Dufferin-Peel Catholic District School Board

Ascension of Our Lord Secondary School – Technology and Learning Grant 2015-16

A Short Background

Ascension of Our Lord Secondary School is located in Malton ON, and is among the lowest socio-economic neighbourhoods in Peel Region. Almost a decade ago, the parents and staff set a vision in place to level the playing field for students in our school by infusing technology into the curriculum, by exposing our students to state of the art devices that they did not have at home and by helping them to build the skills that are necessary to compete with students from across the province and, indeed, the world.

In 2009, Ascension of Our Lord Secondary school and its 2 elementary feeder schools were awarded a sizable grant from HP for student laptop computers and for Smartboards in Science and Math. The project was called the Malton Technology Initiative (MTi) and part of the project involved Science and Math teachers partaking in extensive re-training through ISTE (International Society for Technology in Education). The results were impressive: student engagement is science and math was significantly higher, and EQAO scores in literacy and

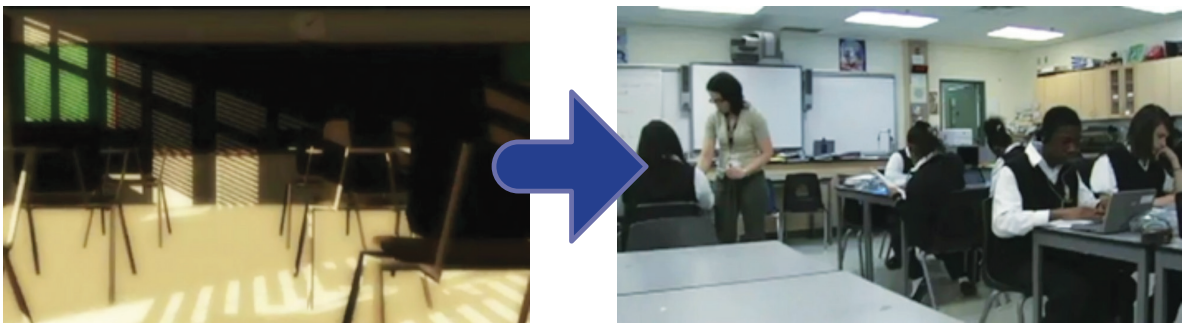


Figure 1. Changing the look of math and science classrooms at Ascension through the Malton Technology Initiative.

numeracy began to steadily increase. In 2012, the Fraser Institute branded the school as one of the fastest improving schools in Ontario, and those improvements have continued through the last 4 years.

Where are we now?

The skills, experiences and transformations in teaching and learning gained from the MTi project have gradually spilled over from Science and Math into all the departments in the school even though funding from HP discontinued in 2011. Wi-Fi has been installed throughout the school and made more robust in part from the Technology and Learning Grant. Students still do not have lap-tops or tablets to bring to school, but the vast majority of them do have a Smart-phone as an access point to Wi-Fi and the internet.

How we used the Technology and Learning Grant to Transform Teaching and Learning?

1. Computer Carts in the Classroom.

In order to expand the availability of technology to everyone in the school, philosophical changes and cost-saving ventures have been set in place by administration and staff at the school. Brick and mortar "cross-curricular" computer labs have been converted into regular classrooms and mobile computer carts are now available for students who do not have a phone, or for teachers to sign out and use in order to make learning more rich. One of these carts was purchased through the Technology and Learning Grant.

Figure 2. Computer carts have replaced designated cross-curricular computer classrooms.

Making carts available to any teacher in the school has raised the ability to expand the technology initiative to all departments in the school. Early adopters of technology in other departments has led to:

- Teachers shifting from instructor-led to instructor-facilitated pedagogy.
- There has been a significant increase in student engagement. Using technology has created active learners that are more intrinsically motivated.
- The technological shift has supported the Catholic Board Learning Plans and the School Improvement Plans. Ascension has met the goals of increasing student achievement in Literacy and Numeracy, as well as to increasing graduation rates. The addition of technology-based learning has contributed significantly to this effect.
- Improvement in the achievement of "at risk" students and students in Applied level courses.
- We have witnessed a gradual transformation of pedagogy for early adopter teachers from teacher-centered to student center technologically-based lessons in many departments. Meaningful differentiated instruction, project-based learning and real-world experiences have been integrated into 3-part lesson plans. Ultimately, this has led to more engagingly rich and personally relevant learning experiences for students.

2. **Helping the Late Adopters with O365** – The school has moved towards using Office 365 as a virtual learning environment (vLE) over the past 3 years. Early adopter teachers have created classroom environments to connect with students and parents, make lessons available at all times, and engage students with learning everywhere. One of the benefits of this has been movement towards a paperless classroom.

   For this year, the administrative team created their own O365 virtual information environment (vIE) in order to support the movement towards a paperless school environment and to provide all important information for staff in an electronic format. The spillover effect has been that teachers who were late adopters of technology have had to log onto dpcloud and O365 for school information and have realized that this vLE is easier to navigate than they

had initially perceived. Many have thus created their own vLE using O365, and are now adopters of technology in the classroom!

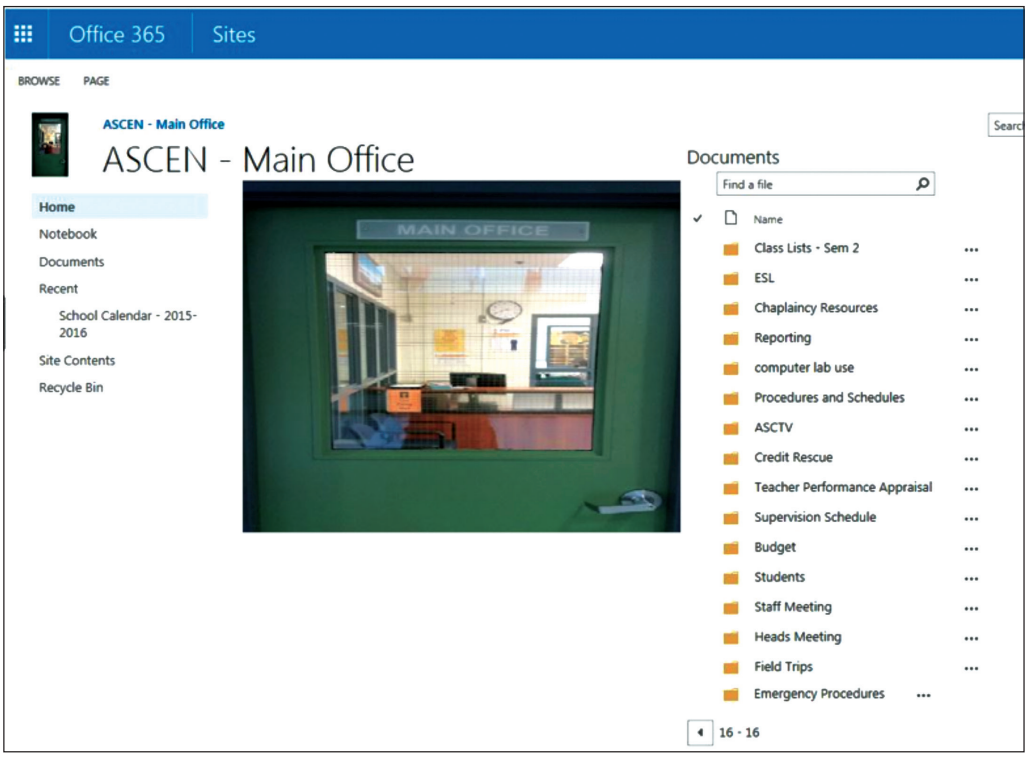
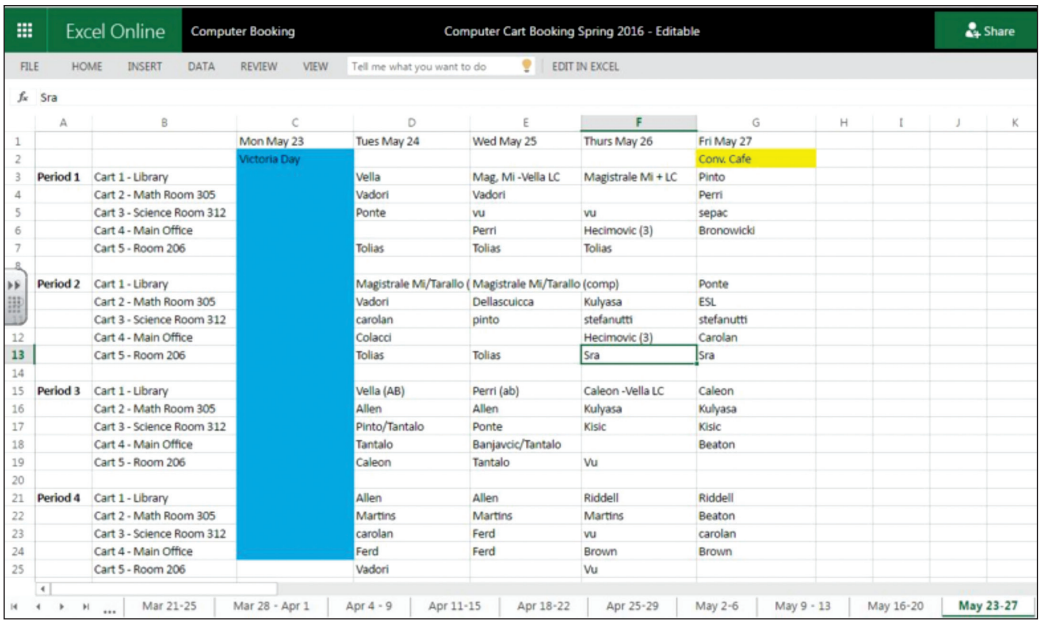


Figure 3. The Main Office virtual information environment. All "hard copy" information that used to be placed into teachers' physical mailboxes is now housed electronically using O365.

In addition to teachers using the main office O365 site to gain information, a teacher must also use O365 (dpcloud) in order to book a computer cart for classroom usage. Again, this means that all teachers become more comfortable with using a cloud-based system for school use, and this exposure helps one gain confidence in using a virtual environment for school use. The spill-over effect is that these teachers begin to see the benefits of using a vLE for teaching and learning.



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FILE HOME INSERT DATA REVIEW VIEW Tell me what you want to do EDIT IN EXCEL

Sra

	A	B	C	D	E	F	G
1			Mon May 23	Tues May 24	Wed May 25	Thurs May 26	Fri May 27
2			Victoria Day				Conv. Cafe
3	Period 1	Cart 1 - Library		Vella	Mag, Mi -Vella LC	Magistrale Mi + LC	Pinto
4		Cart 2 - Math Room 305		Vadori	Vadori		Perri
5		Cart 3 - Science Room 312		Ponte	vu	vu	sepac
6		Cart 4 - Main Office			Perri	Hecimovic (3)	Bronowicki
7		Cart 5 - Room 206		Tolias	Tolias	Tolias	
8							
9	Period 2	Cart 1 - Library		Magistrale Mi/Tarallo (	Magistrale Mi/Tarallo	(comp)	Ponte
10		Cart 2 - Math Room 305		Vadori	Dellascuicca	Kulyasa	ESL
11		Cart 3 - Science Room 312		carolan	pinto	stefanutti	stefanutti
12		Cart 4 - Main Office		Colacci		Hecimovic (3)	Carolan
13		Cart 5 - Room 206		Tolias	Tolias	Sra	Sra
14							
15	Period 3	Cart 1 - Library		Vella (AB)	Perri (ab)	Caleon -Vella LC	Caleon
16		Cart 2 - Math Room 305		Allen	Allen	Kulyasa	Kulyasa
17		Cart 3 - Science Room 312		Pinto/Tantalo	Ponte	Kisic	Kisic
18		Cart 4 - Main Office		Tantalo	Banjavcic/Tantalo		Beaton
19		Cart 5 - Room 206		Caleon	Tantalo	Vu	
20							
21	Period 4	Cart 1 - Library		Allen	Allen	Riddell	Riddell
22		Cart 2 - Math Room 305		Martins	Martins	Martins	Beaton
23		Cart 3 - Science Room 312		carolan	Ferd	vu	carolan
24		Cart 4 - Main Office		Ferd	Ferd	Brown	Brown
25		Cart 5 - Room 206		Vadori		Vu	

Mar 21-25 | Mar 28 - Apr 1 | Apr 4 - 9 | Apr 11-15 | Apr 18-22 | Apr 25-29 | May 2-6 | May 9 - 13 | May 16-20 | May 23-27

Figure 4. The online O365 booking system for utilizing computer carts in the classroom. Usage of this paperless system has many benefits, including building confidence in late-adopters to using a virtual environment. Note as well the frequency of computer usage in the school in any given week!

3. Teacher Training

Much of the Technology and Learning grant has been used for teacher training for both early and late adopter teachers. The late adopter teachers have had more instruction on the use of O365 as a virtual learning environment and how to set up their classroom sites. Both early and late adopters have also had training in how to use apps in the classroom, both on smartphones and computers, to improve instruction, feedback and learning.

For evidence as learning and evidence of learning, teachers have learned to use Kahoot to enrich lessons. Students love this app as it jolts them into learning. The Kahoot tagline "disrupt learning by making it fun!" is absolutely true as students use their Smartphones or school computers to participate.

Used as a tool for learning, OneNote is used within O365 by students in grade 9 through 12 with some teachers who have gained experience and training with this app. Students can create their own cloud-based course notebook by following teacher notes, modifying the notes with video, drawings and information, and by sharing online resources with classmates in collaborative studies. Students use primarily smartphones but school computers are also used when available and necessary.

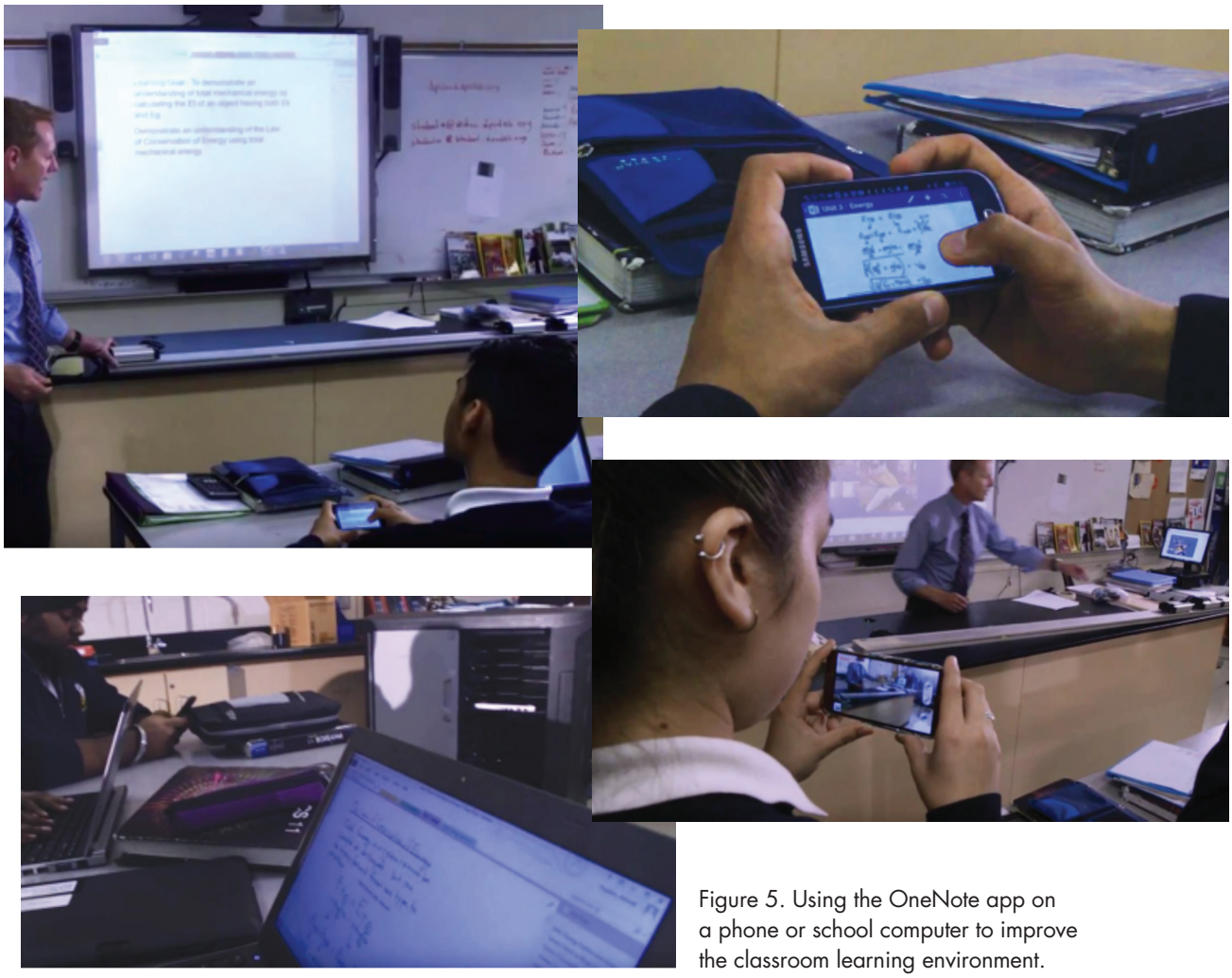


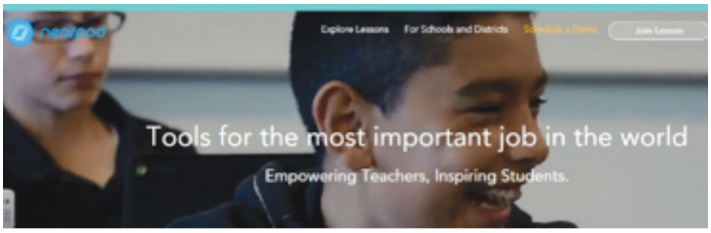
Figure 5. Using the OneNote app on a phone or school computer to improve the classroom learning environment.

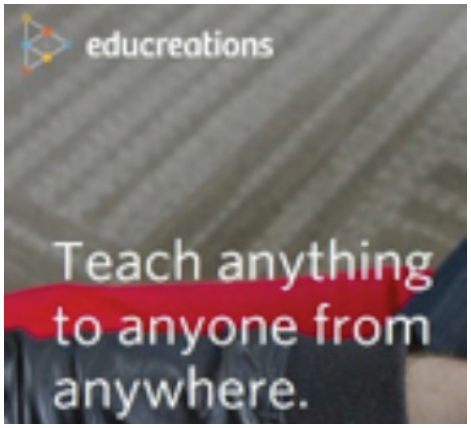
Also used as a tool for learning, some teachers have students use plasticine, yarn, maps, pencil crayons, construction paper, newspapers … whatever … to create a visual story as a still-frame movie using Stop Motion Studio. As an example, students in grade 9 science must meet the expectation of understanding the concept of mitosis, where a cell's DNA duplicates before a cell divides. Using their smartphone, Stopmotion makes learning this expectation both fun and deepens their understanding of the principles at play.

Figure 6. A student sample of using Stopmotion to create a "movie" to explain a course expectation. To see the full movie, please **click here**.

The departments at Ascension have also gathered as professional learning teams to learn how to use other apps that can be integrated into lessons or units to create a richer learning experience for the students. Since our students predominantly use their phone as their learning device, the apps have been selected that are Smartphone-friendly. These apps include:

- **Newsela** – where a teacher can alter non-fictions stories instantly for he reading level of the learner.
- **Padlet** – where teachers and students can create mind-maps and word walls, eliciting input from less inclined students in a non-threatening virtual environment. It is great for discussions and anonymous input.
- **Socrative** – where teachers can create quizzes and elicit input, allowing for more instantaneous feedback.
- **Nearpod** – to allow teachers in classrooms who do not have a projector to carry out a virtual lesson.
- **Educreations** – this app allows teachers to poll students, create a think space, and ask questions which gets displayed on a multimedia white board.





Summary

The community at Ascension of Our Lord Secondary School has purposefully planned to create a rich learning environment using technology to prepare students for the global marketplace. Recently, they have made use of the Technology and Learning Grant to purchase computers on mobile carts, to enhance the Wi-Fi in the school, to help transform teaching for the late adopters, and to implement the use of Smartphone apps in the classroom. While teachers at Ascension understand that the use of technology is not the only way to improve student engagement, they certainly realize that the proper use of technology is a powerful motivating tool to make teaching and learning more fun for our 21st Century Learners. We may have to change our school logo soon!