

# My Natural Gas Safety Activity Book

## Teacher's Guide

### Introduction

*My Natural Gas Safety Activity Book* is a coloring and activity booklet that describes important natural gas safety concepts. Kato the Safety Ranger engages children through various activities while introducing them to the uses of natural gas in the home as well as key safety behaviors around natural gas. This teacher's guide contains suggestions for classroom discussions about the booklet's safety content.

### Cover

Explain to children that this booklet contains important information about using natural gas safely.

#### Discussion:

- What does the picture on the cover show? *(It shows children helping with chores.)*
- What do drying clothes, washing dishes, and cooking on a stove all have in common? *(They are all activities that can use natural gas as the energy source.)*
- What is the blue symbol floating in the middle of the page supposed to indicate? *(A natural gas flame, which is blue, as opposed to the orange and yellow flames of a wood fire.)*
- What do the words at the bottom of the cover say, and what do they mean? *("Smell Gas. Act Fast." This means that if you smell gas you need to take action in order to stay safe from the dangers of a natural gas leak. These dangers will be discussed further inside the booklet.)*

### Page 2: We Use Natural Gas Every Day!

Ask a student to read aloud and explain the heading at the top of the page, and the four sets of colored lettering.

#### Discussion:

- What does the cooking picture have to do with natural gas? *(The stovetop that Kato is using could run on natural gas.)*
- What does the object to the right of the girl at the sink show, and why is it there? *(It is a water heater. It heats the water for washing dishes.)*
- Where does the heat come from that the kids are warming themselves with? *(A furnace.)*
- Why is the clothes dryer on this page? *(Clothes dryers can be fueled by natural gas.)*

Ask another student to read aloud the sentence at the bottom of the page. Explain that natural gas comes from deep inside the earth and is pumped up through wells. It is sent through large transmission pipes to a processing plant where it is purified, and then transported to buildings through smaller underground pipes.

### Page 3: Where Do We Go?

Have students complete the picture-matching activity and then share their answers. *(Running tap goes with sink; dripping towel goes with clothes dryer; pot goes with stove.)*

#### **Page 4: When Natural Gas Is Leaking You Can Tell By the Smell**

Invite a student to read aloud the heading at the top of the page.

##### Discussion:

- What is happening in this picture? *(Kato smells natural gas leaking from the stove.)*
- Ask students: What does natural gas smell like? *(Although natural gas is odorless itself, it is treated with a chemical that has a distinct odor of sulfur or rotten eggs. This odor helps people know when gas is leaking.)*
- Ask for a show of hands of who has smelled leaking gas before.
- What is unsafe about a natural gas leak? *(Leaking gas can easily be ignited by a small flame or even a spark, and could cause a fire or an explosion.)*

#### **Page 5: If You Smell Gas, Get Outside Fast!**

Have a student read aloud what Kato is saying at the top of the page, and then have another student, or you yourself, read aloud the instructions at the bottom of the page. Emphasize that in the event of a natural gas leak, everyone present should leave the home quickly without using matches or any electrical or battery-operated devices. A flame from a match or a spark from an electrical device could ignite the gas.

##### Discussion:

- Why should you get outside fast if you smell gas? *(Because of the danger of fire or explosion inside where gas is accumulating.)*
- Why do you think you shouldn't use a light switch, flashlight, TV or even a phone if you smell gas? *(Because any of these devices could cause a spark that could ignite the gas.)*

#### **Page 6: Only an Adult Should Use Gas Equipment**

Read aloud the heading at the top of the page. Ask students to name the three objects pictured at the top right. *(Hot water heater, stove, furnace.)* Explain that if the equipment has pipes attached to it that are easily accessible, students should never play around them.

Have students do the coloring activity. When completed, ask which people they colored and why. *(Only the adults should be colored, because kids should not use gas equipment.)*

Read aloud the text beneath the 811 logo. Explain that dialing 811 connects you to a special service that arranges for utilities to come and mark their underground gas pipelines, so that people who are doing digging projects can know to dig a safe distance away from these pipes. Be sure to convey to students that calling 811 several days before a digging project is very different from calling 911 for emergencies. Calling 811 is solely for the purpose of having utilities come out to mark pipelines and other buried utility lines before digging.

##### Discussion:

- Why do you think we need to learn where gas pipes are located underground before doing a digging project? *(Because if you don't know where the gas pipes are located, you could strike a gas pipe and create a gas leak.)*
- What is an example of a digging project? *(Answers could include planting a tree or shrub; grading a driveway; putting in a patio, pathway or retaining wall; doing a construction project.)*

### **Page 7: Stay Away From Gas Equipment**

Invite students to complete the activity of crossing out images with the gas symbol. Ask them to name the three items that use natural gas. Point out that natural gas appliances and equipment like these items have a flame inside, so it's important to always keep toys and papers away from them.

### **Page 8: Get Help When You Are Outside!**

#### Discussion:

Ask a student to read aloud the heading at the top of the page. Then have students complete the numbering activity. Once complete, ask students to describe the order that the photos should be in. *(1. Gas leaks from the stove. 2. The children notice it. 3. The children leave the house. 4. The girl tells an adult to call 911 from a safe distance away.)*

- Why do the children leave the house when they notice the gas stove is leaking? *(A fire or explosion could occur if leaking gas is ignited.)*

Students should understand that natural gas leaks from underground pipelines outdoors also pose a fire or explosion risk. It is important for students to become familiar with all the possible warning signs of an outdoor gas pipeline leak, because sometimes the odor may not be obvious. Either read the text at the bottom of the page, or ask the following question (depending on students' reading comprehension).

- What are the signs of an outdoor gas leak? *(A smell of sulfur or rotten eggs; a hissing, whistling, or roaring sound; dirt spraying or blowing into the air; continuous bubbling in water; grass or plants dead or dying for no apparent reason.)*

Tell students that if they suspect a gas leak outdoors, they should move away from the area, go to a safe location, and tell an adult to report the leak to 911 and the local gas utility immediately. They should not use matches or anything electrical (even a cell phone) in the vicinity of a gas leak, as any tiny spark could ignite the gas. They must stay away from the area of the leak until utility officials tell them it is safe to return.

#### Review/Going Further:

- Ask students to each name one thing they learned about gas safety from this booklet.
- Encourage students to take the booklet home and share it with their families.