Transportation in Terrace Town

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Safe Routes to School
Wisconsin Bike Fed

WISCONSIN
BIKE FED

“How are people going to get from place to place in our town?”

DESIGN CHALLENGE!

- **You need a car to get around in most American cities.**

- **Automobiles pollute our air and many people—including kids—do not or cannot drive.**

- **We need your help to design a transportation system that is SUSTAINABLE and KID FRIENDLY!**

Mini-Lesson #1: Transportation Modes & Means

Modes of Transportation

Which is best for your town? Why?
Multiple modes? Why/why not?
Benefits of each? Downsides of each?

Public

- Bus
- Train
- Ferry

Private (Motorized)

- Car
- Motorcycle

ACTIVE!

- Walking
- Biking
- Wheeling

SAMPLE LESSON OUTLINE

1. Present images of street with several modes of transportation; have students list all they see in image (and any modes they know that are not present)


PORCELANOSA
5922
MTA
NYPD
NYPD
© NYC DOT
Flatiron
23rd Street
Partnership


London now

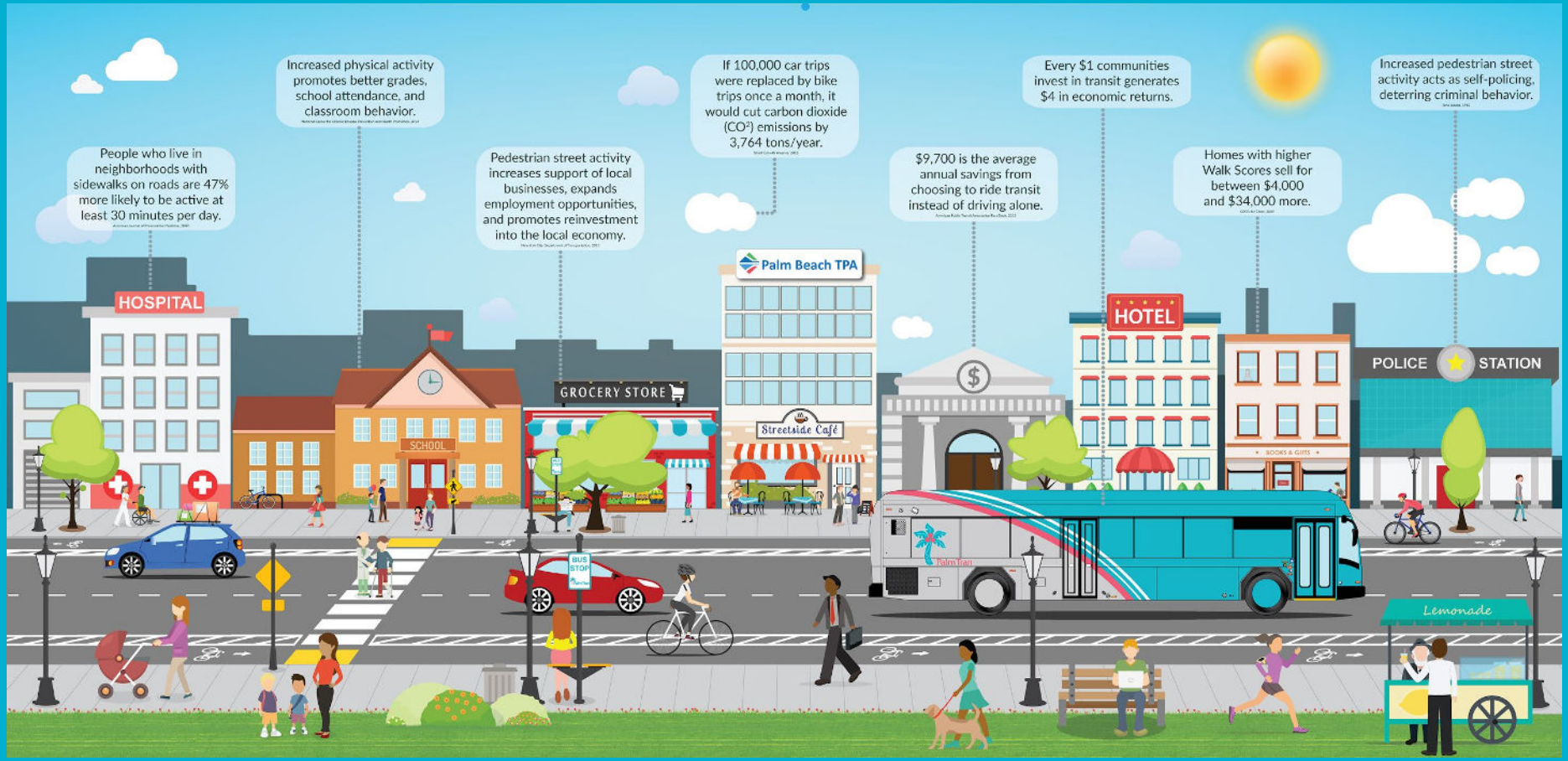

London 2040...can you imagine?
Transport for London
RECYCLED ROCKET CARS...!!
MORE SPACES for WALKING and CYCLING...
Buckingham Palace
Piccadilly Circus
MAKE THE FUTURE FUN!!
Nelson's column
ET TOWER
CENTRE POINT
MORE GREEN SPACES
THE BARBICAN
MAKE TRANSPORT FUN again..!!
BUS
BUBBLE BUSES & ROCKET CARS...!!
Royal Albert Hall
Houses of Parliament
London Eye
St. paul's
THE SHARD
GHERKIN
RAISED CYCLE LANES...
HOVER TRAMS & FLYING TAXIS...
MODULAR BUILDINGS...
HOVER TRAM
Tower Bridge
City Hall
Southbank
TATE MODERN
SKY TRAIN
EVERYTHING... ELECTRIC!!
a GREEN CITY with PARKS and CLEAN air...
CULTURE of RESPECT
CANAL & RIVER TRANSPORT...
TELEPORTATION PODS and ROCKET BOOTS...
BUS
UNDERWATER CARS...
@innovation_arts
@ArupGroup
#tfl2040
MOBILE WALKING + RUNNING PLATFORMS...
INCLUSIVE DESIGN...
SOLAR POWERED TRANSPORT
InnovationArts
ARUP

SAMPLE LESSON OUTLINE

1. Present images of street with several modes of transportation; have students list all they see in image (and any modes they know that are not present)
2. Whole class share out

3. Organize students into small groups; assign a mode of transportation to each group
4. Ask groups to discuss and list “pros” & “cons” of their transportation mode. Record on easel/notepad if possible.
5. Small groups present to whole class
6. DECISION TIME! Have students choose which mode(s) they want in their Terrace Town through a consensus-building activity of your choice. THEN...
7. START BUILDING!

“What makes for a good street?”


People who live in neighborhoods with sidewalks on roads are 47% more likely to be active at least 30 minutes per day.
Increased physical activity promotes better grades, school attendance, and classroom behavior.
Pedestrian street activity increases support of local businesses, expands employment opportunities, and promotes reinvestment into the local economy.
If 100,000 car trips were replaced by bike trips once a month, it would cut carbon dioxide (CO^2) emissions by 3,764 tons/year.
$9,700 is the average annual savings from choosing to ride transit instead of driving alone.
Every $1 communities invest in transit generates $4 in economic returns.
Homes with higher Walk Scores sell for between $4,000 and $34,000 more.
Increased pedestrian street activity acts as self-policing, deterring criminal behavior.
HOSPITAL
SCHOOL
GROCERY STORE
Palm Beach TPA
Streetside Café
HOTEL
BOOKS & GIFTS
POLICE STATION
BUS STOP
Palm Tran
Lemonade

Complete Streets

A Framework for Inclusive Street and Transportation System Design

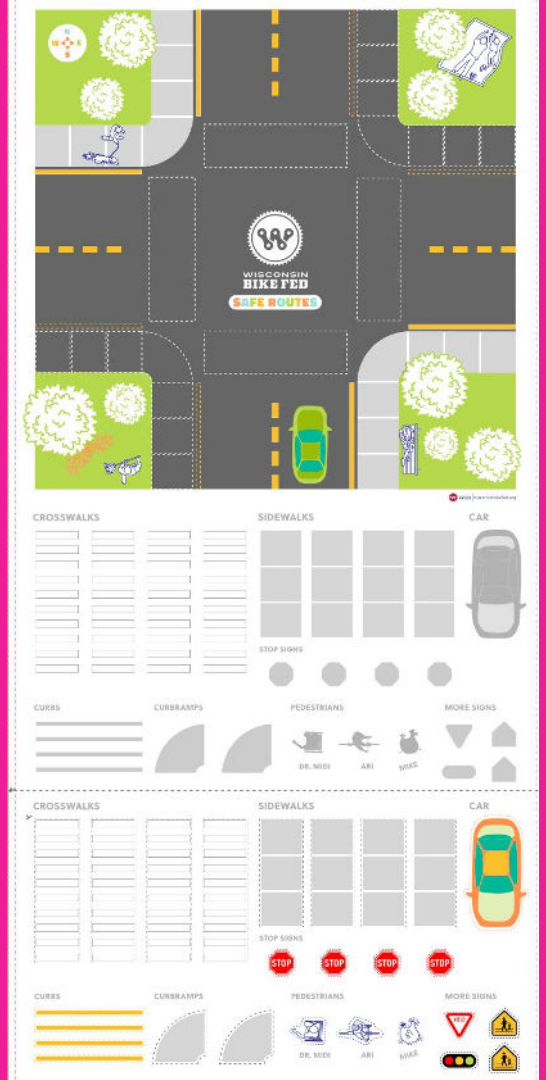
- Access for all people regardless of age and ability
- Supports multiple modes of transportation
  - Walking
  - Bicycling
  - Wheelchair use
  - Cars
  - Public Transit
- Linked to improved safety, health, economic, and environmental outcomes

Mini-Lesson #2: Street Design

DESIGN YOUR DREAM STREET

1. Set up a drawing station where kids can freely design a street using creative and realistic elements.
2. Consider taping a large paper roll to tables so multiple children can contribute side-by-side, forming a collective "dream city."
3. (Younger Students): Teacher/Mentor draws a basic outline of a few streets and intersections along the length of the paper as a starting point.
4. Instruct students to design their dream street. Include at least one thing that makes the street fun and one that makes it safe
5. Pose fun guiding questions and give feedback to encourage real-world and fantastical ideas alike.
    a. Where do people walk or roll on your street?
    b. What makes a street fun?
    c. What do you think would help kids stay safe on their way to school or the park?
6. DECISION TIME! Have students choose which dream street design(s) they want in their Terrace Town through a consensus-building activity
7. START BUILDING!

Building



Resource

What makes for a good transportation *system?*

Mini-Lesson #3: Transportation Networks

Getting There Safely

- Ask the students what makes transportation safe or dangerous and record their ideas:
  - How many cars, trucks, and other vehicles on the road; how fast vehicles move; accessibility of walking and biking paths; safe or unsafe places to cross roads; how much people are paying attention; easy to follow routes.
- Tell the students their job is to make a map of a town where as many kids as possible can get to school, the grocery store, and one fun place safely and using active transportation.
- You don't have room for everything, so you'll have to make some choices.
  - Space restrictions are a huge factor in transportation planning. In Madison in particular, there is limited space due to the lakes. So this reflects real issues transportation engineers have to think about.
- There is already a school and one busy street that you can't change.
- A few items MUST be included (can be adjusted as needed):
  - At least 5 houses and 1 apartment building
  - At least 2 different types of transportation options
  - A grocery store
  - At least 3 fun places
  - Anything else you think a city HAS to have
- Warn students they may not want to glue anything down until they know that's where they want it.
- Bring the group back together to discuss.
  - What worked well? What was difficult? What did you want to include but couldn't? Are there places that would be easier or more difficult to live? To get to? What ended up being near or far from where people live?
- Link to lesson plan and materials: Getting There Safely

OPEN FORUM

- Q/A
- Veterans share past experiences, best practices

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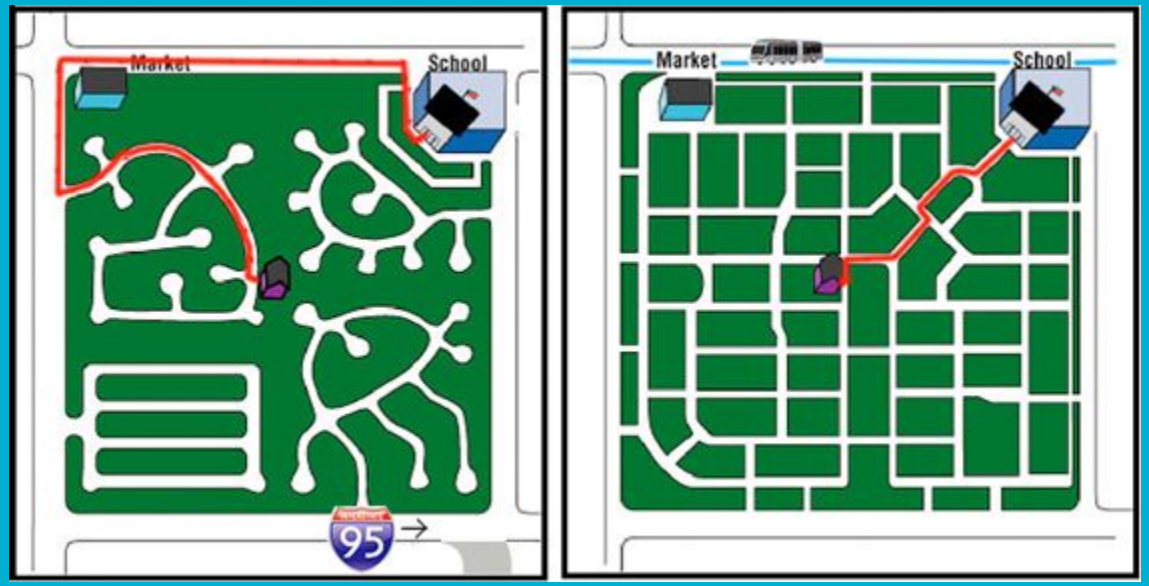
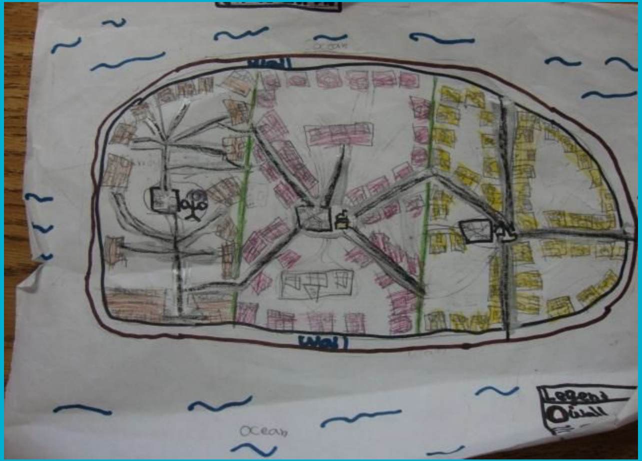
SAMPLE LESSON OUTLINE: ROUTES & CONNECTIONS

1. Present two maps to students
    a. One “traditional”neighborhood with gridded streets + one “suburban” with dead-end/ “Dead-worm”development
    b. Use real maps showing their school and the surrounding neighborhoods vs. another neighborhood or school that looks different than their own
    c. Mark several destinations/landmarks and public transit lines for students (see below)
2. Ask students to trace routes between a variety of destinations on both maps (home, school, grocery store, park, parent/family member’s job, friend’s house)
3. Have students compare the possible routes, measure shortest routes on each map
4. Discuss findings as a class
5. DECISION + PLANNING TIME! Ask students to plan a network of transportation paths to connect the districts, public spaces, and landmarks they’ve designed for their Terrace Town. GET THOSE ART MATERIALS OUT!


Market
School
95
Market
School


S.G.L.D City
= Trees


Map Key
Phone District
Toy Shopping District
Swimming District
Map Key
Λ=Mountains
=River
Circle City


Wall
Wall
Legend
Ocean


Guitar City Island
= Water
= boats

SAMPLE LESSON OUTLINE: VISUAL PREFERENCE SURVEY

1. Present images of various streetscapes
    a. Separated pedestrian path
    b. Tree-lined street with sidewalk, bike lanes
    c. Sidewalk and street on commercial strip
    d. Local highway with no sidewalks or bike lanes
2. Have students rank which they would prefer to walk, bike, etc. on or through
3. Discuss rankings as class. What did they choose? What did they like, not like?
4. DECISION TIME! Have students choose which street design(s) they want in their Terrace Town through a consensus-building activity of your choice. THEN .....
5. START BUILDING!

1

2

3

4

5

6

1

2

3

4

5

6

Word Work!

Transportation vocabulary

Transportation

active transportation

mode

mobility (justice)

fossil fuels

route

pedestrian

access

path

complete streets

Writing/Language Arts Activity

Describe your transportation system in a paragraph.

TOPIC SENTENCE: Define transportation system.

SUPPORTING DETAILS: Describe the modes of transportation and path system you designed for your city.

CONCLUDING SENTENCE: How is your transportation system kid-friendly and green (sustainable)?

Going Deeper...

- **LINKED LEARNING! Make lessons into **WALKING FIELD TRIPS****
- **“If you could create a new vehicle or way of getting around, what would it be?”**
  - Alternative fuels (wind, solar, biofuel, tidal)
  - New technologies (vactrains or vacuum tube rail, maglev, driverless cars)
- Climate Change
- Mobility Justice