

GENERAL INFORMATION AND INSTRUCTIONS

There are many ways of presenting this public works unit of instruction. The information, activities, and resources have been designed to help public works professionals and teachers who have limited experience in presenting information on public works. This versatile curriculum is designed to allow you the flexibility to adapt it according to the amount of time allotted, the needs and ages of the children, and the public works activities and area you select as your focus.

Lesson Plan 1: Living in Communities and *Chipper's Adventures in Public Works*. APWA recommends that if you only have a limited amount of time to spend with the children, that this lesson plan be the one you present. It provides the children with a broad overview of the world of public works.

If you have more time, then combine Lesson Plan 1

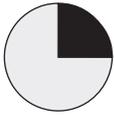
with any of the other four lesson plans. This public works unit of instruction consists of five lesson plans:

- Lesson Plan 1: Living in Communities and *Chipper's Adventures in Public Works*
- Lesson Plan 2: Construction
- Lesson Plan 3: Traffic and Transportation
- Lesson Plan 4: Solid Waste
- Lesson Plan 5: Water and Wastewater

The table below outlines the materials, the activities and resources needed, and the time allotment to complete each lesson plan.

We welcome your comments and suggestions for improving this curriculum and encourage you to complete the User Evaluation found on page 41 of this Instructor's Guide. You may also contact the APWA marketing department at 1-800-848-APWA if you have any questions or comments.

APWA hopes you enjoy *Discovering the World of Public Works!*

TOPIC	MATERIAL NEEDED	ACTIVITIES & RESOURCES	TIME ALLOTMENT
Lesson Plan 1: Living in Communities 	Instructor's Guide p. 5-7, <i>Chipper's Adventures in Public Works</i>	Quiz found starting on page 31 in <i>Chipper's Adventures in Public Works</i> Public Works is Everywhere You Look, Workbook for Children (WC), p. 4 Four Areas of Public Works, WC, p. 5	1 hour 
Lesson Plan 2: Construction 	Instructor's Guide p. 8-11	Construction Tools and Equipment, WC, p. 6 Construction Picture Search, WC, p. 7 Spotting a Construction Worker, WC, p. 8 Construction Journal, WC, p. 9 Construction Find-a-Word (optional), WC, p. 10	45 minutes  <i>includes optional activity</i>
Lesson Plan 3: Traffic and Transportation 	Instructor's Guide p. 12-15	Traffic and Transportation Maze, WC, p. 11 Signs in My Community, WC, p. 12 Looking at Transportation, WC, p. 13 Transportation Secret Messages, WC, p. 14-15	40 minutes  <i>includes optional activity</i>
Lesson Plan 4: Solid Waste 	Instructor's Guide p. 16-19	Solid Waste Math Sheet, WC, p. 16 What's In America's Trash, WC, p. 17 How Trash Travels from Home to the Landfill, WC, p. 18 Solid Waste Art, WC, p. 19 Solid Waste Alphabet Game, WC, p. 20	1 hour 
Lesson Plan 5: Water and Wastewater 	Instructor's Guide p. 20-22	How Water Flows To and From Our Homes, WC, p. 21 Water Matching, WC, p. 22 Water Word Games, WC, p. 23 My Life As a Drop of Water, WC, p. 24-25	40 minutes 
Culminating Activity Thank You Letter	Instructor's Guide p. 23	Thank-You Letter, WC, p. 26	15 minutes 

NOTES TO THE INSTRUCTOR

At the beginning of each lesson plan, you'll notice a time allotment for each lesson, the learning objectives, and a list of vocabulary words. The vocabulary words are defined in the glossary found on page 36–37. These words can either be reviewed prior to implementing the lesson plan, or as you are proceeding through the lesson.

Bold italic text in shaded boxes represents questions or statements to be directed to the children.

TIME ALLOTMENT:
40 minutes

LEARNING OBJECTIVES:

1. Give examples of types of transportation (cars, trucks, trains, buses, etc.).
2. Explain why traffic signals and signs are important.
3. Name services that public works employees perform in the area of traffic and transportation.
4. Identify traffic signs and their meanings.
5. Identify at least five traffic safety rules.

VOCABULARY WORDS:
Potholes
Safety
Traffic safety
Traffic signals
Vehicle



LESSON PLAN #3: TRAFFIC AND TRANSPORTATION

How do you get from place to place? Maybe you walk, maybe you ride a bicycle, or maybe you ride in the car with someone. No matter how you get around, guess who you can thank for making sure that the streets and sidewalks are there for you? Public works employees!

What types of transportation do we have today to get around?

Record the children's responses on the board or (if old enough) have the children take turns performing this task.



Walking
Cars
Airplanes
Buses (school and public)

Bicycles
Trains
Ships or Boats
Helicopters

Typical answers you may get from the children are in a speech bubble and are italic.

NOTES:

All key learning points will be presented in black stop signs with the words, "Stop & Make the Point."

**STOP &
MAKE THE
POINT**

What is public works?
Public works employees provide services to the community—making it a healthy, safe place to live, work, and play.

Answers to all of the activities in the Workbook may be found beginning on page 25 of the Instructor's Guide.

Please Allow:
5 MINUTES
for this activity.
Answers are on page 29.



Extra activities are called out with a Detour box.

Bring a four-to-five pound bag of garbage with you to show the children what that looks like.

TIME ALLOTMENT:
40 minutes



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LESSON PLAN #3: TRAFFIC AND TRANSPORTATION

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NOTES:

" *All of these are ways that we get around the community that we live in. What things can you think of that public works employees do to help keep our traffic and ways of transportation moving?*

Record the children's responses on the board or (if old enough) have the children take turns performing this task.



Keep traffic signals working.

Keep the sidewalks level.

Take care of street lights so we can see better at night. Paint the center lines, curbs, and arrows on streets that let cars and other vehicles know where they need to stay.

Repair potholes (large holes in the streets) so that they aren't dangerous to drivers and passengers.

Remove snow from the streets and roads during the winter.

Operate public buses and trains.

Did you know that taking a shower uses about 20 gallons of water? Taking a bath uses about 30 gallons of water. Just washing your hands and face uses about a gallon!

How can you conserve water?

Record the children's responses on the board or (if old enough) have the children take turns performing this task.



- Don't leave the water running while you brush your teeth.
- Don't leave the water running in the shower while you are soaping up.
- Don't leave the water running when you are washing the dishes.
- Tell an adult when you notice water dripping from any faucet.
- Use the dishwasher only when full.
- Use the washing machine only when full.
- Keep cold water in the refrigerator so you don't have to leave it running until it gets cold enough to drink.
- Don't water the lawn every day.



Please Allow:
10 MINUTES
for this activity.
Answers are on page 34.

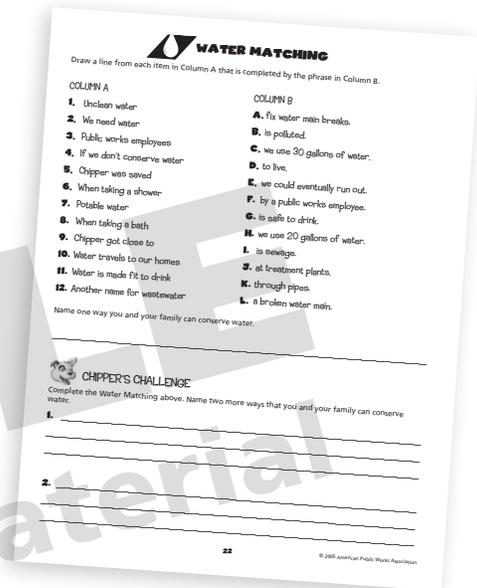


ACTIVITY:
Water Matching

Now please turn to the Water Matching Activity on page 22 of your Workbook for Children. When you are finished, we will review the answers together.

We have talked about the importance of water and how to conserve water. If water isn't clean, it is polluted. How does water get polluted?

Record the children's responses on the board or (if old enough) have the children take turns performing this task.



People, farms, animals, offices, factories, pesticides, and oil from tankers.



What can you do to help with keeping our water clean?

Record the children's responses on the board or (if old enough) have the children take turns performing this task.

- Compost grass and yard clippings.
- Put all trash in a trash can, don't throw it in a storm drain.
- Don't use fertilizers before it rains.
- Clean up after your pets.
- Wash your car on the grass, not the driveway.
- Don't flush paint, chemicals or pesticides into the sewers.

