

# LESSON 7: MAP MAKING: A HANDS-ON BIKE SAFETY EXERCISE

**Title:** “Getting to know and discover the neighborhood around us”

**TEACHING STYLE:** Adult, parent/volunteer, teen assistants

**CLASS SIZE:** 6-12

**COMPETENCY OBJECTIVES:**

Upon lesson completion, students will:

1. Demonstrate understanding of definition of “map”
2. Be able to locate features and landmarks on maps provided
3. Indicate road/traffic hazards found in neighborhood where class is taught
4. Use scale and rulers to calculate distances between features on maps provided
5. Present to peers features on maps created in class, including cycling hazards

**TIME REQUIRED:** 2-3 hours

**MATERIALS NEEDED:**

YBEN safety postcards

Local city (or county) maps of varying scale and detail. Pictograph or cartoon maps.

Paper or poster board (17" x 24" or larger). Can also use roll of newsprint or butcher paper.

Pencils, crayons or colored markers.

Surveys for before and after the map making exercise.

Camera (disposable or other) (video camcorder also suggested).

## INSTRUCTIONAL ACTIVITIES

Post a variety of maps around workspace. (City map, state map, world map, pictograph/cartoon maps, topographic, previous student produced maps, satellite maps of earth).

Discuss traffic safety hazards (see appendix), invite group of youth to help map the neighborhood to show points of interest as well as safety hazards to watch out for. Inform group that they will be asked to select 3 most informative and clear maps for “honorable mention” at end of exercise. 15 minutes

Hand out map knowledge survey (see appendix). Collect and discuss reasons for mapping and reading maps. (Knowing how to find places of interest and noting hazards for cyclists and pedestrians. Also planning adventure trips to get around the neighborhood or other places).

30 minutes

Discuss surveys. Include definitions of maps, why are they useful. Show and discuss various types of maps (city, state, world, topographic, pictorial and cartoon). Discuss scale and legends. 20 minutes

Invite youth to draw maps of the “neighborhood where we live”. Things to include: your home, your school or the closest school, parks, bus routes, places of interest, road and street hazards (see appendix). Discuss scale and grids. Sketch in sample map on board inviting youth to contribute places of interest. Pair youth, preferably those that live on same block or close to each other. Give them 30 minutes to sketch in grid and points of interest. Invite each team to present their map to the group showing points of interest and hazards to watch out for.

If more time is desired, either add to this session or schedule next session to complete maps. When maps are completed (another 30-60 minutes), post maps around walls of room. Ask youth to review each map for ease of reading and points of interest. Note different ways of making maps. Take photos of group at end of this session with maps. Leave maps posted, add photos of map makers and have youth sign and date their maps.

Tell group that next session will involve planning an adventure trip using map skills and available maps. Be sure to talk about street hazards including advantages of taking less traveled streets and benefits of riding in parks and on trails where auto traffic is limited or absent.

Suggest games using maps (scavenger, treasure hunt, orienteering) and schedule if time permits.

## EVALUATION

Hand out survey before and after map making sessions(s) to indicate change in map reading skills. See appendix for suggested questions for survey.

If enough adults available, plan varying routes to rendezvous at selected site. Select youth to serve as navigators on bike ride. At destination, debrief and ask each team to describe any problems navigating with their maps and routes.

Plan longer ride and have youth plot course using safest streets and with stops at points of interest. Picnic lunch at destination provides time to discuss how ride went.

Video camera very helpful to watch later both as review of ride and to observe traffic safety skills exhibited by group--invite group to critique themselves.

## APPENDIX

### Safety Hazards

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Bus routes	Busy streets	Alleys	Pot holes
Broken glass	Opening car door	Railroad track	Dogs
Intersections without stop signs		Intersections	Driveways
Wet streets	Gravel / sand	Steep curves / hills	

Survey (suggested questions--you may want to create or add your own)

1. Have photocopied maps to hand out that can be marked by each youth or team.
2. Give us your own definition of a "MAP".
3. Given city map, locate your home on the map.
4. Locate your school or nearest school.
5. Locate local library, park, other points of interest.
6. What scale is this map drawn to?
7. How far is it from one point of interest to another indicated on map.
8. Using a color highlighter, plot a route from your home to nearest. school, park, library.
9. Using ruler and string, calculate how far it is to nearest  $\frac{1}{2}$  mile in question above
10. Locate your city and the state capital on a state map. Calculate the distance from your city to the state capital.