Mississippi Mills Public Library

June 15, 2021

STEM Programming Final Report

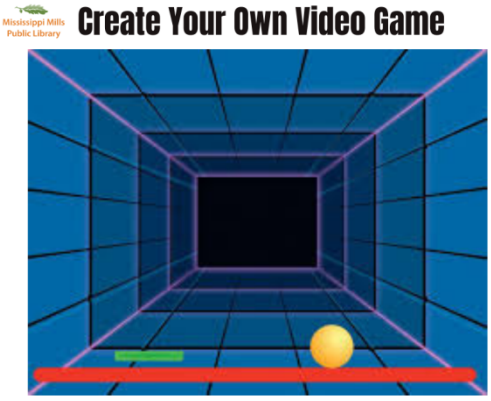
In the fall of 2020, the Mississippi Mills Public Library received funding from the federal government to hire a STEM (science, technology engineering and mathematics) Assistant to run robotics and coding programs at the Library. STEM supplies such as LEGO Mindstorms, a 3D printer and Ozobots are very expensive. Fortunately, the Elizabeth Kelly Foundation (EKF) recognized the value in STEM programming and generously agreed to match funds received and help cover the cost of our STEM supplies.

As you will see, this program continues to expand and residents of all ages have had opportunities to learn new skills and have fun together. The following information highlights the success of this popular program.

Supplies

Item	#
Chromebooks	8
Mobile storage cart (locking)	1
LEGO MINDSTORMS® EV3 Core Set and Software	8
3D Printer and supplies	1 plus filaments
Ozobots Evo Classroom Kit	12
3D Printer enclosure	1
15% Staff (not covered by grant)	

Programs



Online workshops with Gabe, January 2021

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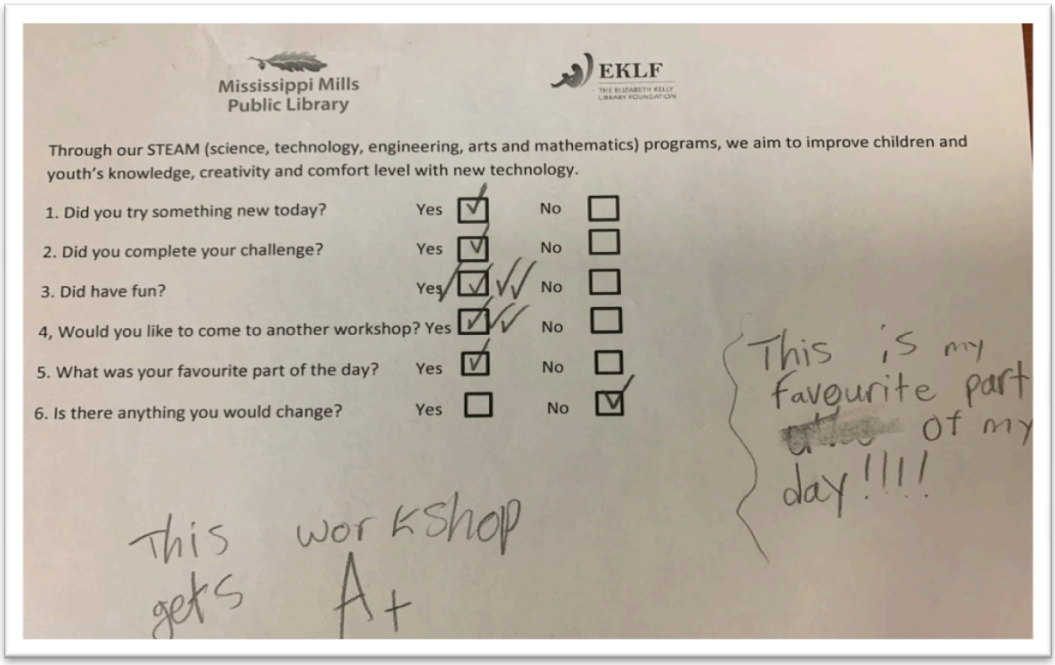
Summary of programs (October 2020-April 2021)

Program	# of sessions	# of participants
Ozobots	14	71
Video Game	7	71
Web Design for teens	3	15
Lego EV3	19	88
Adult Lego	1	7
3D Printer	4	14
Total	48	266

Evaluation/Feedback



Did you try something new? YES -98%

Did you complete your challenge? YES- 90%

Did you have fun? YES – 100%

Would you like to participate in another workshop? YES- 98%

Is there anything you would change?

- No, just missed not going in person!
- Not one thing !!!!
- Nothing, it is awesome!
- I would like more details in the gaming design--it would be fun to have a more advanced course to continue learning about game design
- No (x4)

What was your favourite part of the workshop/event?

- Making the name tag
- Learning/making
- Thanks so much Cole - sorry they kids kept calling you Gabe! For Andrew "I'm glad it wasn't too hard. I like that we actually made something I can keep"
- This was by far the funnest thing we have been a part of since Covid. It was absolutely enjoyable from start to finish. The direction that was given was perfect. We were able to build out robot and program it together. It was so fun. As an added touch the staff of the library had a little gift and card prepared at my husband and my station. It was so thoughtful and brought tears to my eyes. I felt very loved by my community!!! The facilitator's where super friendly and helpful and kept things going at a fun pace. I can't believe I have not tried an event at my library before. It was fantastic!!!!!
- Playing with the game
- my favourite part of the day was in testing it at the end
- building the robot
- building the robot
- building and testing the ev3
- Creating the rocket ship. It was fun to learn about that website.
- everything
- the maze
- coding the directions for a maze
- programming it
- the maze
- the maze
- Completing the build and seeing it work.
- Playing the game after coding it
- Programming video games was really fun--I enjoyed learning about it
- all of it
- everything
- The building.
- Using the robots.
- watching the robots move
- The robot wrestling.
- The drawing part
- The building
- The buildng with lego
- Building the robot

Next Steps

We received funding through the Canada Summer Jobs grant to hire a new STEM Assistant, Austin Campbell, on contract from June to November. Austin is starting with Cryptocurrency and 3D printing workshops (see below). Austin brings new skills to this program and we look forward to watching his plans unfold.

LEARN TO 3D PRINT - YouTube live stream

Every Tuesday, June 8 to 29, 5:30 to 7pm – no registration required. Presenter: Austin Campbell

A series of interactive YouTube live stream presentations – you can ask questions in the comment section. Increase your knowledge, participate in each workshop in the series. Each workshop builds on knowledge from the previous one, but each can be viewed individually. The presentations are recorded and archived. View anytime at the MMPL YouTube channel.

June 8 – General 3D printing intro: Brief intro into the world of 3D printing, giving you a strong foundation of knowledge to start 3D printing.

June 15 – Modelling, CAD Introduction for students: In this course you learn how to get a free student's license of fusion 360 and create some interesting 3D models, which can then be printed with the 3D Printer at the Mississippi Mills Public Library.

June 22 – Introduction to CNC Machining: This course is a general overview and live run-down of how to use a small CNC mill to create various objects.

June 29 – 3D Printer tuning: In this presentation we run-down the basics of how to calibrate and tune your 3D printer for not only good quality printing, but printing of other materials.

We also plan to offer summer STEM camps in July and more robotics programs in the fall with more exciting workshops to come.

Further Comments

- Without the support of the EKF, the Mississippi Mills Public Library could not offer the innovative program that provides community residents of all ages the opportunity to learn new skills and learn together.

- EKF funding helped the Library build on existing supplies and knowledge.

- This program shows how local funding and support multiplies the value and impact of federal funding of STEM.

- Starting a new program requires intensive training and skills development. Through this hands-on experience, library staff now have the skills needed to expand STEM programming into exciting new directions.

We could not be here without your support. *Thank you!*

Christine and staff of the Mississippi Mills Public Library