



OVER-THE-COUNTER MEDICINE SAFETY



Dear Educator and School Nurse,

Research shows that young people begin to self-administer over-the-counter (OTC) and prescription (Rx) medication around age 11.¹ Unfortunately, kids often take on this new responsibility with little knowledge about medicine safety. According to the American Association of Poison Control Centers, more than 85,000 children, ages 19 and under, require medical attention each year due to medicine mistakes or misuse.²

The National Association of School Nurses recommends adding medicine safety lessons to the middle school health curriculum. To help you act on this recommendation, Johnson & Johnson Consumer Inc., with support from the education specialists at Young Minds Inspired, have created **OTC Medicine Safety**, a free education program with activities for grades 5–6 and grades 7–8 that can be used to supplement your health, science, and English language arts curricula. The program's five core units and bonus activity explain the importance of over-the-counter medicine safety, show students how to read the *Drug Facts* label, examine some consequences of medicine misuse and mistakes, and present guidelines for safe medicine storage and disposal. For additional online learning tools, visit www.ymiclassroom.com/otcmedsafety.

Please share this program with other teachers at your school. And please visit www.ymiclassroom.com/feedback-otcmedsafety to let us know your thoughts on the program. We look forward to your comments.

Sincerely,

Dominic Kinsley, PhD
Editor in Chief
Young Minds Inspired



Questions? Contact YMI toll-free at 1-800-859-8005, or by email at feedback@ymiclassroom.com.

Johnson & Johnson

CONSUMER HEALTH

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Developed with support of the National Association of School Nurses.
1. Cheryl Abel, Kerri Johnson, Dustin Waller, Maha Abdalla, and Carroll-Ann W. Goldsmith. Nonprescription medication use and literacy among New Hampshire eighth graders. *Journal of the American Pharmacists Association*. 2012; 777–787.
2. American Association of Poison Control Centers' National Poison Data System. Data covers 2011–2021 annual average, ages 0–19.

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EDUCATIONAL OBJECTIVES

- Introduce students to key information about over-the-counter (OTC) medicines and how to read and use the *Drug Facts* label
- Build critical thinking about how to recognize unsafe behaviors and apply information to make informed decisions about safe medicine use
- Inspire students to use what they've learned to educate their family and community about how to use and store medicines safely
- Support health, science, and English language arts skills



ABOUT OVER-THE-COUNTER (OTC) MEDICINE SAFETY

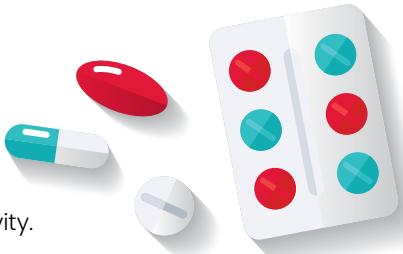
This free, multimedia educational program is designed to inform young people in grades 5–8 and their families about how to use, store, and dispose of OTC medicines safely, as well as how to avoid medicine mistakes and misuse. The program's goal is to build youth's knowledge about OTC medicine safety and encourage responsible behavior *before* they start self-medicating. Throughout the program, an emphasis is placed on reminding young people that they should only take or use medication under adult supervision.



PROGRAM CONTENT

OTC Medicine Safety Teaching Units

The complete program consists of five units that build on one another, plus a bonus activity.



UNIT	CONTENT	ACTIVITY SHEETS AND HANDOUTS
1	Compare Over-the-Counter and Prescription Medicines Students learn the difference between over-the-counter (OTC) medicine and prescription (Rx) medicine, as well as the safety precautions for each.	QUIZ: Over-the-Counter Medicine Safety Pre/Post-Assessment Quiz MINI POSTER: Over-the-Counter Medicine Safety (for use in all units) ACTIVITY SHEET: Compare Over-the-Counter vs. Prescription Medicines
2	Using the Drug Facts Label Students learn how to identify and understand the information on a <i>Drug Facts</i> label.	ACTIVITY SHEET: Using the <i>Drug Facts</i> Label ACTIVITY SHEET: Find a <i>Drug Facts</i> Label Scavenger Hunt
3	The Importance of Medicine Measuring Tools, Storage, and Safe Disposal Students learn the importance of following dosing instructions and how to store and dispose of medicine safely.	ACTIVITY SHEET: Accurate Medicine Dosing ACTIVITY SHEET: Safe Medicine Storage
4	Understanding the Dangers of Medicine Misuse Students learn about responsible medicine use and the harm that could result from misuses of medicine.	ACTIVITY SHEET: OTC Medicine Safety Awareness in Your Community ACTIVITY SHEET: Use vs. Misuse QUIZ: Over-the-Counter Medicine Safety Pre/Post-Assessment Quiz
5	OTC Medicine Safety Review: Informational Text Analysis Students will apply textual analysis skills to a nonfiction passage about medicine safety.	ACTIVITY SHEET: OTC Medicine Safety Article HANDOUT A: Informational Text Features HANDOUT B: Text Feature Options
BONUS ACTIVITY	Spread the Word About OTC Medicine Safety! Students create a public service announcement (PSA) designed to promote OTC medicine safety practices to their peers and community members.	BONUS ACTIVITY SHEET: Inspire Others to Stay Medicine-Safe!



ONLINE MULTIMEDIA RESOURCES & DOWNLOADABLE CONTENT

to enhance your students' educational experience

OTC Medicine Safety Mini Poster	OTC Medicine Safety Interactive Trivia Game
OTC Medicine Safety Answer Key	Hidden Home Hazards Digital Activity
Standards Alignment Chart	The Perfect Project Digital Storybook
OTC Medicine Safety Video and Quiz	Medicine Safety Kahoot!
OTC Medicine Safety for Families (letter in English and Spanish)	

How to Use the Program

Review the program lessons and resources before starting a unit. Each unit includes objectives and a list of materials needed to help you prepare. A whiteboard or digital display screen can be used to present the poster, activity sheets, and multimedia resources, but is not required. Lessons can be used in classrooms and group settings, as well as with online learning.

Important Message

Before each lesson in the **OTC Medicine Safety** program, emphasize to students that they should *never* take medicine without the approval and supervision of a parent, caregiver, or other trusted adult.



COMPARE OVER-THE-COUNTER AND PRESCRIPTION MEDICINES

Students learn the difference between over-the-counter (OTC) medicine and prescription (Rx) medicine, as well as the safety precautions for each.

TIME: 40 minutes, plus research time

OBJECTIVES

Students will:

- Define and understand the similarities and differences between OTC medicines and prescription medicines
- Identify responsible medicine use

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ◆ [OTC Medicine Safety Pre-Assessment Quiz](#)
 - ◆ [Activity 1: Compare Over-the-Counter vs. Prescription Medicines](#)
 - ◆ [Over-the-Counter Medicine Safety Mini Poster](#)
- [Over-the-Counter Medicine Safety Classroom Poster](#)
- [OTC Medicine Safety Answer Key](#)
- [OTC Medicine Safety for Families](#) (letter in English and Spanish)
- Paper, pens/pencils
- Computers with internet access for Extension Activity
- Optional: Whiteboard/digital display screen

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_7-8.

HOW TO USE THIS LESSON

1. If time allows, assess students' current knowledge of medication use by having them complete the [OTC Medicine Safety Pre-Assessment Quiz](#). Save the completed quizzes if you plan to have students retake the quiz for a post-program comparison.
2. Introduce the lesson by explaining that research shows that kids in their age range are beginning to self-medicate (deciding when and how to take medicines on their own). Emphasize that students should never take medicine without the approval and supervision of a parent, caregiver, or other trusted adult. Stress that without the information they need to make safe choices about medicine, young people can easily do more harm than good, so it's important to have a solid understanding of safe medicine use *before* they become more responsible for their own self-care.
3. Begin a class discussion by asking students to brainstorm what they do when they get sick. (Answers may include go to the doctor, take medicine, rest, etc.) Mention that there

are many ways that doctors treat sickness, one of which is by recommending medicine.

4. Tell students that medicine is considered a drug, and a drug is defined as "a substance intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease." (See Drug at www.fda.gov/drugs/drug-approvals-and-databases/drugsfda-glossary-terms#D) Display this definition if possible and, as a class, use context clues and reference materials to decode these terms.
 - **Substance** an item
 - **Diagnosis** determining the cause of someone's illness
 - **Mitigation** making something less serious or unpleasant
 5. Explain that medicines fall into two categories:
 - **Over-the-counter (OTC) medicines** can be bought in a pharmacy, drugstore, grocery store, or convenience store. You do not need a doctor's prescription to obtain them.
 - **Prescription (Rx) medicines** are specially ordered (prescribed) for you by a doctor or other qualified healthcare practitioner. You can only get them from a pharmacist.
- Both categories of medicine can be tablets, liquids, or ointments.
6. Ask students to brainstorm different medicines that belong in the OTC or Rx category. Then, using the FDA's definition of a drug, ask students to brainstorm OTC medicines that might be overlooked. (Possibilities include cough drops, eye drops, ointments, antiseptic spray, etc.) Ask students to explain how these items fit the definition of a drug.
 7. Organize the class into groups of three or four. Distribute the [Compare Over-the-Counter vs. Prescription Medicines](#) reproducible activity sheet and have teams complete it. Discuss their answers as a class and invite any follow-up questions about the lesson. See the [Answer Key](#) for suggested responses.
 8. **Family/Home Connection:** Distribute the [OTC Medicine Safety for Families](#) letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about medicine safety with their families and reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones.

EXTENSION ACTIVITY

Provide students with the following prompt: *How does a medicine become approved for over-the-counter use?* Have students research the answer to this question and write a paragraph describing their findings.



USING THE DRUG FACTS LABEL

Students learn how to find and use the information on a *Drug Facts* label.

TIME: 40 minutes

OBJECTIVES

Students will:

- Identify the *Drug Facts* label and learn the terms used on the label
- Know the importance of reading and understanding all the information on the *Drug Facts* label
- Learn the potential consequences of not reading and understanding all the information on the *Drug Facts* label
- Identify the steps to take in the event of a medicine mistake

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ◊ **Activity 2: Using the Drug Facts Label**
 - ◊ **Activity 3: Find a Drug Facts Label Scavenger Hunt**
 - ◊ **Over-the-Counter Medicine Safety Mini Poster**
- **Over-the-Counter Medicine Safety Classroom Poster**
- FDA's "**Medicines in My Home**" video
- **OTC Medicine Safety Answer Key**
- **OTC Medicine Safety for Families** (letter in English and Spanish)
- Assortment of empty OTC medicine containers (e.g., bottles of fever-reducer, pain reliever, antacids, and antihistamine, and packages of cough drops)
- Paper, pens/pencils
- Optional: Computer with internet access and whiteboard/digital display screen (for video)
- Optional: **The Perfect Project Digital Storybook**

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_7-8.

HOW TO USE THIS LESSON

1. Ask students to describe a time when they did not read or follow directions and faced unpleasant consequences (e.g., on a test/homework assignment, playing a game, cooking/baking, etc.). Discuss responses. Emphasize the importance of reading informational text carefully and in its entirety in order to understand key information or directions that are vital to completing a task

properly or getting the desired results.

2. Direct students' attention to the *Drug Facts* label on the classroom poster or mini poster. Explain that all medicines come with directions. Over-the-counter medicines come with a *Drug Facts* label designed to help make sure that the medicine is used safely and correctly. The labels are required by the U.S. Food and Drug Administration (the FDA).
3. Ask students: *What could happen if you don't read the Drug Facts label before taking a medicine?* Explain that when medicine is not used properly, it may not work the way it is supposed to and could even make you feel worse or hurt you. That's why you should always read the **whole** *Drug Facts* label before taking any medicine and follow all the directions on the label. Remember, only take or use medicine under adult supervision.
4. Show the FDA's "**Medicines in My Home**" video if possible. Pause the video when necessary to highlight the different sections on the *Drug Facts* label and invite student questions.
5. Distribute copies of the **mini poster** to students. As you review each section of the *Drug Facts* label, have students follow along on the handout and read the description of each section aloud.
6. Explain that every medicine is unique and has certain ingredients that enable it to treat specific symptoms. Use the poster to show this information in the "Active Ingredients" and "Uses" sections of the *Drug Facts* label. Have students read the descriptions of these sections aloud.
7. Move down to the "Directions" section of the *Drug Facts* label. Explain that every medicine comes with dosing instructions that tell how much to take and how often to take it. The dosing instructions for OTC medicines appear in the "Directions" section of the *Drug Facts* label. The purpose of these instructions is to help make sure that the medicine is taken correctly. Emphasize that when the instructions are not followed correctly, the medicine may not work the way it is meant to. It may even make you feel worse or hurt you. Have a student read the description of the "Directions" section of the label.
8. Continue reviewing the remaining sections of the *Drug Facts* label by having a student read each section description aloud and then discussing why this information is important for medicine safety.

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USING THE DRUG FACTS LABEL (CONTINUED)

9. To reinforce students' understanding of the label, divide the class into small groups and give each one a sample OTC medicine container. Have students share answers to the following questions:
 - What symptoms does the medicine treat?
 - How is a person supposed to take the medicine?
 - Are there any warnings about the medicine?
 - What are the medicine's active ingredients? Are there inactive ingredients?
 - What other information can you find on the Drug Facts label?
10. Explore the consequences of using OTC medicines incorrectly. Ask students what they think could happen if someone did not read all the information on the *Drug Facts* label. Discuss these possible consequences:
 - Ingredients may cause allergic reactions or side effects like drowsiness or nausea.
 - Medicines can be harmful if you take too much and may not be effective if you do not take the proper dose.
 - Certain medicines can interact with other medicines or with foods to cause unpleasant or harmful side effects.
 - Many medicines contain the same active ingredients, and should never be taken at the same time.
11. Point out the **Poison Control Center phone number** (also called the **Poison Help Line**) on the *Drug Facts* label, **1-800-222-1222**. Explain that anyone can call this number to ask any questions about a medicine. It is not just for reporting that someone may have been poisoned. You can call to ask how to take or give a medicine or what to do if there's been a medicine mistake — for example, if someone took a medicine by accident.
12. Share the following with students:
 - Calls to the Poison Help Line are free.
 - All calls are confidential.
 - Medical experts answer the phone 24/7, 365 days a year.
 - Unlike 911, it doesn't have to be an emergency to call. Call with questions or for information, or if you have an emergency.
 - Poison center experts get more than 2 million calls a year about all kinds of things. They have heard everything, so don't be embarrassed to call.
13. Ask students if they notice anything else that their sample OTC medicines have in common? Point out that they all have an "Expiration Date," after which the medicine should not be used.
14. Distribute the **Using the Drug Facts Label** activity sheet. Have students complete the "Think It Through" questions on the activity sheet and review the answers as a class. See the **Answer Key** for suggested responses.
15. For more practice reading the *Drug Facts* label, distribute copies of the **Find a Drug Facts Label Scavenger Hunt** activity sheet for students to complete with a trusted adult at home. Explain that they should look at the *Drug Facts* labels on OTC medicines in their home with an adult to find medicines that have the information shown in each box. When they find a match, they write the name of the medicine in the box. After they complete this activity, have students share their findings.
16. **Family/Home Connection:** If you have not already done so, distribute the **OTC Medicine Safety for Families** letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the *Drug Facts* label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

EXTENSION ACTIVITY

Share *The Perfect Project* Digital Storybook with your students. Discuss the questions at the end of the story and try the experiment as a class.

THE IMPORTANCE OF MEDICINE MEASURING TOOLS, STORAGE, AND SAFE DISPOSAL

Students learn about accurate dosages, where to store medicine, and how to dispose of it safely.

TIME: 40 minutes

OBJECTIVES

Students will:

- Identify dosing information found in the “Directions” section of Drug Facts labels (when, how, and how often to take the medicine)
- Explain the importance of reading and understanding dosing information and tools
- Discuss possible consequences of not following dosing instructions
- Describe what makes a location safe or unsafe for medicine storage and the consequences of improper storage
- Brainstorm ways to raise awareness about safe medicine storage and disposal

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ◆ **Activity 4: Accurate Medicine Dosing**
 - ◆ **Activity 5: Safe Medicine Storage**
 - ◆ **Over-the-Counter Medicine Safety Mini Poster**
- **OTC Medicine Safety Answer Key**
- **OTC Medicine Safety for Families** (letter in English and Spanish)
- An assortment of empty OTC medicine bottles filled with colored water and their dosing devices (e.g., cup, dropper, spray); kitchen spoons of different sizes

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_7-8.

HOW TO USE THIS LESSON

PART 1

1. Begin with a class discussion about the importance of using the right tools when measuring different things. Ask students:
 - If I wanted to measure how far it is from the school to my house, would I use a ruler? Why or why not?
 - What are some different ways that people make mistakes when measuring things?

2. Encourage students to think about why accurate measurements are important. Ask:

- When is it okay to get less-accurate measurements or to estimate?
- When is it important to get really accurate measurements? Why?

Explain that students are going to learn why reading and understanding dosing instructions is important, and why medicines should always be measured using the proper dosing devices.

3. Ask students to think back to their examination of different Drug Facts labels. Ask:

- What types of measurements are used to measure doses of a medicine?

Answers may include milliliters, tablets, drops, sprays, etc.

4. Emphasize the importance of following dosing directions and using the dosing device that comes with a medicine with a demonstration. Show students a sample OTC medicine that comes with a dosing cup. Have students imagine that this medicine’s Drug Facts label recommends a dose of 10mL. Explain that by conversion 10mL = 2 standard teaspoons. However, kitchen teaspoons are not universal in size. Use a kitchen teaspoon to measure out 2 spoonfuls of liquid. Pour the measured liquid into the dosing cup. Discuss how the dosing cup’s accurate measurement compares to the non-standardized kitchen spoon measurement. Follow the same steps with a plastic teaspoon and a teaspoon with a different design. Point to the message on the bottom of the poster for a reference. Explain that we should only use the dosing device that comes with a medicine because spoon measurements are not exact — household spoons come in various shapes and sizes, which means they hold different amounts of liquid.

5. Next, read the dosing information for an OTC medicine that comes with nasal spray or eye dropper dosing device. Explain that while it may be difficult for us to measure out 50 mg of a nasal spray or 1 milliliter of eye drops, the provided dosing device eliminates any guesswork.

6. Talk about how measuring doses incorrectly and using spoons instead of the dosing device that comes with the medicine can cause an overdose or underdose. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

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THE IMPORTANCE OF MEDICINE MEASURING TOOLS, STORAGE, AND SAFE DISPOSAL (CONTINUED)

7. Distribute the **Accurate Medicine Dosing** activity sheet. Have students complete the worksheet either individually or as a class. Refer to the **Answer Key** and review the students' responses as a class.

PART 2

1. Introduce the importance of safe medicine storage, which, when ignored, may lead to accidental ingestion and medicine poisoning.
2. Ask students to name the locations where medicines are stored in their homes. Write answers on the board. Common answers may include kitchen cabinet, bathroom cabinets, or parents' or trusted adult's bedroom. As students answer, ask for specifics:
 - Are the medicines in drawers or cabinets or on the countertop?
 - Are the medicines easy for young children to see or reach?
3. Get students thinking about how easy it is for children to find medicine in a home. Explain that medicines need to be kept out of reach and sight of their naturally curious younger siblings, or young visitors to their home.
4. If using a whiteboard, visit the **Up and Away interactive website** to learn more about storing medicine safely.
5. Distribute the **Safe Medicine Storage** activity sheet. Explain to students that they are examining the inside of a home to identify the medicine storage errors that could lead to accidental medicine poisoning. Have students complete the activity and review the answers as a class, referring to the **Answer Key**.
6. Next, remind students about the expiration dates they found on the OTC medicine samples they examined in Unit 2. Ask how their families get rid of unused or expired medicine. Common answers may include putting the medicine in the trash or flushing the medicine.
7. Explain that safe disposal is just as important as safe storage for keeping medicines away from people who shouldn't have them. Before throwing away OTC medicines, families should mix them with an unappealing substance (such as kitty litter) and place them in a closed container (such as a sealed plastic bag).
8. The FDA has additional **disposal guidelines** for certain prescription medicines (like disposal by flushing or using the National Take-Back Initiative). In addition, the Poison Help Line (1-800-222-1222) can answer any questions families may have about how to dispose of medicines safely.

Ask students:

- Why do you think that the FDA has these guidelines for safe disposal of medicines?
 - What could happen if a medicine is not disposed of properly?
9. After reviewing storage and disposal information, ask students:
- What did you learn about safe storage?
 - Is there anything from today's discussion that might be important to mention at home?
10. **Family/Home Connection:** If you have not already done so, distribute the **OTC Medicine Safety for Families** letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the Drug Facts label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

EXTENSION ACTIVITY

Ask students to come up with some ways to help people remember how to store and dispose of medicine safely. Some possibilities include:

- An idea for an app that can help families remember all of the ways to make a home medicine-safe. Research for the app idea may involve connecting with a local health expert (pharmacist, nurse, etc.).
- A jingle that describes the Poison Help Line's purpose and phone number
- A mnemonic device to remember the directions for safe medicine storage and disposal
- A survey to distribute to families to determine how medicine-safe their home is
- A fact list about OTC medicine safety for families

Work with your students to check that their OTC medicine safety awareness materials are accurate before they share them with others.

UNDERSTANDING THE DANGERS OF MEDICINE MISUSE

Students will learn about the responsible medicine use and the harm that could result from misuses of medicine.

TIME: 40 minutes

OBJECTIVES

Students will:

- Define misuse as it relates to over-the-counter (OTC) medicines
- Understand why misusing OTC medicines can be harmful
- Identify the steps to take when encountering an OTC medicine misuse situation

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ◊ **Activity 6: OTC Medicine Safety Awareness in Your Community**
- **Activity 7: Use vs. Misuse Classroom Activity**
(4 pages/slides)
- **OTC Medicine Safety Answer Key**
- **OTC Medicine Safety for Families** (letter in English and Spanish)
- Computer and whiteboard/digital display screen
- Optional: Computer with internet access for student use
- Optional: **OTC Medicine Safety Post-Assessment Quiz**

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_7-8.

HOW TO USE THIS LESSON

PART 1

1. Begin this lesson by prompting an open class discussion. Ask students:
 - *Do you think OTC medicines are dangerous if they are misused, or used in a manner other than what is directed by the Drug Facts label or a doctor?*Allow students to offer opinions. Through a show of hands, tally the “yes” versus “no” opinions on the board.
2. Use the **Use vs. Misuse Classroom Activity** to explore how students’ preconceived ideas can sometimes cloud less obvious facts about a topic. Show only the pictures on each page — sun, potatoes, vitamins, ibuprofen. Do not reveal the “Answer” or “Now You Know” sections. After showing the four pictures, ask students:
 - *How are these four items related?*
 - *How do people benefit from these items?*

- *Is it possible that these items may be harmful?*

Explain that all four items are safe when used or stored properly, but they can all have detrimental health effects when used or stored improperly.

3. Go back through pictures and uncover the answers beneath each one.

Page 1: SUN

Answer: Fifteen minutes of sun per day is essential for maintaining a healthy level of vitamin D, which promotes the retention of calcium, mostly in your bones. Calcium is very important in the development of your bones and teeth. Too much sun, however, may cause skin damage or even skin cancer. To protect against damage from the sun’s rays, avoid the sun between 10 a.m. and 4 p.m., when its rays are strongest; wear protective clothing, and use a sunscreen with an SPF of 30 or higher, according to the American Skin Association.

Now you know: Use a good sunscreen when outdoors for more than 15 minutes and avoid prolonged sun exposure.

Page 2: POTATOES

Answer: Potatoes are an excellent source of carbohydrates, which your body needs for energy. But potatoes naturally contain solanine, a toxic ingredient that can cause a number of health problems. Solanine thrives in well-lit environments and is present when you see a green tinge under the potato’s skin and experience a bitter taste.

Now you know: Store potatoes in a cool, dark place and be on the lookout for discoloration and bad taste.

Page 3: VITAMINS

Answer: Vitamins can be purchased over-the-counter and are widely available. They’re easy to access, but can have risks if not used appropriately. They should be taken under the guidance of a parent or trusted adult. Vitamins can be dangerous if they’re misused or if a person isn’t using them in accordance with the *Supplement Facts* label on the bottle.

Now you know: Read the label and talk to a trusted adult before taking vitamins.

Page 4: IBUPROFEN

Answer: Ibuprofen has been used for decades for pain relief and is available over-the-counter. When ibuprofen is used as directed, it reduces inflammation (swelling) and can reduce fevers. However, large doses of ibuprofen can cause damage to the stomach or intestines.

Now you know: Follow directions on the *Drug Facts* label and talk to a trusted adult before taking an anti-inflammatory medicine.

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OVER-THE-COUNTER
MEDICINE SAFETY

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UNDERSTANDING THE DANGERS OF MEDICINE MISUSE (CONTINUED)

PART 2

1. Discuss how the four items on the **Use vs. Misuse**

Classroom Activity pages appear safe, but there are specific guidelines for using or consuming them. If you do not follow the safety precautions for proper use and storage, there could be harmful consequences. Explain that when you dig a little deeper, you often discover new, important information that you might ordinarily overlook. Ask students:

- *Can you think of other items you come into contact with regularly that are safe when used properly, but dangerous when misused?*

Answers may include appliances, cars, medicines, cleaning supplies, etc.

2. Explain that students will look more closely at the effects of medicine misuse. Ask students:

- *What is the perception among your friends about misusing prescription or OTC medicines?*

Answers may include: Misusing prescription drugs is dangerous and can be deadly; no one really gets hurt from misusing OTC medicines.

3. Have students work in pairs to brainstorm possible answers to the questions below. If students have access to technology, have them quickly research their answers.

What negative effects could result from:

- *Not reading and following the Drug Facts label?*
- *Taking more than the recommended dose?*
- *Redosing more frequently than directed on the label?*
- *Using different medicines with the same active ingredient at the same time*
- *Taking medicines for longer than directed on the label?*
- *Taking medicines for reasons or symptoms other than what is directed on the label?*

4. Once students have completed the questions, ask them to share their answers with the class. During the discussion, emphasize that all the scenarios are dangerous because there are very real and potentially dangerous consequences when someone misuses OTC medicines. For example, misuse can lead to nausea, diarrhea, irregular heartbeat, seizures, and even the potential for addiction. The *Drug Facts* label provides instructions for using the medicine safely.

5. Ask students:

- *Based on the information you've learned while studying OTC Medicine Safety, who do you believe needs to be informed about the dangers of misusing OTC medicines?*

Answers may include: Parents and guardians so they can keep children safe; younger children so they can avoid

dangerous situations; local officials so they can develop programs and policies for safe medicine use and disposal.

6. Distribute the **OTC Medicine Awareness in Your Community** activity sheet and read the directions together. Discuss the two different audiences students can reach: local officials or younger students. Remind students that they need to keep their audience in mind when writing. Discuss these questions as a class:

- *What information would be most persuasive for local officials? What is the best way to communicate this information and your suggestions?*
- *What information would be most persuasive for younger students? What is the best way to get their attention and help them remember this information?*

7. Invite students to conduct online research for their writing. Then have them complete the assignment. Schedule time for students to share their work with the class.

8. Explain to students that this activity sheet can be used to launch a community-wide campaign. A coalition of families, students, and community leaders can show collective support for making their communities and schools safer places for children and their families. Working together in this way, they would show collective support for making their communities and schools safer places for children and their families, and could help disseminate information about the safe use and storage of OTC medicines and the dangers of misuse. Students can work with their families and neighbors to submit a collection of letters to local town officials and leaders that encourage getting the word out about safe medicine use.

9. **Optional:** Assess what students have learned about OTC medicine safety by having them complete the **OTC Medicine Safety Post-Assessment Quiz**. Compare the completed quizzes to students' pre-assessments to measure the growth of their knowledge.

10. **Family/Home Connection:** If you have not already done so, distribute the **OTC Medicine Safety for Families** letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the *Drug Facts* label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

EXTENSION ACTIVITY

Now that students have learned about the misuse of OTC medicines, the importance of understanding the *Drug Facts* label, and the safety precautions for proper use and storage, encourage them to apply what they've learned in a role-playing activity.



OTC MEDICINE SAFETY REVIEW: INFORMATIONAL TEXT ANALYSIS

Students apply textual analysis skills to an informational passage about medicine safety.

TIME: 40 minutes

OBJECTIVES

Students will:

- Identify the central idea and key details of an informational text
- Create text features to enhance an informational text

MATERIALS NEEDED

- Copies of the following reproducible activity sheets for each student in the class:
 - ◊ [Activity 8: OTC Medicine Safety Article](#)
 - ◊ [Activity 8 Handout A: Informational Text Features](#)
 - ◊ [Activity 8 Handout B: Text Feature Options](#)
 - ◊ [Over-the-Counter Medicine Safety Mini Poster](#)
- [OTC Medicine Safety Answer Key](#)
- [OTC Medicine Safety for Families](#) (letter in English and Spanish)
- Pens/pencils
- Whiteboard/digital display screen

Note: All Unit resources and digital assets featured on page 2 can be accessed at www.ymiclassroom.com/lesson-plans/otcmedsafety-teachers_7-8.

HOW TO USE THIS LESSON

1. Review with students what they have learned about medicine, such as the purposes of medicines, types of medicines, medicine safety, etc. Create a word splash on the board to record students' ideas.
2. After students brainstorm their ideas, remind them that they should only take medicine with the approval and supervision of a parent or trusted adult.
3. Explain that students are going to read an article about medicine safety. Point out that the author has used a variety of text structures and techniques to engage the reader, but students will need to think about ways to strengthen the article.
4. Review some common informational text structures. Encourage students to brainstorm signal words that may indicate each type of text structure.
 - **Description:** defines or describes a person, place, thing, or idea; signal words include *is, are, include, composed of*

- **Sequence:** explains the order of events or steps in a process; signal words include *first, next, then, after, finally*

- **Cause/Effect:** explains why an event happens and what happens as a result; signal words include *because, since, as a result, therefore*

- **Problem/Solution:** describes a problem and proposes one or more solutions; signal words include *challenge, issue, solve, fix*

- **Compare/Contrast:** describes the similarities and differences between two items or concepts; signal words include *like, similarly, on the other hand, in contrast*

5. Have students brainstorm ways that authors can get readers interested in a topic. Possible responses include:
 - Using surprising facts or statistics
 - Sharing personal stories
 - Addressing the reader directly
 - Referring to familiar stories or examples
 - Incorporating quotations from experts
 - Including a call to action

Optional: Create a list of responses on chart paper for students to reference when completing the activity.

6. Distribute the [OTC Medicine Safety Article](#) activity sheet and point out the blank spaces where students will insert helpful text features. Students should imagine that they are editors who are preparing the article to be published. Their goal is to make sure that the structure of the text will engage readers and help them understand the key ideas in the article.
7. Use the [Informational Text Features](#) handout to review the relevant text features: title, section heading, pull-out quote, diagram, and glossary. Prompt students to suggest why a writer would use each feature and how it can help a reader before revealing those columns on the chart. Use the [Over-the-Counter Medicine Safety Mini Poster](#) to point out topic-specific examples of some of these text features. Provide students with the [Text Feature Options](#) handout if needed.
8. After students have finished editing the article, ask them to complete the "Think It Through" section of the activity. Students will need to explain their choices for the text features they filled in, as well as answer a series of critical-thinking questions on the content of the article. Discuss students' answers as a group. See the [Answer Key](#) for suggested responses.

(Continued on the next page.)



OTC MEDICINE SAFETY REVIEW: INFORMATIONAL TEXT ANALYSIS (CONTINUED)

- 9. Family/Home Connection:** If you have not already done so, distribute the [OTC Medicine Safety for Families](#) letter for students to take home, or include the PDF in email correspondence to parents and caregivers. Encourage students to share what they have learned about the *Drug Facts* label and why it is important. Suggest that students post the Poison Help Line phone number in a visible place in their home and get family members to save the number in their mobile phones. **Reinforce the importance of always communicating with a trusted adult before taking any medicine, and only taking medicine with the approval and supervision of a parent or trusted adult.**

SPREAD THE WORD ABOUT OTC MEDICINE SAFETY!

Students learn how to create a public service announcement (PSA) to communicate important medicine safety information to a targeted audience, while practicing skills that support writing and speaking and listening.

TIME: 30 minutes, plus time to create PSAs

OBJECTIVES

Students will:

- Identify a central idea and supporting details regarding safe medicine use
- Develop a persuasive text to teach others why medicine safety is important

MATERIALS NEEDED

- Copies of the [Inspire Others to Stay Medicine-Safe!](#) reproducible activity sheet for each student in your class
- Optional: Computer with internet access and whiteboard or projector
- Sample PSAs to share with students, such as poster and video examples from the [Ad Council](#) on emergency preparedness and texting and driving; audio examples from the [CDC on flu vaccines](#)



HOW TO USE THIS LESSON

- Ask students to imagine they have an urgent message to communicate to their community. What tools could they use to help them reach the most people?
- Explain to students that a public service announcement (PSA) is a message to raise awareness about an important issue.
- Emphasize that the purpose of a PSA is to educate people about an issue and encourage them to take action to change a certain behavior.
- Inform students that PSAs are usually created in the form of commercials on television or streaming services, social media campaigns, radio, billboard, or print ads, or text messages. If possible, show a few examples of PSA campaigns that are suitable for your group and will resonate with them (see sample links under Materials Needed). Have students brainstorm other PSA campaigns they know.
- Distribute the activity sheet and pair students to work together. Explain to students that they will be creating a PSA focused on OTC medicine safety. Emphasize that their target audience is anyone unfamiliar with the topic, for example younger students, their peers, family members, or people within their community who may not know about how to use medicines safely and may not realize that OTC medicines can cause harm if not used properly.
- Guide students through the planning and drafting process. Encourage them to use the sidebar on the activity sheet to select key points that will best support their message and to include a call to action.
- Review all PSAs for appropriateness and safe, correct messaging. Then assist students in distributing, displaying, or presenting their PSAs in the school or community (class website, gallery walk, school assembly, etc.).
- At the conclusion of the lesson, remind students that they should *never* take medicine without the approval and supervision of a parent or trusted adult. Ask them whether they think their PSAs communicated this message to others.



Unit 1, Activity 1:

COMPARE OVER-THE-COUNTER VS. PRESCRIPTION (RX) MEDICINES

Part 1

1. Both
2. Prescription (Rx) medicine
3. Prescription (Rx) medicine
4. Both
5. Over-the-Counter (OTC) medicine
6. Both
7. Both

Part 2

1. Prescription (Rx)
2. Don't know (not enough information)
3. OTC

Unit 2, Activity 2:

USING THE DRUG FACTS LABEL

1. Side effects may include drowsiness and/or excitability, especially in children
2. Answers may include: A doctor should be consulted before taking this medicine if you have liver or kidney disease, and before giving the medicine to children under 6 years of age. A doctor should also be consulted if an allergic reaction or overdose occurs.
3. The **Directions** section.
4. Answers could include that the *Drug Facts* label appears in a standardized format for consumers' ease of use and understanding in what a medicine does and how to use it safely. The label allows consumers to know where to look for information to make informed choices relevant to their health situation. Most serious warnings are presented first as it is helpful to convey these important safety messages to consumers.¹
5. Answers might include: Uniform formatting on the label: Use of bolded and italicized headers and bulleted information within sections increases readability; use of bolded font emphasizes important safety information, such as "Keep out of reach of children," "Stop use and seek medical help right away."
6. 1-800-222-1222

Unit 2, Activity 3:

FIND A DRUG FACTS LABEL SCAVENGER HUNT

Answers will vary.

Unit 3, Activity 4:

ACCURATE MEDICINE DOSING

1. Olivia is 13 years old. The proper dose for adults and children 12 years of age and older is 5 ml two times per day. The dose may be repeated every 12 hours while symptoms last. Olivia's reasoning might be that since it is a new day that she can take another dose of medicine. This is an error as no more doses should be given until 9 am. The label directs that it is not safe to take more than 10 ml in 24 hours.
2. Miguel is 11 years old. The proper dose for children under 12 years of age is 2.5 ml two times per day. Taking 5 ml once a day can result in an overdose and potential side effects.
3. Using anything other than the dosing device that is packaged with the medicine can result in an inaccurate dose.

Unit 3, Activity 5:

SAFE MEDICINE STORAGE

Any response that identifies medication stored in a location that is not up, away, and out of sight would be acceptable. The medication storage errors shown in the picture are as follows:

1. Open purse with pain relief bottle sticking out of the top
2. Medicine left out on the nightstand with dosage cup
3. Toiletry bag hanging low from doorknob inside closet with vitamin bottle showing
4. Medicine bottles visible and accessible inside cabinet below kitchen sink
5. Bottle of cough medicine on the counter and a teaspoon with a trace of medicine visible on spoon (should be using the dosing device and stored up and away)
6. Allergy medicine on the table next to vase

Unit 4, Activity 6:

OTC MEDICINE SAFETY AWARENESS IN YOUR COMMUNITY

Answers will vary.

Unit 5, Activity 8:

OTC MEDICINE SAFETY ARTICLE

Answers will vary.

Pre/Post-Assessment Quiz

Types of Medicine

What type of medicine is best described by each statement below? Check only one.

Q1. This is medicine a doctor orders for you, and is available only from a pharmacist.	Q2. This is medicine bought in a drugstore, pharmacy, or grocery store without having to get a doctor's permission.
Prescription medicine	✓ Over-the-counter (OTC) medicine

Medicine Safety

Q3. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE
If you use a household or kitchen spoon to measure liquid medicines, you can be sure you will get the right dose.	✓	
You can't be harmed by over-the-counter medicines.	✓	
It's okay to take two medicines with the same active ingredient at the same time.	✓	
It's okay to use someone else's prescription medicine if you have the same symptoms they had when they got it.	✓	
It's okay to take your leftover prescription medicine later if you get sick again.	✓	
It's okay to take more medicine than what is directed on the label if you are very sick.	✓	
In a medicine, an active ingredient is what relieves a person's symptoms.	✓	
The <i>Drug Facts</i> label tells you what symptoms the medicine treats.	✓	
The <i>Drug Facts</i> label gives you the dosage information (how much medicine to take).	✓	
Q4. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE
A pharmacist can answer questions about over-the-counter medicines.	✓	
All medicines have an expiration date.	✓	
Children should not use prescription medicine without the permission of their parent or a trusted adult.	✓	
Medicine should be kept in a place where children can't reach it.	✓	
If you and your friend are the same age, it will be safe for you to take the same dose of an over-the-counter medicine.		✓
Prescription medicine cannot be bought without a doctor's permission.	✓	

(Continued on the next page.)



Pre/Post-Assessment Quiz (continued)

Medicine Safety		
Q5. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE
Children over 12 can take over-the-counter medicine without a parent's permission if they carefully read the label.		✓
Medicine should be stored in the container it came in.	✓	
One gulp from a bottle of liquid medicine is exactly one tablespoon of medicine.		✓
Over-the-counter medicines can be dangerous when misused.	✓	
Prescription medicine can be found on the shelves in some stores.		✓
Prescription medicine is meant to be used by one person.	✓	
Q6. Are the following statements True or False? Check one answer for each row.	TRUE	FALSE
The Poison Help Line is a good place to call if someone has taken too much medicine.	✓	
Medicine should be kept on the kitchen counter so you remember to take it.		✓
Taking more medicine than directed will help you feel better faster.		✓
Taking more than one medicine with the same active ingredient will help you feel better faster.		✓
If you have questions about an over-the-counter medicine you have not taken before, you should ask a friend who has taken it before.		✓
You can call the Poison Help Line even if it isn't an emergency.	✓	



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