



Skills Ontario Guinness World Record Attempt Event 2021

Educational Guide & Attempt Guidelines

May 5 – 26, 2021

skillsontario.com/world-record-2021

Skills Ontario

Who we are:

Skills Ontario is a not-for-profit organization whose goal is to promote the skilled trades and technologies as viable career options for youth. Skills Ontario aims “to champion and stimulate the development of world-class technological and employability skills in Ontario youth.” Diversity, inclusion, and representation are top priorities.

Skills Ontario is committed to preparing Ontario’s youth for the highly-skilled economy of tomorrow. We partner with school boards, colleges, small businesses, labour groups, and governments to provide opportunities for youth to explore and develop skills for successful careers in the skilled trades and technologies. With 30 years of experience, Skills Ontario is a province-wide organization with a grassroots connection into the many communities we serve. Our programs represent a long-term investment in the lives of all Ontario.

What we do:

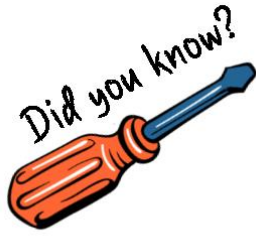
Skills Ontario is building Ontario’s skilled trades and technologies workforce. We enable and empower all youth, including women and Indigenous youth, to consider a career in the skilled trades and technologies. Engagement with students, teachers, parents, volunteers, employers, and mentors ensure our programs connect education, experience, and employment. We deliver in-school presentations across Ontario, host Canada’s largest skills competition, run summer camps for skills development and connect students with employers. We are focused on growth sectors such as construction and infrastructure, technology innovation, and hospitality services.

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Why a Guinness World Record Attempt

As a leader in promoting skilled trades and technologies, Skills Ontario wants to further increase awareness by participating and succeeding in a second Guinness World Record attempt; the largest number of people passing and using a screwdriver in a video chain. With the growing demand for skilled workers, our goal is to bring further attention to the trades while providing an exciting opportunity to use and learn about the screwdriver, specifically the Robertson. The attempt will have a focus on women in the trades, but will be open to anyone, including any age.



In 2017 Skills Ontario attempted our first Guinness World Record: Most people hammering a nail simultaneously. The number to beat was 250, and Skills Ontario did so by setting a new record at 299 people.

Read more about the attempt here: [Record Broken](#)



Women Pioneers in the Skilled Trades & Technologies



Construction: Marion Mahony Griffin

Marion was one of the world's earliest licensed female architects who received her training at MIT, graduating in 1894. A year later, she was employed by Frank Lloyd Wright where she was a big influence on Prairie Style Architecture. Some of her credits include: David Amberg Residence; and the Adolph Mueller Residence.

To learn more, check out: [8 Female Architects Who Made History](#)

Industrial/Manufacturing: Rosie Riveter & Veronica Foster

During the Second World War, hundreds of thousands of women answered the call and took over essential jobs in Canadian and US industries to produce desperately needed war material. These women, who at one point accounted for over 65% of the entire US aircraft industry, were known as “Rosie the Riveter,” and became an enduring symbol of the sacrifices and contributions women made during the war.



In Canada, 1.2 million women stepped in to work in various skilled trades careers. Of those women, 67% worked in the following sectors:

- 439,000 women worked in service;
- 373,000 women worked in manufacturing; and
- 4,000 women worked in construction.

Veronica Foster, or “Ronnie the Bren Gun Girl” was Canada’s precursor to Rosie the Riveter, representing the 1.2 million women in the trades.



To learn more, check out:

[5 Influential Women Who Affected Manufacturing](#)



Automotive: Florance Lawrence & Charlotte Bridgewood

Florance Lawrence is credited with creating the “auto signaling arms” which used flags that were remotely raised and lowered with a push of a button. These were used to signal which direction a car was turning. In addition, she also introduced a signaling system which allowed cars behind to know when you were stopping; a sign with the word ‘stop’ would flip up at the back of the car as a warning that the car was slowing down. It was triggered by pressing the break pedal. Lawrence did not patent either invention.



Charlotte Bridgewood, who is Florance’s mother invented and patented the automatic windshield wiper in 1917. Unfortunately, her patented expired in 1920, allowing automakers the opportunity to tinker with the idea. Cadillac became the first car company to include the automatic windshield wiper on their cars.

To learn more, check out:

[10 Women Who Shook the Automotive Industry](#)

Service: Coco Chanel

Coco Chanel revolutionized the fashion industry in the 1920s by designing and marketing casual outfits that were both elegant and comfortable to wear, a sharp contrast to the bulky corsets and petticoats that were popular prior. Her designs helped give the 1920s their iconic and distinctive style, and her fashion house is still producing stylish and unique clothes to this day.

To learn more, check out:

[10 Influential Designers in Fashion History](#)



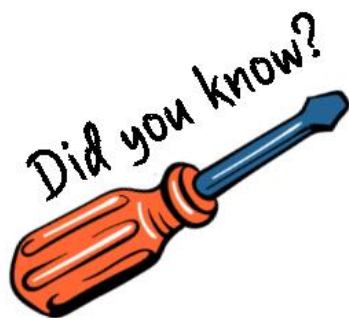
Technology: Ada Lovelace and Grace Hopper

Ada Lovelace is credited as the first computer programmer. She is known for drafting the plans for the Analytical Engine which could perform computations.

Grace Hopper was a pioneer in the field of computer programming. In 1952, she created a program which allowed us to give instructions to computers using words instead of machine code for the first time, revolutionizing the field

To learn more, check out:

[History of Women in IT: 6 Female Pioneers in Computer Science](#)



Our very own Jennifer Green, Director of Competitions and Young Women's Initiative, is a trailblazer in the skilled trades and technologies? Check out her bio below:

As a Skills Ontario and Skills Canada Alumna, long-term volunteer, and staff member of Skills Ontario, Jennifer Green is also a graduate of Conestoga College, an Industrial Mechanic Millwright by trade, and an Apprenticeship Youth Advisor for the Ontario Ministry of Labour, Training and Skills Development. With a history of promoting the skilled trades as top-choice career options and advocating for women to pursue these careers, Jennifer is a mentor, leader, and trailblazer.

EVOLUTION OF SCREWS AND THE SCREWDRIVER

3rd Century B.C.E	Archimedes is considered to have been the first person to invent the screw. However, his design only allowed for the transfer of motion rather than fastening things together.
1st Century B.C.E.	Early screws were made from wood and had a flat end rather than the pointed end we see today. They were commonly used in the production of wine and olive oil. The screws were turned using a spike stuck into or through a handle (similar to a modern day cork screw).
15th Century C.E.	Metal screws and nuts first appeared. These screws were turned with a wrench and had square and hexagonal screw heads.
16th Century C.E	Slotted screws started being found in armor.
1744	The first flat-bladed bit for a carpenter's bit was invented.
1770	Jesse Ramsden, instrument maker, invented the first screw cutting lathe.
1797	Henry Maudslay designed a large screw cutting lathe, capable of mass production of accurately sized screws.
1798	David Wilkinson also created machinery for mass production of threaded metal screws.
1880	The first handheld screwdrivers appeared.
1908	The Robertson screwdriver was invented by P.L. Robertson.
1930's	The Phillips screwdriver was invented by Henry Phillips. To learn more, check out Phillips Screw and Driver .

HISTORY OF THE ROBERTSON SCREW AND SCREWDRIVER



The Robertson screwdriver, also known as the square head screwdriver, was first invented by Canadian P.L. Robertson in 1908 to solve a common problem found with the flathead screwdriver; the flat head screwdriver would often slip out of place when fastening screws slowing down the production process. Robertson patented both the square head screw and corresponding screwdriver in 1909. Manufacturers like Henry Ford took to Robertson's design as it saved time on the assembly line thus helping Ford to produce more cars (specifically the Model T). Ford was so impressed that he reached out to Robertson about obtaining special licensing and having a say in how the screws would be made, but Robertson turned him down. In the end, Ford only used Robertson screws in cars manufactured in Canada instead of across North America.

In the 1930's, Robertson began to see competition from Henry Phillips who caught the attention of the American Screw Company with his new cruciform socket designed screw and driver. The advantage to this design was that it would "cam out" preventing damage to the screw from over torqueing. Because of this the Phillip screw starting show up in Cadillacs.

By the end of the 1940's the Robertson Company employed 500 employees and offered three different size screws and corresponding screwdrivers:

- Green (small square head which functions with screw sizes 5, 6, and 7)
- Red (medium square head which functions with screw sizes 8, 9 , and 10)
- Black (large square head which functions with screw sizes 12 and higher)



Robertson's screws and drivers thrived in Canada because of how rapidly they were integrated into the market. The Robertson screw and driver are still very common today in the construction industry as the driver allows for a cling fit making it easier when driving in screws vertically from above. Unfortunately, Robertson's patented expired in 1964 allowing for a number of knock-offs to be produced.

To learn more, check out [Robertson, Phillips and the History of the Screwdriver](#)

MOST POPULAR TYPES OF SCREWDRIVERS

Slotted Screwdriver (Flat Head)

- **Once the most common used screwdriver**
- **Can be used as a chisel in emergencies**
- **Can be used in Phillip head screws**



✂ Some careers that use a Slotted Screwdriver: Electricians, Precision Machining, Millwright

Phillips Screwdriver (Cross Head)

- Designed to “cam out” (come out of the screw head when the torque limit has been reached)
- Now the most preferred type of screwdriver and head combination



✂ Some careers that use a Phillips Screwdriver: Cabinetmaker, General Carpenter

Torx (Star)

- Originally used for security functions but now popular in commercial fields
- Has a high torque tolerance



✂ Some careers that use a Torx screwdriver: Network Security, Automotive Technicians, Electronics Technician

Hex (Allen Wrench/key)

- Most commonly used in bike maintenance, but very popular with furniture companies like Ikea



✂ Some careers that use an Allen Key: Motorcycle Technician, Bicycle Mechanic, Electric Motor System Technician

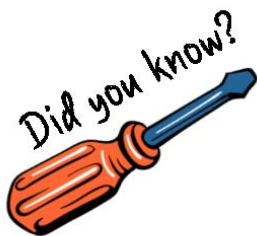
Robertson (square head):

- The least common of the screwdrivers (except for in Canada)
- Has the highest torque tolerance
- Most commonly found in the automotive and furniture industries



✂ Some careers that use a Robertson screwdriver: Drywall Finishers, Woodworker, General Carpenter

To learn more, check out: [14 Different Types of Screwdrivers and Their Uses](#)



P.L. Robertson created a “Handikit” that was exclusive to the Robertson Company and donated hundreds of kits to high schools and woodworking classes, plant visitors or anyone simply interested in the product.



Trades Professionals Talk Their Favourite Screwdriver and It's Impact!

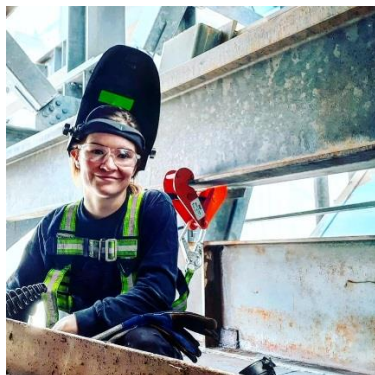
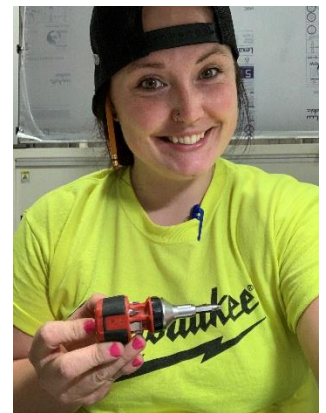


Lana Norton, Executive Director and Founder, Women of Powerline Technicians – Collaborating Organization

Powerline Technicians construct and maintain overhead and underground electrical transmission and distribution systems. My favourite screwdriver is the flathead because of the many uses it has. As a Powerline Technician we carry a flathead screwdriver in our tool belt. The screwdriver can be hammered into a pole to create an anchor point for us to hang a handline or a nosebag. In an emergency, a flathead can be an anchor point for a rescue line to help lower a co-worker to safety.

Andie Davidson, 309A Construction & Maintenance Apprentice Electrician, Eclipse Automation & KickAss Careers Ambassador - Collaborating Organization

One of my favourite screwdrivers for working in the automation industry is my Milwaukee stubby ratcheting multi-bit driver. I love the adaptability of being able to use any bits - Robertson, Philips, slot, or hex drivers and the ratcheting function allows me to get into and work in tight spaces.



Kate Parr, Level 3 Industrial Mechanic Millwright Apprentice, Diverse Mechanical Solutions & KickAss Careers Ambassador – Collaborating Organization

My favourite screwdriver would have to be a flat head! I commonly use flat heads while servicing electrical wiring on machines, removing machine covers/guards for maintenance, or sometimes even scraping and cleaning. A millwright's tool bag is always full of versatile tools, so I commonly carry a multi-bit screwdriver, but a flat head would have to be my essential!



GUINNESS WORLD RECORD™ Attempt Event 2021

Largest Online Video Chain of People Passing and Using a Screwdriver

Submission Date: May 5 – 26

*Note, all submissions must be received before May 26, 2021 to be eligible for the attempt. All video submissions will be stitched together and submitted to Guinness World Records on May 31 for adjudication. **All participants are required to electronically sign a photo video release form, and if under the age of 18, must be signed by a parent/guardian when uploading their video submission to the Skills Ontario website.**

The Skills Ontario Guinness World Record Attempt guidelines presented by Guinness must be reviewed fully before submitting your video. Failure to follow all guidelines may result in your video submission not being a part of the attempt.

Submissions will be accepted starting May 5, 2021 and close on May 26, 2021

GUINNESS WORLD RECORD: OVERVIEW

Attempt:

- Skills Ontario will attempt to break the record for the most people to feature in an online video chain passing and using a screwdriver.

Participants:

- Although the record attempt has a focus on women in trades, anyone of any age is permitted to submit a video
- Classes may participate, however, each student must complete and submit an individual video

Measurement:

- This record is measured in the number of videos which constitute the video chain*

**Video Chain: for the purpose of this record a video chain is a collection of video clips, depicting an action that is passed from one side of the video frame, to the other, edited together to form a chain that is a continuation of the action*

Required Materials:

- 1 commercially available screwdriver, as well as a surface or object where a screw can be inserted (piece of wood)
 - 1 screw (1inch or shorter)
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GUINNESS WORLD RECORD™ ATTEMPT: GUIDELINES & RULES

IMPORTANT: These guidelines should be read and understood by all concerned with the record attempt prior to the attempt – this includes every participant.

These guidelines are specific to our record attempt and must be followed. Should any part of these guidelines be contravened, our record attempt will be disqualified, without any right of appeal.

Rules for largest online video chain of people passing and using a screwdriver:

1. Each participant must be equipped with their own commercially available screwdriver, as well as a surface or object where a screw can be inserted
 2. The videos in the chain must be of a single individual receiving a screwdriver from out of frame (left hand to right hand) and passing the screwdriver out of the other frame.
 3. All of the individual must receive the screwdriver and use it to screw into the surface/item and pass the screwdriver in the same direction (i.e. all screwdrivers receiving from the left and passed right)
 4. **The screw must be completely screwed in prior to the participant passing the screwdriver to the next participant**
 5. A video clip can only be used once, any duplicate videos will not be counted towards the final total
 6. Only one video can be supplied per person
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Rules for ‘Largest online video chain’ records:

1. Each video clip must be a **minimum of 5 seconds** (unless specified above) of unedited footage
 2. The video chain must be dedicated solely to the specified action
 3. The subject must appear to be receiving the action from the edge of the frame camera left and then pass it on to the edge of the frame camera right.
 4. In order to count as a video of the specified action, the participant must be the most prominent subject within the video
 5. Each video must frame a unique person in order to qualify towards the final total. It is not permitted for an individual to participate in more than one video.
 6. **Each video must be filmed in the same aspect ratio (the ratio of the width to the height of the video) and the same camera orientation (portrait).**
***Please see the sample video**
 7. Videos may be contributed by different individuals and must be edited together by a sole entity into a single video containing all unique submissions.
 8. Videos cannot be cut from any pre-existing film or video clip.
 9. For the purpose of this record, heavily edited videos will not be counted. For example, the use of programs such as Adobe Premiere Pro to insert the subject into existing videos would not be permitted; any videos created using such programs must not count towards the final record.
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10. Green screen can be used for this record, as long as the subject of the video is the most prominent part of the video.
 11. Videos cannot be a recording of a screen displaying another video.
 12. Edited or altered versions of the same video will not be permitted.
 13. Participants can only appear in one video to be counted towards the final total. Any participant that appears in multiple videos can only be counted once.
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SUBMISSION GUIDELINES

Submissions will be accepted starting May 5, 2021 and close on May 26, 2021. Any submissions after this time will not be accepted into the record attempt. Skills Ontario will submit the completed video chain to **GUINNESS WORLD RECORDS™** on May 31 for adjudication.

All video submissions must be saved using the following name/format:

(name, length of video, action performed, and position in the video chain)

E.g. Lindsay C. 30 seconds, passing using screwdriver, middle

How to submit your videos:

- Participants must submit their video submissions to www.skillsontario.com/world-record-2021

IMPORTANT: participants are required to electronically sign a photo video release form, and if under the age of 18, must be signed by a parent/guardian when uploading their video submission to the Skills Ontario website.

Skills Ontario will notify you once your submissions has been received and accepted.