

# Minecraft in the Classroom

Saskatchewan School Library Association

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Watching my son create entire worlds, including houses with functional lighting and a circuit which sets off fireworks, got me thinking.....“How can I use Minecraft in my classroom?” I quickly discovered that countless people have already investigated this question and have created a multitude of online places to find resources and share ideas. I was equally excited to register for some sessions at ISTE 2016 devoted to using Minecraft in the classroom, and spent quality time at the Microsoft Minecraft Education Edition display at the ISTE EXPO. Determined to learn and fascinated by the numerous possibilities to integrate Minecraft and the Saskatchewan curriculum, I started planning.

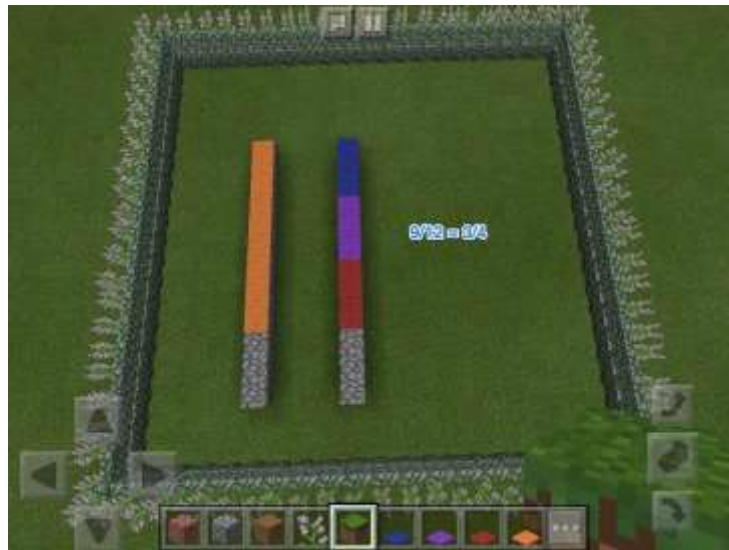
I first had to play. My son has the Pocket Version (PV) of Minecraft on our iPad and so I decided to build something. I felt rather silly when I put too many blocks in one place and I couldn't get rid of them. Regardless of the sword or pick axe I chose, that block could not be hit away! In frustration, I called the resident expert, my son, to solve this problem. “You just have to hold your finger on it to break the blocks!” First lesson about using Minecraft in the classroom – it is all about problem solving! Presenting a problem and allowing students the opportunity to develop creative ways of solving it is easy to do in Minecraft and an essential skill for students to develop. That problem also reminded me that I do not have to be the expert in order to facilitate Minecraft in the classroom. Students know, and if they do not, the other students are more than willing to assist! I may know little about the functionality of Minecraft, but I know enough to set the criteria for the assignment and create a simple example of what I want them to do. The rest is up to the students! You would be surprised at how they rise to the occasion!

The sessions I attended at ISTE 2016 involved Microsoft's [Minecraft Education Edition](#). I was expecting a teacher to discuss possible uses in the classroom and provide ideas and resources. This was provided, but it was brief and concise. Suddenly, a group of Grade 8 and 9 students commenced facilitation of how to use Minecraft. The students provided tasks, illustrated how to use the basic controls, and discussed the essentials of the program. Meanwhile, the adult facilitator outlined the 'teacher controls' and settings of the game in order to create the environment for classroom use. The teacher controls the accounts and can create group builds (where groups of students work together on a project from their own computer) or individual builds. It further re-iterated the idea that I do not have to be an expert, or know even hardly anything, about Minecraft in order to use it in my classroom.

The Microsoft version of the program is set up fantastically to work in the classroom. Teachers need an Office 365 account AND Windows 10 or the latest MacOS. There is a cost per student, approximately five dollars, but volume purchasing is available. As my school division has Office 365 Education accounts, we do not have Windows 10 on the computers, this was not a viable option.

To circumvent this issue, I put PV on the iPads. It is an expensive app, approximately ten dollars. To ensure the cost was worthwhile, I enlisted teachers who were ready to co-learn and investigated online resources. The Minecraft Education Edition website spawned great ideas! <https://education.minecraft.net/class-resources/lessons/> The site also features training and a community section for questions and discussions. I recommend the website as a valuable resource, even if you are not using their version of Minecraft.

I started with two projects: Minecraft Math with a group of Grade 8 students and Minecraft Art with a group of Grade 6 students. For Minecraft Math, the math teacher and I focused on fraction concepts. We started by showing equivalent fractions. I created screenshots of the settings I wanted students to use to create their world (Creative Mode, Flat World, always day) and ensured they put their name in the world title, as other classes use the iPads. Students used a variety of materials to represent equivalence: blocks, flowers, animals in a pen, food – whatever they wanted to show their understanding of equivalent fractions. Students took screenshots of their fraction and used the app, Skitch, to add their name and the fractions. The students then used AirDrop to send the picture to my iPad and “hand it in”.



From Pinterest, I had the idea for students to showcase their learnings of multiplying fractions through Fraction Stories. We watched a YouTube video ([https://youtu.be/k1ZOt\\_RSomc](https://youtu.be/k1ZOt_RSomc)) showing a student using Minecraft to multiply fractions. I found an example of a Minecraft fraction story for us to work together at first.



**Steve is Planning his garden. Due to his love of cubes, he wants the garden to be square and since he is so busy mining for gold, he only wants to plant  $\frac{3}{4}$  of it this month. Of that  $\frac{3}{4}$ , he wants  $\frac{1}{2}$  to be melons. What fraction of his garden will be melons?**

<https://mathmindsblog.files.wordpress.com/2013/12/mc.jpg>

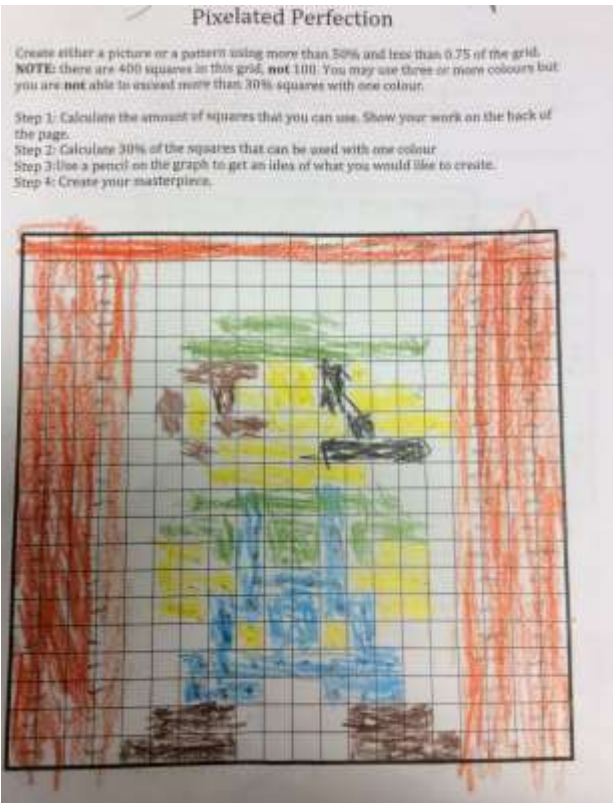
The students next used a story we wrote as a “screenshot/hand in”. Finally, the students created their own fraction story and illustrated it using Minecraft, a lesson I learned in an ISTE webinar.

*Mrs. Nelson was making walls of a house with 80 blocks. She wanted  $\frac{3}{4}$  of the blocks to be brick. How many brick blocks did she use to make her house?*



### **Pixelated Perfection Assignment**

This particular assignment is from an autistic Grade 8 student who LOVES Minecraft and video games. Using Minecraft in the classroom was not only fun for him, but kept him engaged and on task for an entire period whereas normally he can only withstand a few minutes of a task or instruction before he has to “go walk”. The student’s intricate design of a picture of Luigi exceeded the creativity of many of the other students, who simply chose to create a pattern with their blocks. This task has allowed the student to express his conceptual understanding, so much more than paper and pencil ever could.



Another project involved a Grade 6 class and Minecraft Art creating Pixel Selfies. The idea was gleaned from the Minecraft Education Edition lesson plan section with a few changes made to suit the PV <https://education.minecraft.net/lessons/pixel-selfies/>. We discussed how artists create self-portraits and viewed several famous examples. The students took selfies with the iPad to use as reference. The key is finding the right materials. Artists use various materials and colours when creating their art. Creating some features with blocks in Minecraft can be difficult. I had a hard time showing my red curly hair in my sample! However, the idea is to problem solve and have your pixel selfie closely resemble your photo selfie. Following the co-constructed criteria and using Minecraft settings (creative mode, flat world, always day), the students went about creating their pixel selfies. Again, they took screenshots, added their name with Skitch and sent it to the teacher devices through AirDrop.



This was an awesome learning experience for both me and the students. I am glad I had adventurous teachers who were willing to step outside the box with me, let go of the reigns, and let the students lead the way with their creations. There was initial reluctance: “I don’t know anything about Minecraft” and “I’ve never even played this before! How can I teach them to use it?”. We learned that we do not have to “teach” them to use it – the students are teaching us! I have had several other teachers express an interest in other activities and I am so excited to see what they create!

If you have any questions do not hesitate to email me at [chantelle.anderson9@gmail.com](mailto:chantelle.anderson9@gmail.com)