same, personalized videos into lessons. These videos were accompanied by individual Handouts for student practice. SMART Learning Suite's individual Handout feature allowed teachers to create Handouts featuring drag-and-drop elements, infinitely cloned objects, writing prompts, and more, which was especially important for lessons about transformations, for example, as students could move shapes geometrically. According to Sue, "that was really powerful, because how else can you see your students interactively complete an activity when not in face-to-face scenarios? Individual Handouts allowed me to 'pick up' a student's work and give them feedback on the spot. I don't know how else I would have accomplished that without SMART Learning Suite. It's like I was looking over their shoulder, but digitally." In addition, teachers incorporated game-based activities as beginning-of-lesson tasks and as additional independent practice for students to complete at their own pace.

Each lesson lasted 40 minutes or less and was very structured, so students knew the exact goals and expectations of the lesson as well as how they could be achieved. The feedback Sue and the school received from students was very positive. "[The students] did not feel overwhelmed at all, despite the unique circumstances we faced during COVID-19 school closures."

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According to Sue, "If we didn't use SMART Learning Suite, we wouldn't have been able to get the same level of interactivity remotely. We wouldn't have been able to do much besides PowerPoint lectures. We think the individual Handouts and embedded ad-free YouTube videos are the most powerful features for online learning."

CONTINUOUS PROFESSIONAL DEVELOPMENT

Sue hosted and continues to host training open to her colleagues. The focus of the training has been how to better use SMART Learning Suite, both in synchronous and asynchronous scenarios. This helps ensure that lessons can continue whether students are in school or at home. "This is why we think SMART Learning Suite can be used throughout the school as a long-term, more permanent solution," says Sue.

EMERGENCY REMOTE LEARNING, ROUND 2

Following the return to face-to-face instruction in September 2020, the school remained continuously prepared to send students home again, should there be another surge in the pandemic. According to Sue, "We were heavily relying on SMART Learning Suite. Students attended school in cohorts, so we occasionally had to send a cohort of students home if someone tested positive for the virus." To ensure all students were involved in daily lessons, the school invested in wireless headsets for students who needed to be sent home to quarantine--that way, all students could access a synchronous lesson while attending a Microsoft Teams call. In fact, the school now uses the SMART Learning Suite app within Microsoft Teams to deliver instruction seamlessly, all in one place.

Following the Winter Holiday Break, the UK government once again mandated remote learning in response to increased COVID-19 cases. Teachers were much better equipped to deal with the second emergency remote learning transition, as

their familiarity with technology had grown rapidly since the pandemic's onset.

Sue now manages a dedicated online learning space for teachers' continuing professional development, affectionately known as "The Hub." She regularly surveys teachers' needs in using SMART Learning Suite and posts weekly YouTube videos that address those needs.

RECOMMENDATIONS

Based on the two emergency remote learning transitions at Penwortham, Sue recommends the following:

- When learning remotely, students should be educated in online safety.

- Students' health and mental well-being should come first, and learning activities should be varied so that students are not sitting at a screen all day.

- Faculty should be surveyed regularly to determine which professional learning opportunities would best suit their needs.

- Online software, such as SMART Learning Suite, is best for remote learning as it can be used synchronously and asynchronously.

- Staff should check with disadvantaged students--Do they have the necessary technology at home?

- A schoolwide rules system around remote learning and student data protection should be created to ensure students' privacy is maintained.

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LESSONS LEARNED

Emergency transitions to remote learning were studied across the three schools. Three key findings emerged from live interviews and email communication with the technology leader of each school.

KEY FINDING #1

Successful remote instruction involves interactive synchronous and asynchronous lessons, and a focus on well-being

To maintain consistency among students' learning experiences, teachers at all three schools, across all year levels, provided the same synchronous and asynchronous instruction to essential workers' children (who attended school in-person) and students at home. Furthermore, to ensure that consistency in instruction was maintained when students returned to school after the first remote learning experience, faculty across the three schools continued to use asynchronous Student Share Links so students could remain engaged even when some students were sent home to quarantine. Those students also attended live lessons remotely via video conferencing, such as Google Meet, Microsoft Teams, or Zoom.

In addition to maintaining consistent academic instruction, all three school technology leaders recommended that schools focus on students' well-being, taking care to address the pandemic's emotional toll, which recent literature has found could lead to increased rates of depression (Asanov, et al., 2021). To keep spirits high, students had opportunities to interact during synchronous lessons, add to collaborative worksheets, and complete wellness and Physical Education activities. Students were also given time to speak to their teachers individually, even if the teacher needed to call the student's home.

Recent research has shown that synchronous activities, including collaborative digital worksheets as made possible by SMART Learning Suite,

effectively generate "a little more social interaction in otherwise socially-distanced lives" of students relegated to remote learning (Howley, 2020). The author further reported that giving students independent digital worksheets was still a superior instructional method to passive lectures, as students can construct their own knowledge in an active, involved manner.

KEY FINDING #2

A learning management system is essential for remote instruction

A schoolwide learning management system is essential for teachers and students to remain organized, structured, and productive (Gende, 2020, Smith, 2021; Garcia-Vedrenne, et al., 2020). All three schools used SMART Learning Suite as a lesson building and delivery platform that allows for both synchronous and asynchronous instruction; however, those asynchronous lessons were posted to each school's learning management system of choice. Teachers and students at each school learned how to use their system for maximum efficiency and resource management. For example, King's Rochester faculty posted asynchronous Student Share Links to Google Classroom. Students used Google Classroom to complete lessons, submit assignments, and send messages to their teachers.

Finally, simplicity is key. Although all three schools used a learning management system, they used it in as efficient and simple a manner as possible, providing assignments with clear directions via Google Documents or asynchronous SMART Learning Suite lessons. This created a more calm and organized remote learning environment. This is preferable, as supported by Marshall's (2020) remote teaching experience.

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KEY FINDING #3

Continuous, purposeful, and relevant professional learning makes all the difference

The technology leaders of all three schools consistently provided professional learning opportunities before the pandemic and maintained the cadence of those opportunities during both remote learning transitions. In this way, teachers were far better equipped to engage students remotely. All three school leaders recommended the use of interactive online educational software, such as SMART Learning Suite, to maximize student engagement. Over the course of the past year, school technology leaders led continuous professional learning sessions, sometimes required but often optional. Despite optional attendance, the relevance and focus of these sessions contributed to high attendance.

Providing additional opportunities for teachers to practice as well as ongoing professional learning is well-supported in the research literature (e.g., Lindqvist, 2019; Niederhauser, et al., 2018, Darling-Hammond, Hyler, & Gardner, 2017). For example, Lindqvist's (2019)

study of technology integration in Swedish schools found that when teachers were given additional practice time and expert support for integrating technology, they were more successful and felt more positive about the integration. This finding was also supported by Niederhauser and colleagues' (2018) study of technology integration across schools in Australia. Darling-Hammond and colleagues' (2017) meta-analysis found that teachers who didn't receive ongoing professional learning ultimately decided against adoption technology and reported feeling unprepared for its use in teaching. Finally, Jwaifell and Gasaymeh (2013) found that a one-time training session did nothing to encourage teachers' technology use or integration, giving more credence to the provision of ongoing training sessions.

In all three UK schools participating in this study, school technology leaders provided and continue to provide ongoing, relevant professional learning sessions for teaching staff. In fact, to ensure the relevance of each session, leaders regularly survey teachers to discover the most urgent needs for training.

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LESSONS LEARNED FROM EMERGENCY REMOTE LEARNING TRANSITIONS IN THE UNITED KINGDOM - SUMMARY

The instructional technology leaders of each school studied describe how the use of online software, such as SMART Learning Suite, allowed faculty and students to continue being productive despite the challenges of remote learning. SMART Learning Suite allowed teachers to build and deliver interactive lessons that featured game-based activities, digital worksheets and assignments (both individual and collaborative), manipulatives, ad-free and safe YouTube videos, and much more. The table below summarizes how each school used SMART Learning Suite in both asynchronous and synchronous learning.

One of the major benefits of SMART Learning Suite is its versatility--teachers can post lesson links for asynchronous, self-paced lessons or engage students in live, synchronous lessons to foster collaboration and create a sense of community despite the distances among students. Both of these features of SMART Learning Suite Online align to remote learning recommendations made by Garcia-Vedrenne and colleagues (2020), specifically in the use of flexible delivery methods (asynchronous and synchronous) and the use of tools that encourage student engagement.

	BENHURST	KING'S ROCHESTER	PENWORTHAM
Individual Handouts	✓	✓	✓
… with manipulatives for active learning and equitable access	✓		
… for active self-paced and teacher-led learning	✓	✓	✓
… to track student progress and provide timely, personalized feedback	✓	✓	✓
Game-based activities	✓	✓	✓
… as lesson starters for skill development		✓	✓
… for additional self-paced practice		✓	✓
… as a fun and competitive lesson review	✓	✓	
… as a mechanism to promote student well-being	✓		
Collaborative Workspaces	✓	✓	✓
… to promote collaboration in brainstorming and similar activities	✓	✓	
… to showcase participation in outdoor or physical activities	✓		
Teacher-created voice-over videos with SMART Recorder, posted to YouTube and embedded in lessons	✓	✓	✓
… to explain specific mathematical concepts	✓		✓

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