

CONNECT YOUR COMMUNITY

ACTIVITY DESCRIPTION:

Design your own street

Recommended Grade Levels: 6-8

LEARNING GOALS:

- Problem Solving
- Critical thinking
- Be able to explain choices
- Express thoughts in a creative/alternative way

What's included:



Activity worksheet



Writing prompt

What you need:



Paper



Access to printer or computer to obtain project worksheet



Students' choice of materials to complete project

PROFESSIONAL SPOTLIGHT:



Hannah Pritchard
Pedestrian &
Bicyclist Data
Coordinator

Hannah Pritchard works as a pedestrian and bicycle Engineer to develop new guidance and reviews designs that benefit people walking and biking on Minnesota's Trunk Highway System. She encourages students to keep your eyes open while you're out on the road-look at bridges, streets, buildings around you. Be curious about how they are built and what function they play in the community. You'll start to think like an engineer in no time!

If you would like a MnDOT employee to connect with your classroom, please email Marcia Lochner at marcia.lochner@state.mn.us

ENHANCE YOUR LESSON:

There are many ways to scale this lesson and allow students to think critically about the connections in their community. In addition to the activity itself, the prompts below will help students bring what they've learned to the real world.

Day-long activity:

Facilitate a group discussion about the students' designs. Here are some questions to get started:

- ? Do you use bike and pedestrian facilities in your everyday life? What features are most important to you and your family?
- ? What was important for you to incorporate in your design?
- ? If you could implement parts of your design into the community, what would you choose and why?

Give out an at-home summary assignment. Here is a writing prompt that can help students reflect on the activity.



Write a half-page reflection about the project you completed. Talk about why you chose your project elements, how you completed the assignment, and which parts of your design would work in the real world.

Week-long activity:

Have students address a real bike and pedestrian issue in your community. Take a day to go out in the community and find an area of interest that students can come up with a solution for. Invite a local politician or transportation engineer to hear students present their ideas on how to solve the problem. Discuss the ways that solving this problem would help the community.



Before you begin, watch the **Connect Your Community** video on your own or with the class.

www.youtube.com/watch?v=73_JR4aVZ-c

Now that you've learned about different elements of street design and different ways that people get around—vehicle, bicycle, walking, rolling – it's time for you to create your perfect street! Will it be in the city or in the country? Will it include sidewalks, benches and bus stops, or buffered bike lanes and crosswalks? To *Connect your Community*, you will be tasked with designing a street or set of streets (in your neighborhood, city, a made-up village, or whatever you choose) that focuses on improving the lives of bicyclists and pedestrians. Your street design should include features that help bicyclists and pedestrians move in the area safely and effectively.

This project is an opportunity to use your imagination and build a community that works for everyone. Below are some instructions for your project—have fun and be creative!



How do I complete my project?

You can draw, paint, use design software, create a sculpture, make a video, write a story or any other method you choose—be creative!



If you need ideas on how to share your community design, ask your teacher.



What do I need to include in my design?



To complete your project, you must include at least five bike or pedestrian elements from the video in your design.



Name your street or community!



Your design should help improve safety and accessibility for those walking and biking in your community.



You can include real or made-up community landmarks: local ice cream shop, school, museum, and other landmarks you think your community wants to see in their neighborhood.

HOW WILL PEOPLE USE MY STREET OR COMMUNITY?



Think about ways to help different kinds of people—those who take a bus or walk home, those in wheelchairs, families with strollers, those who bike—how can your design help many people move through the area?



You may want to think of an existing street in your neighborhood or community and figure out ways to make it better. Could the road by your house use a bike lane? Are there ways to make it easier to cross? Do measures need to be put in place to slow down traffic?

BICYCLE AND PEDESTRIAN CONSIDERATIONS:

ADA (Americans with Disabilities Act): Requirements for ensuring equal opportunity for persons with disabilities in employment, state and local government services, public accommodations, commercial facilities, transportation, and accessibility.

Bench/ seating: Seating options for use of pedestrians in the area.

Bicyclist: Person travelling via bicycle.

Bicycle rack: Method to provide short-term bike parking in the traditional on-street parking space along the curb.

Bike lane: A portion of roadway that has been designated for preferential or exclusive use by bicyclists with pavement markings and designs, if used.

Buffered bike lane: A bicycle lane accompanied by a designated buffer space, separating the bicycle lane from the adjacent travel lane.

Complete streets: As defined by Michigan law, roadways planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive device, foot, or bicycle. MCL 247.660p.

Crosswalk: Any portion of a roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing by lines or other markings on the surface.

Curb extension: A section of sidewalk or a landscaped area extending into the roadway at an intersection or mid-block crossing that reduces the crossing distance for pedestrians and may help reduce traffic speeds.

Curb ramp: A combined ramp and landing to accomplish a change in level at a curb. This element provides street and sidewalk access to pedestrians using wheelchairs, strollers or other devices with wheels.

Cycle track: A bicycle facility separated from motor vehicle travel lanes, as well as sidewalks and pedestrians, by a physical barrier, such as on-street parking, a curb, or is grade-separated.

Detectable warning: Standardized surface feature built in, or applied to, walking surfaces or other elements to warn pedestrians with vision impairments of hazards on a sidewalk and or loading platform, such as the curb line or drop-off. Detectable warnings are also called truncated domes.

Landscaping: Any plants, trees, sod, or other natural enhancements to an area for aesthetics, shade, or other benefits.

Lighting: Lighting features to an area that can increase safety and visibility for those in the area.

Median island: An island in the center of a road that physically separates the directional flow of traffic that provides pedestrians with a location to safely wait for a gap in the traffic so they can finish crossing the road. This makes crossing the road easier for pedestrians by allowing them to cross in two stages and deal with one direction of traffic flow at a time.

Pedestrian: A person on foot or in a wheelchair.

Pavement markings: Painted line(s) or markings on any travel surface used to convey messages to roadway users. They indicate which part of the road to use, provide information about conditions ahead, indicate where passing is allowed, and more.

Rectangular rapid flashing beacon: A user-actuated amber LED beacon that supplements warning signs at non-signalized intersections or mid-block crosswalks. They are activated by pedestrians manually by a push button or passively by a pedestrian detection system. RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles.

Sidewalk: A paved path for pedestrians at the side of a road.

Shared use pathway: A bikeway physically separated from motor vehicle traffic by an open space or barrier, either within the highway right of way or an independent right of way. Shared-use paths also may be used by pedestrians, skaters, wheelchair users, joggers, and other nonmotorized users. Most shared-use paths are designed for two-way travel. Its minimum width is 10 feet. It is separated from vehicular traffic either by a barrier or a minimum lateral separation of 5 feet.

Shared roadway: A roadway open to both bicycle and motor vehicle travel.

Sheltered bus stop: A roofed structure for people to wait under at a bus stop.

Shoulder: A strip of pavement or gravel outside an outer traffic lane that accommodates stopped vehicles, emergency use, and lateral support of sub-base, base, and surface courses. Shoulders, where paved, are often used by bicyclists.

Trail: Non-descriptive general term referring to off-road pathway but with no standardized definition. Use of the term trail should generally be avoided as it may refer to many different types, including a coarse, unpaved hiking/biking route or a paved urbanized route.

Works Cited: AASHTO; NACTO; MnDOT 2020 Bicycle Facility Manual;
https://www.michigan.gov/documents/mdot/MDOTBicycleandPedestrianTerminologyBooklet_445994_7.pdf;
<https://www.dot.state.mn.us/bike/bicycle-facility-design-manual.html>