CURRICULUM-FOCUSED ACTIVITIES

This is intended to be a general guide on how to integrate active transportation into general and specific learning outcomes of different subjects in the Manitoba curriculum. Activities can be adapted to different age groups.

Social Studies/History

- Discuss how rules keep us safe when walking or biking (stop signs, crosswalks, looking both ways, listening to the crossing guard, signalling on a bike or car)
    - Have a classroom discussion on whether laws are effective at keeping people safe when they use non-motorized transportation. Ask who feels safe walking, who feels safe biking, whether they would like to walk or bike more, what their parents say about walking and biking to school
    - Discuss the pros and cons of tools designed to make streets safer for those outside of vehicles (new sidewalks, countdown crosswalks, different types of bike infrastructure, curb bumpouts, speed bumps, etc.)
- Take a walk through the neighbourhood, discussing local landmarks, block parents, community helpers, nature, favourite places, and other people walking and biking in the community. Plan for parent volunteers to assist with larger groups. The walk will vary depending on weather and time of year, but it is also an opportunity to teach students to dress for conditions, and this exercise is particularly valuable in winter, when many perceive it to be too cold to play outside. While in between stops, integrate songs about walking or different steps (e.g. hopping on one foot between sidewalk cracks). You can discuss any curriculum outcomes that tie into community, the local environment, and personal safety. Later, you can draw the route on a map, or have students draw the best part of the walk.
    - Elementary-Middle Years: Hold a field trip by bike train, a system where a group of children bike in single file, with adults every 4 children or so to supervise and model respectful riding. Stop in planned locations throughout the community for educational opportunities. Older students may be able to help plan the route. Ask for parent volunteers to help supervise.
    - Middle-Senior Years: Do a community walkabout/photovoice project: invite students to take photos of their school community, documenting the things they like or dislike, make them feel safe or unsafe, etc. These can include parks, places they meet friends, or artwork, but also areas where older students or adults are threatening, streets are difficult to cross, broken sidewalks, or areas where vehicles tend to speed or drive recklessly. Post photos in an art display.
- Discuss bikes as fun ways to get around. Who in the class bikes with their families? What do they like about it? Dislike? Do they ride or are they in trailers? Where do you go when you bike?
    - Compare the different ways people use bikes around the world. Why do they bike a lot in some places, and don't bike at all in others? Climate, affluence, cities are built for bikes, parents feel their children are safe on a bike, easier to store than a car. Highlight foreign countries- China, Denmark, Germany or Holland) along with closer cities, like Montreal or Portland, OR (a fun case study: Oulu, Finland's population continues to bike

in large numbers through winter, and there are many resources online about this community).
    - Discuss the role that bikes played in the development of societies:
        - How the bicycle contributed to the paving of roads in North America
        - How the bicycle contributed to the liberation of women
        - The bicycle's use in Canada, in earlier years and now
        - Olympic racing events or international racing events such as the Tour de France
        - The importance of the bicycle in other countries
- Have students map their world. Students make a list of the important places they visit often (their house, their school, their grandparents, the library etc.). Each student gets a poster size piece of paper. They are instructed to think about directions, maybe share a large City of Winnipeg map and point out where their chosen locations are in respect to each other. Then they draw each individual place they visit (talk about size… houses should be drawn smaller than airports), and connect them through a system of roads, or walkways depending how they travel from place to place.
- Photograph your world. Each student brings in printed photos of the places they love to visit in Winnipeg. Then map them on a large paper.
- Plan a route with your students. Using maps of the community, talk to your students about what could be a good route to cycle or walk between two points, including how to overcome the obstacles they may encounter en route.

Math/Science

- Assign an activity for students to do in the morning on the way to school (e.g. counting trees, make a note of the best thing they observed using their senses). Children can count up the totals and make a chart, or draw what they observed. Ask parents who have to drive to park a couple of blocks away and walk their child to school
- Use the BikeWalkRoll app to measure how students are getting to school, and use the numbers to do basic operations (If we have 27 students in class and 17 are driving, how many re walking?) Use these numbers to do guesses by multiplying (There are 20 classes of 25 kids in school. If 10 kids in each class are biking, how many kids are biking in the school?).
    - Have children use the scientific method to measure changes to the modes students are using after an event takes place (bike workshop, etc.)
- Have students hypothesize on the amount of traffic (cars, buses, bikes, pedestrians) there will be on a street over a given time, and then use the app "Counterpoint" to collect data on each mode. Repeating the experiment at different times of the year or during active travel events allows students to determine mean, median, and range values
- Use the BikeWalkRoll app to collect data on how the class is getting to school. Graph the numbers. Assign points for every child getting to school by active transportation and try to increase the numbers (e.g. 10 students are currently biking- assign 8 points for every student using active transportation. Set the goal at 100, which can be easily met if 4 more students change their travel habits)
- Have students Bike or Walk to Brandon/across Canada/ around the world, depending on the duration of the activity. Each student uses Google Maps to track the distance they travelled to school by active travel over a period of time. The activity continues until students hit their distance goal. Alternatively, data can be used to determine mean, median, and range of distances travelled per day or per week, or to estimate total number of steps taken for the whole class.

- As part of a lesson on measurements, have students estimate the following distances by breaking into pairs and having them stand at a distance from each other.
    - one to one-and-a-half metres (a good distance to ride away from the curb).
    - five to six metres (the distance before an intersection at which a cyclist should begin to move to the right if turning right).
    - 15 to 20 metres (a good distance before an intersection to look over your left shoulder in preparation for making a left turn).
- Discuss the various simple machines working together in bicycles (levers, wheels, axles, gears)
- Use bicycle stopping distance at different speeds to illustrate momentum (p=mv)
- Discuss students' experiences of air pollution, and how we can keep the air clean by choosing to walk or roll
    - Discuss major sources of air pollution (industry, power generation, transportation), and how it can be reduced or eliminated
- Discuss climate change, major sources of CO2, and the role of active transportation in reducing our carbon footprint
- Introduce the concept of the environmental footprint, relating our transportation choices to harmful impacts on the systems of the earth (air, water, and soil pollution)
- Discuss how wheels help us get places faster, meaning someplace that's too far to walk can be biked to, and a place that's too far to bike can be bused or driven to.
    - (Measure how long it takes to travel a certain distance by bike and by walking. Highlight how bikes can save us time and get us places faster because it's a more efficient use of our energy (using wheels and simple machines). Take a sample and using the average speed of walking, running, and biking, determine how far you could travel in an hour

Phys Ed/Health/Safety

- Bikes and Cars. Take students to a nearby street and have them guess how long it will take a car to reach a designated point. Make the connection between this activity and the decisions a cyclist has to make when entering an intersection.
    - Measuring stopping distance. Have a volunteer (preferably an adult) ride a bicycle across the parking lot and then stop as quickly as possible. Measure the distance it took the cyclist to stop. Discuss with the class how this illustrates that a cyclist must look ahead for hazards to be able to stop in time. Repeat the activity with the cyclist traveling at various speeds. You may also have the students guess -before each trial – how many seconds it will take for the cyclist to stop completely.
    - Have students set a personal goal to use a bike more often. Identify the barriers and incentives to doing so, and brainstorm ways to reduce barriers
- Imagine that you or a friend is injured while cycling or walking. Talk about how we can be prepared and what we can do when it happens.
- Hold a bike rodeo for your class to teach bike safety skills (signalling, effective braking, riding straight while shoulder checking). These are offered free from Manitoba Public Insurance at https://www.mpi.mb.ca/en/About-Us/Community/Safety-on-Wheels/pages/bikerodeo.aspx

Language Arts, English or French

- Use one of the following for inspiration on writing:
    - Bike-u. Write a haiku about biking
    - An interesting or amusing experience you had with your bicycle

- A bicycling crash or a near crash that you witnessed. Describe what you saw, tell what you think caused the crash. How could it have been prevented
- A bicycling trip you took or would like to take.
- A gift of a bicycle. Tell who gave the bicycle and who received it, and explain what the gift meant to each of them. This can be a true story or a make-believe one.
- How cycling will change the world
- Complete the following story. Be as descriptive as possible. “One sunny day I was riding my bike to my friend’s house, thinking about all the fun we were going to have riding our bikes. I started thinking about our favourite thing to do on our bikes, which was…”

Art

- Do some walk/shoe/bike-themed colouring and post the class's drawings in the hallway with a notice like “We’re biking to school for Bike to School Month!” / “We’re walking for International Walk to School Month!”
- Have students draw what they love about cycling.
- My dream bike. Students design their dream bike, or a bike of the future.
- Bike to School Banner. Students design a Bike to School Week banner or poster. It could be a banner which every students who bikes gets to sign.
- Bike decorating. Decorate your bike so it stands out on the road!
- Bike bandana, t-shirt or vest making. Talk about visibility and get bright neon fabric paint for kids to design their own Bike to School themed attire.
- Complete a Photovoice project—students use pictures and drawings to share how they feel about their commute to school.