

YOUth Strategy

Transit in Your Community (TIYC) Program - Metrolinx & Civic Engagement, Grade 5 Lesson Plan

Grade: 5

Subject: Social Studies

Duration: 45 minutes to an hour

Program Title: Transit in Your Community

Lesson Title: Metrolinx & Civic Engagement

Learning Objectives

1. Understanding Metrolinx regional network
 - What is Metrolinx?
 - What type of transit does Metrolinx build and operate?
2. Presto
 - What is PRESTO and how do you use a PRESTO card?
 - What are PRESTO perks and PRESTO youth discounts?
3. Governments involvement in building transit.
 - Why do we need to build transit?
 - How do governments work together to build transit?
 - What are the types of machines that build transit?
4. Rail & Construction Safety.
 - Why is it important to be transit safe?
 - How can you be safe around transit?



Materials and Resources

1. Slide Deck - USB or Laptop.
2. Activity Material:
 - Design Your Dream City.
 - 11' x 17' blank paper.
 - Pencil, makers, crayons.
 - Transit Trivia Game.
 - Buzzers.
 - Game slides.
 - Projector.

Lesson Plan Details

Introduction Section - Slides 1 to 4:

- **Timing:** 2-3 minutes.
- **Purpose:** Introduce the speakers (if applicable), Metrolinx, and what we will be talking about today.

Question(s): What is Metrolinx?

Answer: Metrolinx is an agency under the Government of Ontario that was created to improve the coordination and integration of all modes of transportation in the Greater Toronto and Hamilton Area.

Question(s): What are we talking about today?

Answer: Today, we're going to talk all about transit and how it is built. We will tell you about the transit projects being built in your community and everyone that is involved in building transit. We will then talk about safety and do an activity together. We're going to leave some time to take any of your questions so try your best to hold them in your brains until the very end.



Metrolinx & Network Overview Section - Slides 5 to 15:

- **Timing:** 5-8 minutes.
- **Purpose:** The purpose of this section is to inform students about what Metrolinx has to offer, and the connecting regional network of upcoming and existing transit.
- **Lesson:** Metrolinx has a unique opportunity to plan, build, operate, and connect transportation in the Greater Toronto and Hamilton Area.

Question(s): Does anyone know what kind of transit Metrolinx builds and operates?

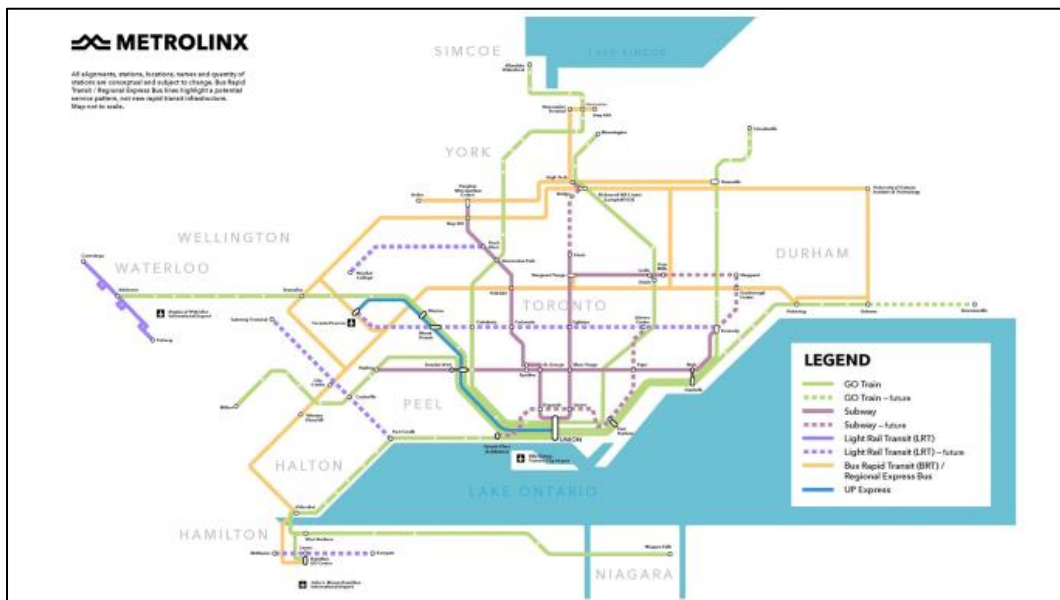
Answer: Metrolinx builds and operates GO Trains, GO Buses, LRT (Light Rail Transit), Subways, and UP Express.

Question(s): Has anyone every taken the GO Train or GO Bus? Where did you go?

Answer: Metrolinx, mission is to connect our communities, and the vision is to get you there better, faster, and easier. One of the ways we are working towards meeting these objectives is by building a regional transit network that allows people to connect across the Greater Toronto and Hamilton Area.

Inform: As you can see, Metrolinx has different modes of transit that connect various communities.

Show: Slide with Metrolinx alignment and Network.



Inform: As you can see, we have all these different modes of transit that connect various communities. For example, if you lived in Toronto and wanted to tryout a new restaurant in Hamilton you could, depending on where you live, take the bus to the Union Station and from there take a GO Train to Hamilton. Another example would be if you live in Hamilton or Kitchner and wanted to get to Pearson International Airport, you could take the GO Train to the Union Station and then take the UP Express to the airport.

PRESTO Section - Slides 16 to 19:

- **Timing:** 5 min.
- **Purpose:** Familiarize students with the PRESTO service, including how to use the PRESTO card on local and regional transit services, and PRESTO perks.

Question(s): Does anyone know what a PRESTO card is?

Answer: When people take transit, they can either buy a ticket or use a PRESTO card. For people who use transit a lot, a PRESTO card makes things easier and faster since they don't have to worry about buying tickets or carrying change for fares! They can load money onto their card online and tap on and off when boarding a train, bus, or subway.

Question(s): Did you know that kids (like you!) ride for free on GO Transit services?

Answer: Kids aged 12 and under travel for free on the GO Transit services across the Greater Golden Horseshoe region.

Question(s): What are the places you could GO?

Answer: You could go to Ripley's Aquarium in Toronto, a Blue Jays Game, a Toronto Maple Leaf's Game, Bird Kingdom, Great Wolf Lodge, and much more! (include other locations depending on region).

Question(s): Did you know that you can enjoy discounts with your PRESTO card at these places?



Show: Show slide with PRESTO Perks.

WHERE WOULD YOU GO WITH PRESTO (PERKS)?



Save on more than transit with PRESTO.
Find out where and how you can use your PRESTO card to unlock savings on exciting attractions, adventures and experiences.
Visit www.prestocard.ca/perks for more information.

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Inform: You can show your PRESTO card at these locations or when buying tickets and you can receive incredible discounts!

Building Transit Section - Slides 20 to 23:

- Timing: 5-7 mins.
- Purpose: The purpose of this section is to inform students about why we build transit. How all 3 levels of government work towards building regional transportation networks, the share the types of careers involved in building transit, and the type of equipment used to build transit.
- Lesson: This section teaches students the importance of building transit, how all three levels of government collaborate on regional transportation networks, the careers involved, and the equipment used in transit construction.

Question(s):

- Why do we need to build transit?
- What are some methods of transit?

Answer: Trains, buses, cars, subways, ferries...

Question(s): Why do you think we need to build transit? What benefits does it have?

Answer:

- Transit makes our lives easier.



- Transit saves us time.
- Transit can be better for the environment.
- Transit is safer.
- Transit helps serves a growing population.

Metrolinx works with all levels of government to build transportation networks -

Slides 21

Question(s): What are the 3 levels of Government?

Answer: Federal, Provincial, and Municipal.

Inform:

- The *Federal* Government is responsible for issues that affect the whole country.
- The *Provincial* Government is responsible for issues that affect the province.
- The *Municipal* Government is responsible for services in our cities.

Question(s):

- What do you think the federal government is responsible for?
- What do you think the provincial government is responsible for?
- What do you think the municipal government is responsible for?

Inform: When it comes to transit, the federal government is responsible for overseeing international and inter-provincial transportation, while the provincial government responsible for intra-provincial (or within the province) transportation. The municipal government looks after the municipal roads and transit systems. All three levels of government work together to build regional transportation networks.

Who is involved in Building Transit? - Slide 22

Answer:

- Engineers
- Architects
- Planners
- Government
- Contractors
- Construction Workers



- Communicators

Constructing Transit Section - Slides 26 to 29

- **Timing:** 5-7 mins.
- **Purpose:** The purpose of this section is to inform students about why we physically transit.
- **Lesson:** This section teaches students the reasons behind constructing transit systems and introduces the machines and equipment used in the construction process.

Inform: There are many machines used to build transit. Dump trucks, front loaders, tunnel boring machines, pile drivers, drill rigs, hydrovacs and mini excavators are common construction vehicles used to build transit. Machines and Building Transit.

Question(s): What types of machines build transit?

Show: Show slide with pictures of tunnel boring machine, pile drivers, dump trucks, and excavators.

WHAT TYPE OF MACHINES BUILD TRANSIT?

			
<p>Meet <i>Diggy Scardust</i>, a tunnel boring machine used to create the tunnel for the future subway extension in Scarborough.</p>	<p>Pile drivers are used to put large poles into the ground that can support the new stations and buildings for LRTs and subways.</p>	<p>Dump trucks are used to remove the dirt from tunnelling or building underground stations.</p>	<p>Excavators (or diggers) are used to dig holes or carry heavy equipment around the construction site.</p>
<p> METROLINX 26</p>			

Answer:

- Tunnel boring machines are used to create tunnels for future subways.
- Pile drivers are used to put large poles in the ground that can support new stations and buildings.



- Dump trucks are used to remove dirt from tunneling or building underground stations.
- Excavators (or diggers) are used to dig holes or carry heavy equipment around construction sites.

Inform: Other common construction vehicles you might see are front loaders, drill rigs, and hydrovac.

Safety Section - Slides 30 to 45

- **Timing:** 10 minutes
- **Purpose:** The purpose of this section is to teach students about how to stay safe and the importance of safety around transit, construction sites, roads, and level crossings.

Safety Moment - Slide 28:

Question(s): How do you stay safe in your community?

Answer: Wait for students to answer.

Construction Safety - Slide 30 to 33

Question(s): What are some types of Personal Protective Equipment (PPE) that protect workers on construction sites?

Show: Show slide on Safety on the Construction Site.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
SAFETY ON THE CONSTRUCTION SITE



Hard Hat

Hard hats or safety helmets protect from possible head injury due to falling debris and other related incidents.

Construction Vest

Every construction personnel wears a reflective safety vest to protect them from possible hazard due to lighting, weather changes, and other risks to enhance their visibility on site.

Protective Boots

Safety boots with steel toe cap coverings and soles protect feet from possible injuries.

Safety Glasses

Safety glasses or goggles reduce the potential risk of exposing the eyes and face from hazards.

Gloves

Safety gloves protect personnel when handling rough, sharp and excessive coarse materials.

 METROLINX



Answer:

- **Hard Hat/ Safety Helmet:** a hard hat or safety helmet protect from possible head injury due to falling debris and other related incidents.
- **Construction Vest:** Every construction personnel wears a reflective safety vest to protect them from possible hazard due to lighting, weather changes, and other risks to enhance their visibility on site.
- **Protective Boots:** Safety boots with steel toe cap coverings and soles protect feet from possible injuries.
- **Safety Glasses:** Safety glasses or goggles reduce the potential risk of exposing the eyes and face from hazards.
- **Gloves:** Safety gloves protect personnel when handling rough, sharp, and excessive coarse materials.

Question(s): How does Metrolinx keep you safe around construction?

Show: Show slide 'Safety around Construction'.



Answer:

- Traffic barrels guide motorists around construction sites. Traffic barrels indicate areas of active construction. Do not cut through, move, or relocate barrels.



- No left turns permitted. Left hand turns are prohibited in some areas due to construction. Signs will indicate turning restrictions for motorists where applicable.
- Reduced speed limits to 50km near active construction sites to protect onsite workers.
- Temporary bus platforms are installed for safety during construction. Wayfinders and bus stop markers direct passengers to the stop location.
- No U-turns permitted. U-turns are prohibited near active worksites for the safety of you and your passengers. Please pay close attention to signage prohibiting U-turns.
- Detour signs. Pay attention to detour signs which direct pedestrians and cyclists safely around work zones.

Road Safety - Slide 33

Show: Show slide on Road Safety



Question(s): How can you stay safe on the road?

Answer:

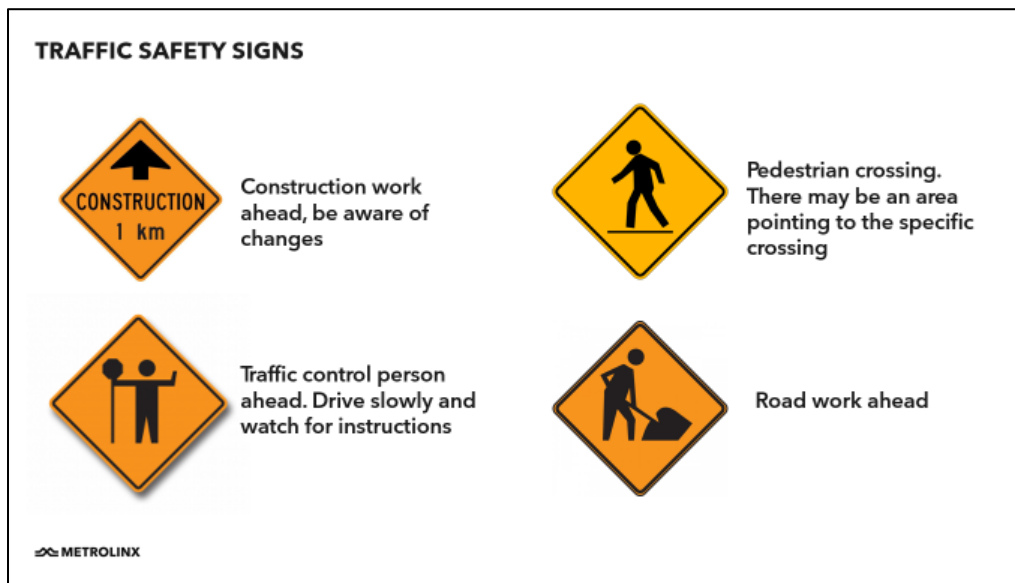
- Be mindful of your surroundings. Avoid distractions such as cellphones, headphones, and other devices that take your eyes (and ears) off the road. Pay close attention to nearby cyclists, pedestrians, and vehicle traffic.



- Be mindful of speed limits. Obey speed limits, especially in school zones.
- Don't text while travelling. Avoid using cell phones and other distractions while driving, walking, and cycling.
- Wear a mask: If you feel the to do feel free to stay a safe distance from people you encounter, or even war a mask!
- Watch out for school buses: Always stop for school busses.
- Don't take shortcuts. You may be directed around construction areas, pay close attention to signs and only cross the street at designated crosswalks and intersections.

Traffic Safety Signs - Slide 35

Show: Show slide with pictures of traffic safety signs



Question(s): What do these signs mean?

Answer: These are commonly seen traffic safety signs: Construction work ahead, Pedestrian crossing, Traffic Control Person ahead, Road work ahead.

Question(s): Safety is a shared responsibility. It is never safe to enter a construction zone. Can you point out why it would be unsafe?

Safety around Transit - Slides 41 to 50

Question(s): There is a saying at Metrolinx- "anytime is train time" -- can anyone tell me what this means?



Answer: Train time is anytime, in any direction. The average freight train can take over 2 kilometers to stop - that is EIGHTEEN football fields!

Question(s): What are some good safety practices around transit?

Answer:

- Hearing distractions: Don't listen to music or play on a device near the tracks, which can prevent you from hearing trains.
- Yellow line: When waiting on a train platform, stand well behind the yellow line.
- Don't run in front or behind a bus.
- Mind the gap. Watch out for any gaps between the platform and the train when boarding and existing.
- Holes along the fence: If you find a hole in the fence along the rails, let us know! Fences are there to protect you.
- Crossing tracks: Only cross the tracks at designated railway crossings. Crossing the tracks illegally can result in serious injury or even death.

Question(s): What is a level crossing?

Answer: A level crossing is where a railroad and a road cross at the same level. There are more than 50 of these on Metrolinx-owned corridors!

Inform: Remember, when crossing tracks - (1) Always use designated crossings, (2) Pay attention to signage and signals, and (3) never rush to cross ahead of a train.

Activity

- **Timing:** 15 minutes.
- **Purpose:** solidify the knowledge and information presented in an engaging, interactive game. Allows students the opportunity to apply active recall.

Activities:

- **Drawing Activity - Slide 46**
 - Ask the class: If transit could take you anywhere, where would you go?



- Instructions: Have students use their imagination and draw their dream location with the transit they would take to get there.
- **Find the Safety Moment! - Slides 47 to 49**
 - Ask the class: Can you spot all the safety issues in this photo? Take a close look and raise your hand to point out any hazards you notice!
 - Instructions: show slides and review with class. Another option is print off the slide and distribute it as a handout.
- **Transit Trivia Game (General MX) - Slides 49 to 59**
 - **Set up:**
 - Divide the class into teams of 4. Have each team choose a team name.
 - Keep track of scores using whiteboard and marker.
 - **Game Play:**
 - **Option 1:**
 - Have each team choose a colour as their team's name. (i.e. Red Team, Blue Team, Green team, etc.).
 - Teams “buzz in” their answers by saying their colour out loud. This should remove any ambiguity as to which team “buzzed first”.
 - Tip: Consider implementing a rule in which teams that get loud and disruptive may risk losing points.
 - **Option 2:**
 - Players can “buzz in” their answers by raising their hand or some other classroom object. Quizmaster (teacher) must be very attentive to hand-raising motions to ascertain correct order and ensure fairness.
 - **Game Rules:**
 - Each correct answer is worth 1 point.



- First team to buzz in first gets first try at answering the question. If they get the question wrong, the next team gets a turn at answering.
- Teams may not “buzz in” until after the entire question has been asked. Tip: consider implementing a rule where teams could lose points if they buzz in ahead of turn.

Conclusion

- **Timing:** 2 mins.
- **Inform:** In today’s lesson, we talked about the types of transit that Metrolinx builds and operates and how Metrolinx works together with governments to build transit networks across the region. We also talked about PRESTO cards and safety around transit and construction.
- **Question(s):** Does anyone have any questions?

