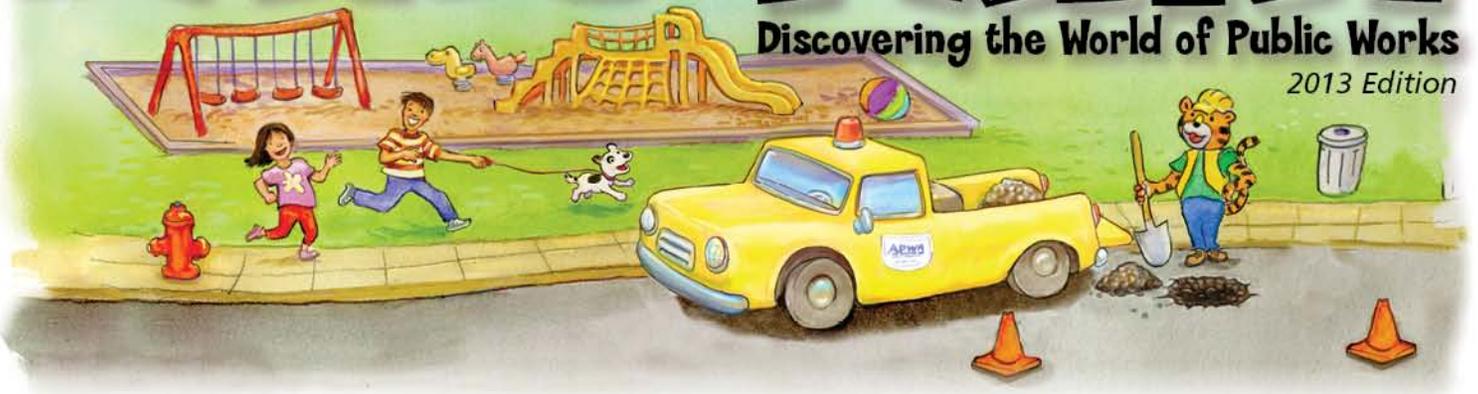


PAWS PRINT

Discovering the World of Public Works
2013 Edition



CELEBRATING PUBLIC WORKS



Public Works Works for You!

You might ask "What is public works?" Public works is services provided to the public, used by the public, and usually paid for by their tax dollars.



Public works can be found all around you. It is transportation (how people travel), construction (how public facilities are built), water and wastewater (how water is cleaned and goes through pipes) and more. You might have seen or used public works projects without knowing who did the work.



Remember, it's because of public works that your community is a better, safer place to live, work, and play. Look at these pictures—are any of these services familiar to you?



What Is National Public Works Week?

Are you ready for National Public Works Week? We are! In fact, we are so excited; we want you to celebrate with us. National Public Works Week (NPWW) began in 1960. It is celebrated the third full week of May, which this year is May 19–25, 2013, in cities all over North America! What is it that we celebrate? The men and women of public works, of course! NPWW is when we think of all of the great things that the people of public works do. Why do they do them? To make your community a better place to live, work, and play. 🐾



This year's National Public Works Week poster was created by Jannie Ho. The theme is about the quality of life brought to communities around the world. We are able to have clean water, safe streets and neighborhoods, efficient traffic and safe clean communities, "Because of Public Works..."

NPWW '13 Theme: Because of Public Works...

The theme for this year's NPWW is "Because of Public Works..." This theme is just the beginning of *many* important sentences. For example... "Because of Public Works we have clean water to drink." Or, "Because of Public Works the landfills contain less recyclable material." Of course, this theme is also the *end* of great sentences like, "The icy roads were made drivable *because of public works.*" Or... "No one was hurt by the downed power line *because of public works.*" The list goes on and on.

The next time you walk down a sidewalk, play in a public park, or ride your bike down a bike path... just stop. Take a breath. Look around. And discover how many things you see, use, and enjoy every day... because of public works. 🐾

Public Works SuDoku

Because of public works, there are so many colorful signs, symbols, and objects all around your city. Some of these objects are printed in this challenging SuDoku puzzle!



Rules: Draw each of the objects to complete the puzzle. Every row (left to right) must contain exactly one of each object. All the while, each column (top to bottom) should contain one of each object, too. When you're done, you'll know that you solved the puzzle when every 2 x 3 grid also contains one of each object! 🐾

A Visit from Sandy

When 2012's Hurricane Sandy struck the northeast coast, public works employees were ready for action! Everyone from emergency services to parks and recreation. From transportation to waste collection.

Here are some of the many things that come into play when an unruly guest blows in to town.

Early Warning

The storm's path is tracked carefully through the National Weather Service. This gives public works officials valuable information as they ask:

- Should shelters be created for citizens?
- Will sandbags be needed for flooding?
- How much fuel should be gathered for generators and vehicles?

Preparation

Public works equipment and teams are assembled. Lines of communication are created with community leaders. These leaders can be:

- the mayor
- the public works director
- the police chief
- the fire chief
- and even the governor.

Public works employees prepare the city by:

- Setting up shelters and comfort stations
- Preparing emergency fuel vehicles
- Getting ready for possible flooding
- Preparing for loss of power and water
- Assembling crews and supplies to repair roads, bridges, and public buildings

If an evacuation is needed, all departments work together to clear routes and provide transportation. The police, public works, and the fire department make sure everyone gets out safely.

Evacuation –
when citizens leave a dangerous area

This is the hurricane
evacuation route symbol.



This is what it looked like when Hurricane Sandy hit Seaside Heights. Can you spot the flooded rollercoaster?

Re-Entry Operations

After the storm, teams are sent in for search and rescue operations. Other workers inspect the area for health and safety.

Public works plays a big role with re-entry operations. They remove debris from roads, clear downed electrical wires, and help divert floodwater.

After areas are deemed safe, there is a controlled re-entry of citizens.

Clean Up

Roadways are cleared so public works crews can begin repairs. Bridges and roads are inspected for damage. Debris is removed from streets and drainage basins.

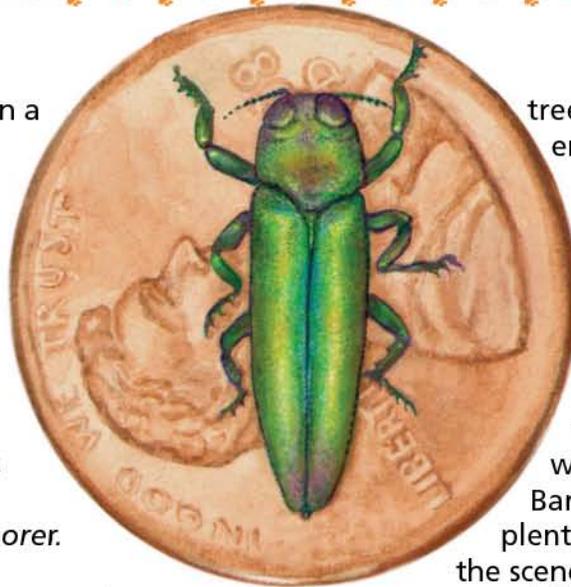
Because of public works, the storm-ravaged city will be back to normal as soon as possible! 



A Boring Beetle

How can a beetle no larger than a penny cause so much trouble?

In October of 2012, nearly fifty ash trees had to be removed from the Village of Barrington, Illinois. The Barrington Public Works Department inspected over seven thousand parkway trees and discovered that many trees were infected by a bothersome beetle called the *emerald ash borer*.

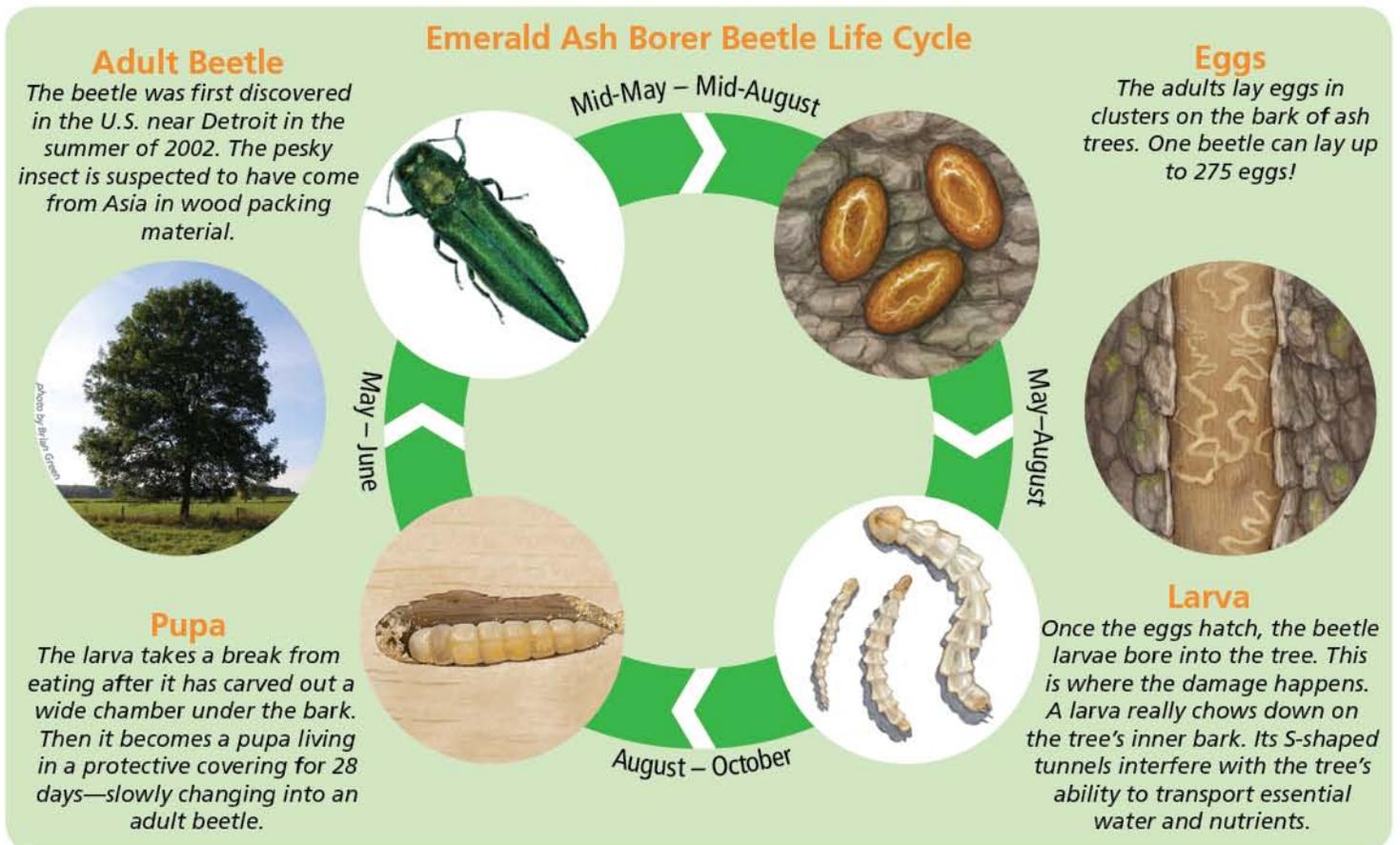


tree bark, eventually killing the entire tree.

The public works employees could treat the trees, but there was no guarantee that the trees would survive. Instead, they decided to replace the trees to save time and money. Because of the public works department, the City of Barrington parkways will have plenty of healthy ash trees to keep the scenery beautiful as well as break up some of the street noise.

The beetle is called *emerald* because of its sparkling green color. The "Ash" in its name comes from its favorite tasty tree—the ash tree. And it's a borer, not because it puts people to sleep with boring conversation. No, it bores, or gets under,

Now, let's follow its life cycle and discover some interesting facts about this not-so-boring beetle...



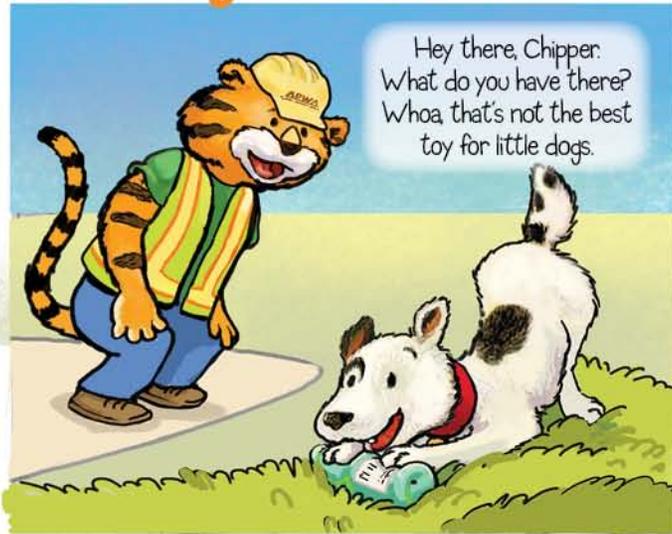
There's one bird that finds both the larvae and pupae quite tasty – the woodpecker.

So there you have it. The life of the tiny beetle that has killed millions and millions of ash trees across North America. Actually, the adult

beetle barely nibbles on the tree leaves. As you learned from the life cycle, the larvae are the real culprits. Maybe the public works department of Barrington, Illinois, should put some woodpeckers on the payroll to help keep their parkways full of beautiful ash trees!



Something to Chew On...



Hey there, Chipper.
What do you have there?
Whoa, that's not the best
toy for little dogs.



Let me give you something
else to chew on... like where
this bottle ends up after
the public works recycling
program gets hold of it!



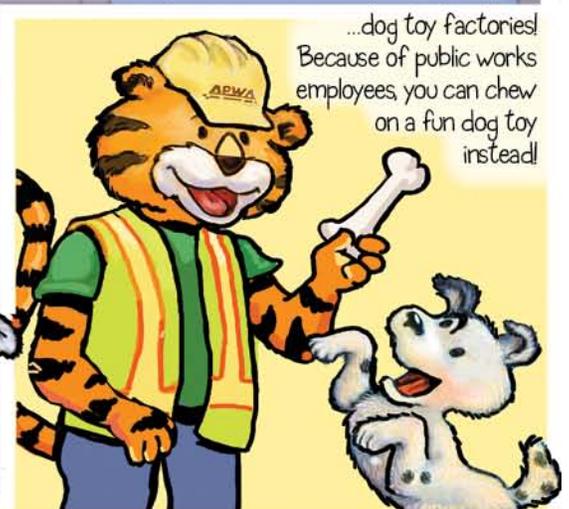
That plastic bottle of yours gets taken to a recycling
center along with paper, glass, and metal cans.



Once the plastic bottles are separated out,
they get their labels removed and are cleaned



The clean bottles are shredded and then melted down into little plastic
pellets. These pellets are sold to companies all over the world, including...



...dog toy factories!
Because of public works
employees, you can chew
on a fun dog toy
instead!

Did You Know...

- ...it takes nearly 700 years for a plastic bottle to degrade in a landfill?
- ...recycling 1 ton of plastic bottles frees up 7.4 cubic yards of landfill space?

- ...Americans use approximately 4 million plastic bottles every hour?
- ...and only about 1 million of them will be recycled?

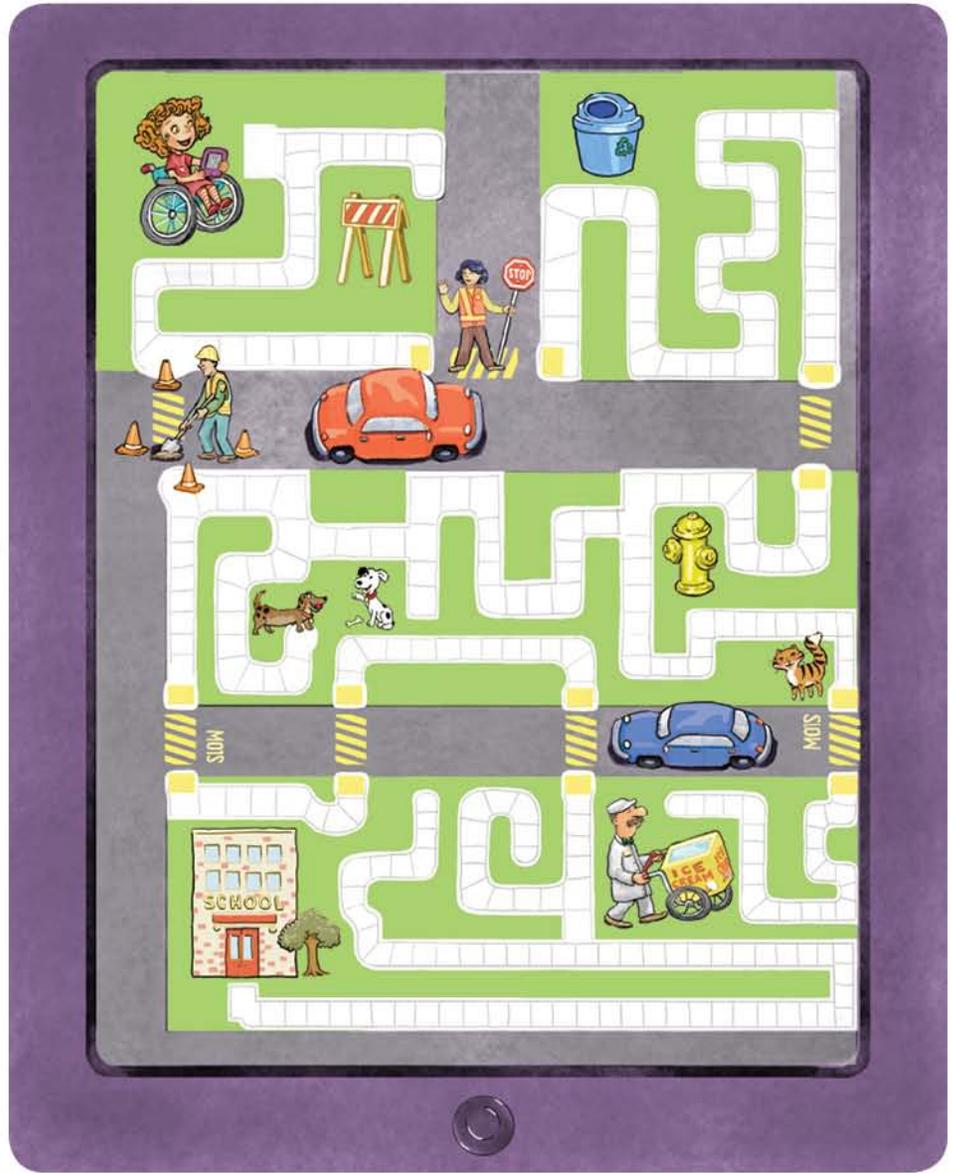
citations: niu.edu
& earth911.com

Ramping Up with New Technology!

The public works department of Minneapolis, Minnesota, saved a quarter of a million dollars by using iPads to inventory the city's 15,000 pedestrian curb ramps.

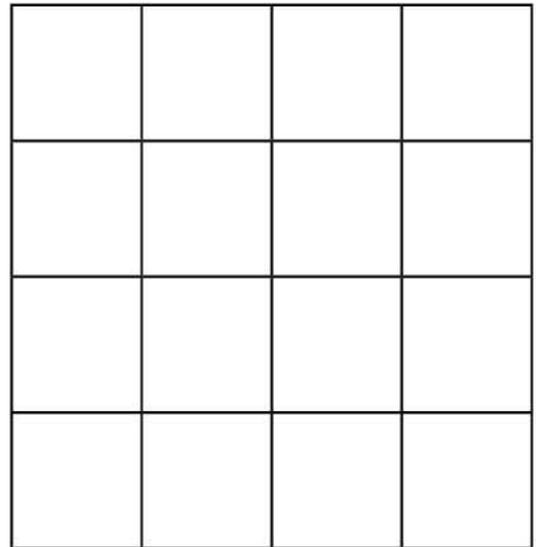
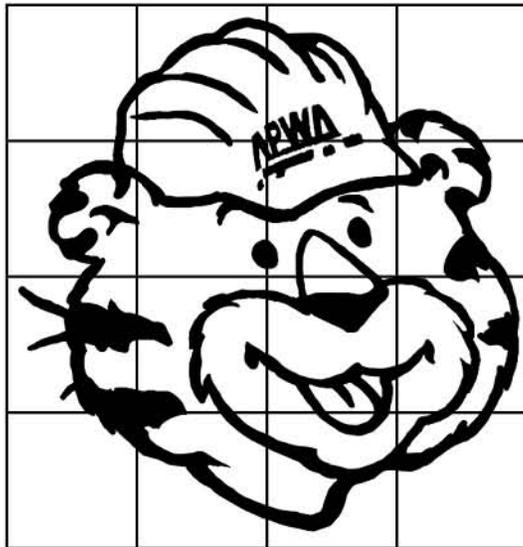
Using the iPads to photograph each curb ramp, a database was created for later use. Now public works employees can pull up any curb ramp in the city to see if it is in need of repair or improvement. Because of public works, citizens in wheelchairs will have an easier time traveling the Minneapolis sidewalks.

Help Jessica get to school by using the sidewalks, crosswalks, and curb ramps. When you're done, count all the curb ramps and see how many you can inventory!



Draw P.W. PAWS

Public works handles the "big picture" by taking care of little things everywhere. You can do the same to draw P.W. PAWS! Use the grid system to copy the lines in each square. Just like the men and women of public works, after you copy all the smaller squares, you'll take care of the big picture, too!



Publicus Workus

Public works has been around much longer than you think.

"Is it 100 years old?"

"Maybe 200 years old?"

"How about 500?"

Try more than two thousand!

That's right! People throughout the ages have lived better lives because of public works. And it goes all the way back to Ancient Rome.

Roman Aqueducts

The aqueducts were a series of channels, ducts, and pipes that supplied Rome with water. As the city grew, local lakes and wells became polluted with sewage.

Luckily, the crafty Romans figured out a way to get water from lakes and rivers from miles away. Their engineering was so solid, that parts of the aqueduct system are still in use today!

Roman Sewers

Bringing in clean water with aqueducts wasn't enough; they had to get rid of the dirty water and waste, too. Ancient Rome solved that problem with the Cloaca Maxima (or Great Sewer).

The Cloaca Maxima was a large system that originally directed storm water into a large channel. The runoff then dumped into the Tiber River. Later, public baths and toilets were tied into the system. Even some private homes were connected.

The ancient Romans didn't have any way to treat sewage the way public works does today. But flushing it out of the city was better than having it stick around to make people ill.

These days, we enjoy many of the same benefits as the ancient Romans. And, because of public works employees and departments, we have cleaner lakes and rivers to boot!



Aqueduct facts:

- Total length: 260 miles below ground, 30 miles above ground.
- The *Curator Aquarium* was the title of the person in charge of the aqueducts.
- The aqueducts could provide as much as 220 gallons of water for every person in Rome.

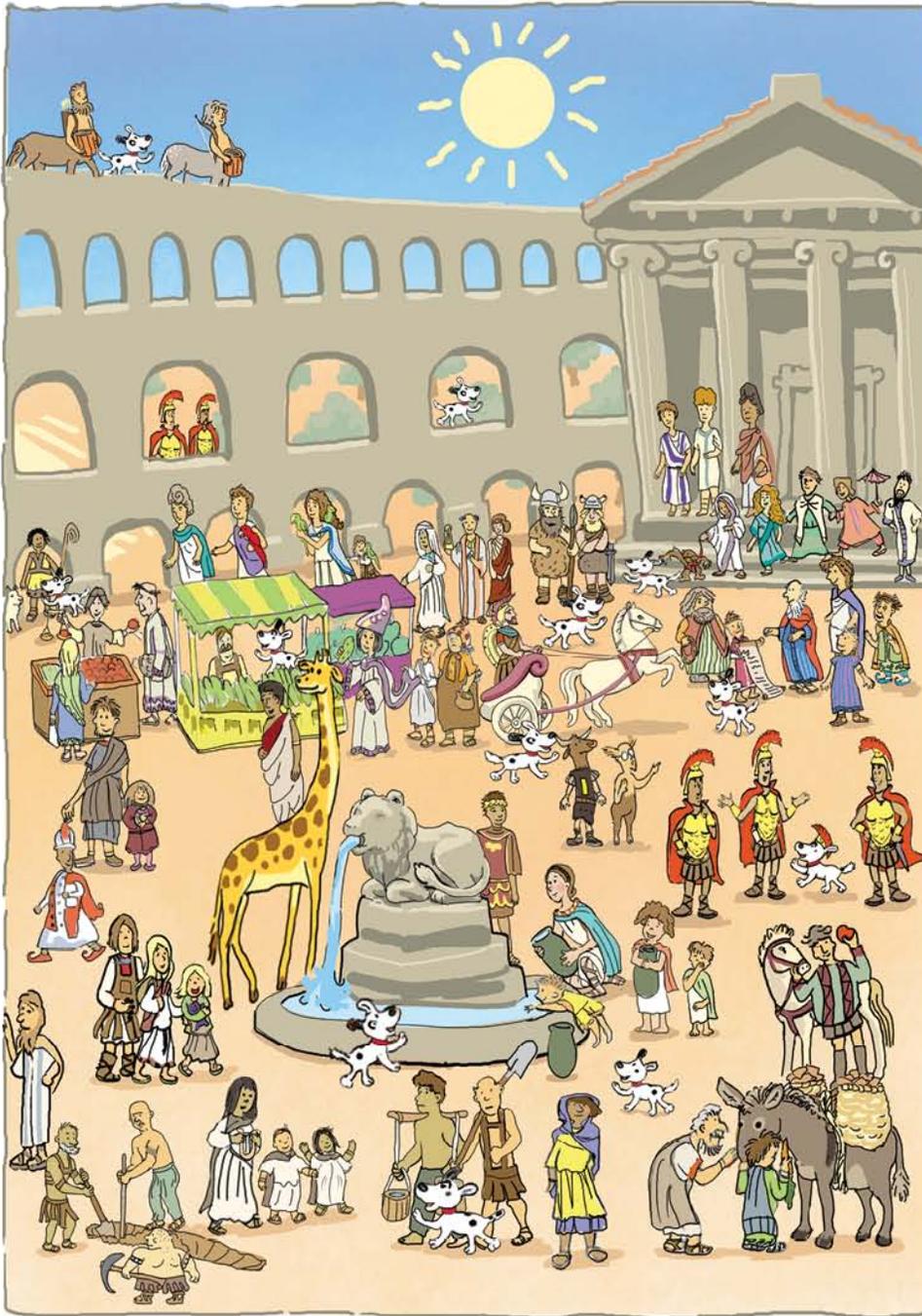


Roman Sewer Facts:

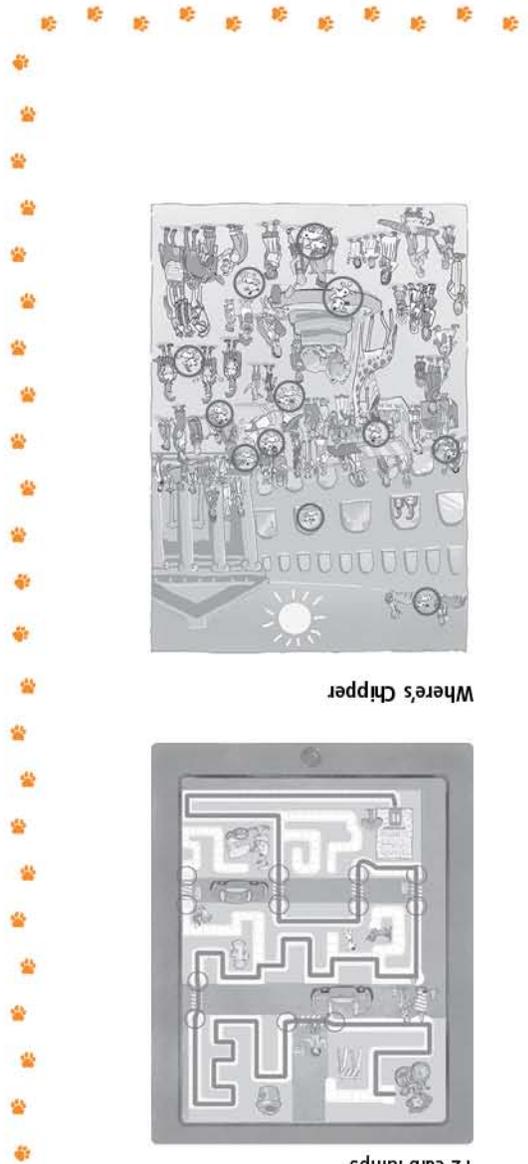
- Engineers even used the sewer's underground pipeline to drain marshes from nearby villages.
- In some of the public toilets, a Roman citizen sat side-by-side with up to twenty other people.
- Before public sewers, many ancient citizens simply dumped their sewage out of windows and onto the street. Look out below!



Where's Chipper?



Chipper is hidden 12 times in this scene. How many can you find?



Where's Chipper



12 curb ramps

Ramping Up with New Technology

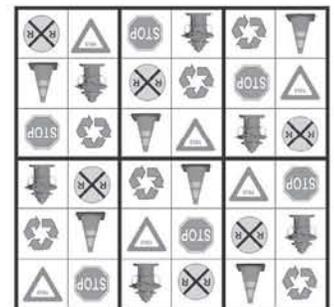
PAWS PRINT

PAWS PRINT material © 2013 by the American Public Works Association (APWA). All rights reserved. Limited permission is granted by the publisher to reproduce and distribute solely for non-commercial educational purposes. All, or parts, of this newspaper may be reproduced in any form or by any electronic means, without prior notification, provided APWA receives full ascription.

We welcome your comments and suggestions about PAWS PRINT. Please write to: PAWS Print, APWA, 2345 Grand Blvd., Suite 700, Kansas City, MO 64108 or call 800-848-2792, ext. 5253.

The American Public Works Association (APWA), an international educational and professional association, is committed to advancing and promoting outreach and public awareness of public works for school-aged children in all communities.

Special Thanks: The American Public Works Association (APWA) would like to thank Michael Anthony Steele, consultant, and Sheila Bailey, illustrator. APWA would also like to thank Principal Lisa Gielow of Nebbie Williams Elementary School, Rockwall, Texas, and her staff and students: Librarian Lori Dyer, Kristi Arenas (1st Grade), Jennifer Henry (3rd Grade), and Holly Sanford (5th Grade) for their insights and contributions during the pilot study of this newspaper.



Public Works Sudoku Symbol Matching

ANSWER KEY: