Preventing Kitchen Accidents

A Kitchen Mishap Have you ever had an accident in the kitchen? Chances are, you have broken a dish or glass, cut or burned yourself, let food overcook or boil over, or even experienced a small fire! Perhaps you have choked while eating, or touched a hot outdoor grill. Write a descriptive paragraph about one kitchen accident you have had.

Writing Tips Follow these steps to write a descriptive paragraph:

- Use adjectives and details to make paragraphs descriptive.
- Try to make the reader visualize what happened.
- Think about how things look, smell, feel, taste, and sound.

Caption Answer Answers will vary but should cite some of the following: sharp edges on cutting tools, heat and flame, electrical appliances, and household chemicals.

Discussion Point out to students that the main causes of kitchen accidents are falls, cuts, burns, electrical problems, and hazardous chemicals. Ask students: What can you do to avoid kitchen mishaps? (Answers may include: Take preventative measures, such as identifying potential hazards and following basic safety guidelines.)

Writing Activity This activity prompts students to describe a kitchen accident they had. Encourage students to share their responses with the class. Descriptive paragraphs should be focused on only one accident. Encourage students to consider the five senses when writing.
Before You Read

Preview Make a list of three kitchen safety hazards. Write a way to prevent each hazard. As you read, see if your suggestions for prevention are correct.

Read to Learn

Key Concepts
- List six ways to prevent accidents in the kitchen.
- Explain why keeping a kitchen clean can prevent a kitchen fire.
- List five things to remember when using household chemicals.
- Explain why it is important to follow safety guidelines when cooking outdoors.
- Summarize five precautions to make kitchens safe for children.
- Describe two first aid procedures you should know to prepare you to respond to kitchen emergencies.

Main Idea
Good safety habits can prevent accidents and protect you against a variety of hazards in the kitchen.

Content Vocabulary
You will find definitions for these words in the glossary at the back of this book:
- polarized plug
- Heimlich maneuver
- carbon monoxide
- cardiopulmonary resuscitation (CPR)

Academic Vocabulary
You will find these words in your reading and on your tests. Use the glossary to look up their definitions if necessary:
- inspect
- vulnerable

Graphic Organizer
Use a graphic organizer like the one below to note six ways to prevent accidents in the kitchen.

Before You Read

Point out to students that most kitchen accidents that arise from food preparation can be prevented by following basic guidelines for kitchen safety.

Develop Concepts

Main Idea Discuss the main idea with the students. Ask students: Do you think keeping a kitchen clean can help to prevent kitchen accidents? Explain. (Answers may include: A clean kitchen can help to prevent slips and falls, prevent kitchen fires, and prevent injury from tools or appliances that have been left soaking in the sink.)
Kitchen Safety Basics

Kitchens are full of hazards that can cause accidents: slippery surfaces, sharp edges, electrical appliances, heat and flame, and household chemicals, to name a few. These safety habits can help protect you against these hazards.

- Focus on what you are doing, especially when cutting, cooking, or using appliances.
- Dress for safety. Wear short or snug sleeves and tie back long hair and apron strings. This prevents loose items from tangling in appliances or catching fire.
- Use all tools and equipment safely and use the right tool for the job. For example, use a can opener to open a can—never pry it open with a knife.
- Close drawers and doors completely to avoid bumps, bruises, and cuts.
- Store large pots and other heavy or bulky items that could fall on low shelves, within easy reach.
- Control clutter. Put items back where they belong as soon as you finish using them.

Preventing Falls

Falls are a common cause of household injuries. Prevent falls by removing hazards that could cause slips and trips. Wear snug shoes without trailing shoelaces, and choose pants or skirts that are not so long as to cause tripping.

Keep the floor clear of clutter. Wipe up spills and spatters right away. If you spray oil on baking pans, hold the pan over the sink. Otherwise, oil can create slick spots on the floor or the stovetop. Secure slippery throw rugs with tacking or tape or replace them with non-skid mats. Repair damaged or worn flooring. Use a sturdy stepstool to reach higher shelves rather than a chair, box, or stool, which may tip over.

Handling Sharp Edges

Sharp edges in the kitchen can cause serious cuts. Handle and wash knives, graters, and other sharp-edged tools carefully.

Knife Safety

Knives can cause serious cuts, so manage them with care. Store knives in a divided drawer, knife block, or knife rack so that you can pick them up by the handle, not the blade. Learn when and how to use different types of knives, so that you use the right knife for the task. Always use a cutting board when cutting.

Take extra care when cleaning knives, as well as other tools with sharp edges. Do not soak them in a sink or dishpan, where suds or other dishes can hide them from view. Dry knives by wiping them carefully, with the blade pointed away from you.

Sharp Edges

Graters, peelers, chopping tools, mixers, and can lids also have sharp edges and require caution. Keep fingers away from rough surfaces, slicing edges, and rotating beaters. Keep tools away from mixers and blenders when they are switched on. If a cake recipe says “Scrape the bowl while beating,” for example, stop the mixer before using the scraper. If a sharp-edged tool starts to fall, resist the impulse to catch it. Step back and pick it up when it comes to a complete rest.

Dull, But Dangerous

Imagine you are teaching a group of young students how to safely cut vegetables. To keep them from cutting themselves, would you provide them with dull knives? Actually, a dull knife is more dangerous than a sharp knife. Why? You have to use more force to cut with a dull knife, which makes it more likely to slip. A dull knife applied to the skin with great force can do harm. A sharp blade, in contrast, cuts with less effort, and is less likely to slip. Keep knives sharp by using a sharpening stone or by having them professionally sharpened. A sharpening steel keeps a blade straight.

What Would You Do? In your foods lab, you notice one of your peers trying to forcefully cut a tomato with a dull knife. “Gea,” she says, “this knife works slowly, but at least I won’t cut myself.” What would you do?

Answer Answers could include: stop the student from using the knife; sharpen the knife if a sharpener is available; replace the dull knife with a sharper one; or explain that dull knives are more dangerous than sharp ones because they can slip.
Broken glasses and dishes also have dangerously sharp edges. Sweep up broken items right away with a broom or a whisk broom and dustpan. If you need to pick up very small pieces by hand, use a wet paper towel instead of your bare fingers. Seal broken bits or pieces in a bag and place it in the waste-basket. Take out the trash as soon as possible.

Identify Where, besides knives, can you encounter sharp edges in the kitchen?

Preventing Fires and Burns

There are many sources of heat and flame in a kitchen, including the stovetop, range, microwave, and toaster. Help prevent fires and burns by keeping the kitchen clean. Regular, thorough cleaning prevents grease and bits of food from building up in burners, ovens, range hoods, and toasters, where they can catch fire.

Use cookware that is in good condition. A glass baking dish with a hairline crack can fracture. Inspect, or carefully examine, pots, pans, and dishes before each use to make sure they are safe.

Cooktop Safety

On a cooktop, pots and pans can get hotter than the food inside. Handle cookware with dry potholders or oven mitts. Wet potholders are not effective, because water carries heat. When cooking, turn the handles of pans toward the back or center of the range top so that they are less likely to be jostled and knocked over. To remove a lid from a pot or the top from a microwave container, lift the far edge first so the steam rises away from you. Steam can deliver a worse burn than hot metal or boiling water. Make sure that burners are turned off before you reach over them.

Keep flammable items such as curtains, kitchen linens, paper goods, aerosol cans, and potholders away from heat and flame. Use only heatproof utensils when cooking. Regular plastics are flammable and give off poisonous fumes when they burn.

Oven Safety

How hot is a hot oven? Water as hot as 130°F can burn your skin, yet oven temperatures of 325°F and above are common. Several strategies can help you avoid contact with the high temperatures of an oven:

- Arrange oven racks as you want them before you turn on the oven, not when the oven is already hot.
- Stand to one side when you open a hot oven. This protects you from the heat that rushes out.
- Use a sturdy potholder or oven mitt to remove a pan from a hot oven. Pull the oven rack forward a little first, then grab and lift the pan.
- Turn the oven and broiler off right after using them.
- Clean up spills and crumbs inside the oven after the oven has cooled.
UNIT 5  Kitchen Basics

CHAPTER 20  Gas Safety

Skill Practice

Guided Practice

Identify  In one sentence, have students identify one method for handling kitchen fires and explain why quick action is important if a fire starts in the kitchen. (Responses may include: Turn off the burner if the fire is on the cooktop; Quick action is important to keep a fire from getting out of hand.)

L1  ELL

Explain  Have students identify four strategies for handling kitchen fires and explain why you should never use baking powder or flour on a fire. (Answers may include: do turn off the burner if the fire is on the cooktop; do unplug the cord if the fire is in an electrical appliance; do turn off the heat if the fire is in the oven, and keep the oven door closed until the fire dies out; and do smother flames on clothes: stop, drop, and roll. Never use baking powder or flour on a fire because they can explode.)

L2

Apply  Have students write a paragraph in which they describe the Dos and Don’ts of handling kitchen fires and explain what to do if you cannot put out a kitchen fire. (Paragraphs should illustrate the Dos and Don’ts of how to handle a kitchen fire and explain that students should alert others, leave the building, and call the fire department if a fire cannot be put out quickly.)

L3

Explore the Photo

Caption Answer  First, stand to one side as you open the oven. Pull the oven rack forward a little first so you do not have to reach in too far, and then grab and lift the pan with oven mitts.

Discussion  Ask students: What is the correct way to lift a lid from a pot or the top of a microwaveable container? (Lift the far edge first so the steam rises away from you and will not burn you.)

Science in Action

Fighting Flames

To start and survive, a fire requires three elements: fuel, heat, and an oxidizing agent—usually oxygen. Removing any one of these elements can extinguish a fire.

Procedure  Conduct research about extinguishing fires. Firefighters remove the fuel that would start wildfires through controlled burning. They remove the heat from some types of fires with water. They can remove oxygen using the aqueous foam found in fire extinguishers.

Analysis  In a kitchen fire, you can smother flames with a lid, pan, salt, or baking soda. Why is this method effective?

L1  ELL

NSES C  Develop an understanding of chemical reactions.

Science in Action

If a Fire Starts

Catching a fire early saves lives and property. Install smoke detectors. Test them every six months and check inside for cobwebs. Learn how to use a fire extinguisher and read its label. Keep the extinguisher handy in the kitchen.

Quick action can also keep a fire from getting out of hand. If a fire starts in the kitchen:

- Do turn off the burner if the fire is on the cooktop.
- Do unplug the cord if the fire is in an electrical appliance; do not carry a burning pan to the sink or another pan, or with salt or baking soda.
- Do smother the fire with a lid, with another pan, or with salt or baking soda.
- Do smother flames on clothes: stop, drop, and roll.
- Do not use baking powder or flour on a fire, because they can explode.
- Do not use water on a kitchen fire. Water makes grease spatter, which spreads the flames and can inflict a severe burn.
- Do not carry a burning pan to the sink or outside, because you could hurt yourself and start a bigger fire when air fans the flames.

If you cannot put a fire out quickly, alert others and leave the building at once. Call the fire department from another location.

Reading Check  Explain  Can steam burn worse than hot metal or boiling water?
Handling Electricity and Chemicals

Electrical appliances and household chemicals are big helpers in the kitchen, but they can cause burns, shocks, and other injuries. Handling cords, appliances, and chemicals carefully can prevent injuries.

Cord Safety

Check cords for damage before each use. An exposed wire could catch fire or shock you. Keep cords away from hot surfaces. Keep cords tidy so that they do not get snagged and pull an appliance down. Do not staple or nail cords in place. To disconnect an appliance, grasp the plug at the electrical outlet rather than tugging on the cord.

Limit the number of cords in an electrical outlet. An overloaded circuit can start a fire. If you need an extension cord, choose a heavy-duty cord or surge protector designed for appliances.

Newer appliances have polarized plugs. A polarized plug is a plug that has one blade wider than the other. Polarized plugs reduce the risk of shock if used with a polarized outlet. Do not try to fit a polarized plug into a non-polarized outlet. Buy an adapter at a hardware store or supermarket.

Appliance Safety

Read the owner’s manual carefully before using any electrical appliance. Turn off small appliances as soon as you are finished with them. Never put your fingers or a kitchen tool inside an appliance that is plugged in. You may get a painful shock, and you can seriously hurt yourself if you accidentally turn on the appliance. Unplug a mixer before removing the beaters, for example.

Unplug an appliance immediately if it starts to overheat or gives a shock. Have it repaired before using it again.

Water conducts electricity, so appliances and water can be a deadly mix. Never use an electric appliance with wet hands or while standing on a wet floor. Do not run a cord around the sink. If an electric appliance falls into water or gets wet, unplug it immediately before touching it. Check the owner’s manual to see how to clean an appliance. If an owner’s manual recommends cleaning the appliance with a wet cloth, unplug the appliance first.

Household Chemical Safety

Many household chemicals are hazardous to your health. Cleaners, lighter fluid, drain cleaners, and pesticides can harm eyes, lungs, and skin.

Less toxic substitutes are often just as effective. Baking soda and boiling water dissolve some sink clogs. Borax sprinkled outside the door discourages ants. Diluted vinegar cleans glass.

Here are five things to remember when using household chemicals:

1. Read the label before buying. Read the instructions carefully. Know the potential hazards.

Letters and drawings on fire extinguishers show how to use them. This extinguisher works on ordinary combustibles like wood and paper (A), flammable liquids like grease (B), and electrical fires (C).

Why should you not use water to put out a grease fire?

Explore the Photo

Caption Answer  Water makes grease spatter, which spreads the flames and can inflict a severe burn.

Discussion  Ask students: What is the appropriate action to take in the event of a grease fire? (If you have a grease fire, immediately smother the fire with a lid. If the fire does not go out, smother the fire with salt, baking soda, sand, or a fire extinguisher. Never use baking powder or flour, because they can explode.)
Critical Thinking

Grilling Safely Ask students: What specific steps would you take and what tools would you use to maintain kitchen safety while cooking with a charcoal grill? (Potential risks may include: baked-on food and grease can cause flames to flare up, causing burns or fire; setting a grill on a surface that is not level can cause it to tip over; causing burns and fire; and adding fluid to lighted coals could trigger an explosion, causing burns and fire. Suggestions for safety may include: start with a clean grill to avoid flare-ups; set the grill on a level, paved surface so it will not tip over; and apply starter fluid before lighting a grill to avoid an explosion.)

ASSESS

Quiz

Ask students to answer the following questions:

1. What is a polarized plug? (A polarized plug is an appliance that has one blade wider than the other, which helps to reduce the risk of shock if used with a polarized outlet.)

2. How can keeping a kitchen clean help to prevent fires? (Regular, thorough cleaning prevents grease and bits of food from building up in burners, ovens, range hoods, and toasters, where they can catch fire.)

3. What should not be used to put out a kitchen fire? (water, baking powder, flour)

Explain Water conducts electricity, so water and appliances can be a deadly mix.

Cooking Outdoors Safely

Burning coals can generate temperatures up to 1,000°F. Burning charcoal also gives off large amounts of carbon monoxide, an odorless, highly poisonous gas. Follow these safety guidelines to help you grill food safely:

- Start with a clean grill. Baked-on food and grease can cause flames to flare up when you light the charcoal. Clean the grill with a hard-bristle brush after each use. Wipe and wash the grate in hot, soapy water.

- Set the grill on a level, paved surface where it will not tip over. Keep the grill away from buildings, shrubs, trash containers, and anything else that could catch fire.

- Keep a fire extinguisher handy.

- Never use a charcoal grill or hibachi inside the home or garage. Carbon monoxide can build up in an enclosed area, causing drowsiness, headaches, nausea, and even death.

- If you use starter fluid or fuel, apply enough before striking the match. Adding fluid to lighted coals could trigger an explosion.

- Use fireproof gloves and heavy-duty grilling tools with long handles that let you reach food while staying a safe distance from the heat.

- Extinguish a flare-up by raising the grate off the grill, covering the grill, or spreading the coals with a long-handled tool. You can also use a pump-spray bottle filled with water to mist the flare-up. Do not pour water directly on burning charcoal, because this creates a dangerous cloud of steam.

- Let the coals burn down to ashes when you are finished grilling. Douse the ashes with water and put them in a metal trash can. Do not dump hot coals or ashes on the ground. They can burn grass and people and may even start a fire.

List Tools and supplies needed to safely grill outdoors are a hard-bristle brush to clean the grill, a fire extinguisher, fireproof gloves, and heavy-duty grilling tools with long handles.
Protecting Family Members

Kitchen safety protects the entire household. However, more vulnerable members of the family, such as children and people with physical impairments, need extra protection. Vulnerable means susceptible to harm.

Five Precautions to Protect Children

Children can enjoy and learn from their time in the kitchen when you take a few simple precautions:

• Never leave young children alone in the kitchen, even for a few seconds.
• Protect toddlers by using safety latches on drawers and cabinet doors.
• Teach children to stay away from heat sources such as the oven, range, and toaster.
• If children want to help you work, set up a child-size table or a safe stepstool. Provide small utensils that children can handle for simple tasks, such as mixing and mashing. Do not let young children use knives or work near heat sources. Supervise them at all times.
• Model safe work habits. Teach by example.

People with Physical Challenges

Simple changes in tools and workspaces can make it easier for people with physical challenges such as limited eyesight or arthritis to use the kitchen safely. These steps can help everyone in the family stay safe in the kitchen:

• Add more or better lighting.
• Use unbreakable dishes and glassware and heatproof utensils.
• Store frequently used tools and foods in easy-to-reach places.
• Keep a magnifying glass in the kitchen for reading small print. Re-label items in larger letters with stick-on labels and a marking pen.

Handling Emergencies

You cannot prevent every kitchen accident—but you can be prepared. Keep emergency numbers next to the phone. Keep a well-stocked first-aid kit in a handy location. Learn to use a fire extinguisher and keep one ready in the kitchen. Have the fire extinguisher tested each year and recharged when necessary.

Frequently Used Tools

Keeping kitchen tools within reach can make kitchen work more comfortable. What object can you place under a cutting board or mixing bowl to keep it more stable during use?

• Buy round rubber jar openers for gripping appliance knobs.
• Put mixing bowls on a damp dishcloth or on a round, rubber jar opener to keep them on the countertop during mixing.

Explore the Photo

Answer: a damp dishcloth

Discussion: Point out to students that universal kitchen design focuses on ensuring that anyone will be able to comfortably and safely use tools and workspaces in the kitchen. Ask students: How might universal design make it easier for the elderly to use the kitchen?

(Answers will vary but may include: new magnetic touch-and-release cabinet doors can make accessing cupboards easier for elderly people with arthritis.)
Take a first-aid training class from the American Red Cross or another organization, such as your local fire department. Learn these two important first-aid measures:

**The Heimlich Maneuver** The Heimlich maneuver is a way to dislodge an object from the throat of a person who is choking by using a series of upward thrusts on the abdomen.

**Cardiopulmonary Resuscitation** Cardiopulmonary resuscitation (CPR) is a technique used to revive a person whose breathing and heartbeat have stopped. Chest compressions, sometimes accompanied by assisted breathing, get oxygen into the blood to keep the heart and lungs working.

The Heimlich Maneuver

1. Stand behind the person whose throat is closed. Put your arms around them. Hold your two hands in the middle of their abdomen.
2. Make a fist with one hand and place it on the middle of their abdomen. Place your other hand over the fist. Keep your arm straight and flat on their abdomen to ensure you are pressing into their diaphragm.
3. Give five sharp upward thrusts into their abdomen. This maneuver should dislodge the object that is blocking their airway.

**Note:** You can also use the Heimlich maneuver on children. Simply wrap your arms around their lower chest and press up and in a few times. If the object isn’t dislodged, give a few abdominal thrusts to dislodge the object.

Create a First-Aid Kit Ask students to brainstorm what should be included in a first-aid kit for their kitchen. Divide the class into five or six groups and have groups make a list of the items necessary for their first aid kits.

**Recipe Prep Tip** Remind students that by stacking the vegetables, they are creating a sandwich that is colorful and attractive. The vegetables in this recipe are chosen in large part for their contrasting colors. You can create similar contrasts by selecting a variety of vegetables that are in season.

**Grilled Vegetable Sandwich**

**Ingredients**

- 1 Tbsp. Olive oil
- 1 tsp. Balsamic vinegar
- ¼ tsp. Salt
- ¼ tsp. Cayenne pepper
- 1 Red onion
- 1 Zucchini
- 2 Portabella mushrooms
- 4 Rolls (Kaiser, Sesame or other)

**Directions**

1. Mix the olive oil, vinegar, salt and Cayenne pepper in a small bowl.
2. Cut the bell pepper lengthwise to make four wide, flat slices. Cut the onion into four thick circles. Slice the zucchini lengthwise into four long strips, then cut the strips in half. Remove the stems from the mushrooms and slice them in half so that you have two circular pieces.
3. Place the vegetables on a tray and brush them with the marinade. Grill the vegetables on a grill or bake them on a wire rack in an oven set to 375°. Watch the vegetables closely and remove them from the heat when they are done.
4. Stack the vegetables on the bread to make the sandwich. Slice the sandwich in half and serve.

**Nutrition Analysis**

- Calories 232
- Total fat 6 g
- Saturated fat 1 g
- Cholesterol 0 mg
- Sodium 315 mg
- Carbohydrate 37 g
- Dietary fiber 3 g
- Sugars 4 g
- Protein 7 g

**Recipe**

**A Silent Alarm**

Your home’s smoke detector can awaken you with loud beeps. But what if you’re hearing impaired? Inventors in Japan have created a new smoke detector that uses food, not sound, to alert the deaf during a fire. Wasabi is a Japanese horseradish that has a strong odor and taste.

When the Wasabi Smoke Detector senses smoke, it sprays potent wasabi extract into a room to alert the deaf people to a fire. In tests, this silent alarm woke up 13 out of 14 people.

**Investigate** What other types of alarms can alert the hearing impaired to a kitchen fire?
CHAPTER 20 Review & Applications

After You Read
Chapter Summary
Good safety habits protect against many kitchen hazards. Make six safety habits part of your kitchen routine. In addition, prevent falls by removing hazards, and handle sharp edges with care. Prevent fires and burns by practicing cooktop, oven, and gas safety, and take the correct steps to respond if a fire starts. Handle cords, appliances, and household chemicals properly to prevent injuries. Be prepared to handle emergencies by keeping important tools handy and learning safety measures.

Content and Academic Vocabulary Review
1. Create a fill-in-the-blank sentence for each of these content and academic vocabulary words.

<table>
<thead>
<tr>
<th>Content Vocabulary</th>
<th>Academic Vocabulary</th>
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</thead>
<tbody>
<tr>
<td>polarized plug (p. 305)</td>
<td>inspect (p. 303)</td>
</tr>
<tr>
<td>carbon monoxide (p. 306)</td>
<td>vulnerable (p. 307)</td>
</tr>
<tr>
<td>Heimlich maneuver (p. 308)</td>
<td>cardiologympulmonary resuscitation (CPR) (p. 308)</td>
</tr>
</tbody>
</table>

Review Key Concepts
2. List six ways to prevent accidents in the kitchen.
3. Explain why keeping a kitchen clean can prevent a kitchen fire.
4. List five things to remember when using household chemicals.
5. Explain why it is important to follow safe practices when cooking outdoors.
6. Summarize five precautions to make kitchens safe for children.
7. Describe two first aid procedures you should know to prepare you to respond to kitchen emergencies.

Critical Thinking
8. Evaluate this situation. After breaking a glass in the foods lab, Jarred quickly swept up the pieces and put them directly into the wastebasket. How might this situation be improved?
9. Explain what the cook might have done wrong. After a severe kitchen fire, firefighters learned that it started small, but the cook’s attempts to put out the fire made it worse. What could the cook have done differently?
10. Examine the safety issues illustrated by this scenario. A child stands on a chair at the kitchen counter. She uses a dull knife to cut a sandwich while her parent answers a phone call. What safety measures could be implemented?

Critical Thinking
6. To make kitchens safe for children, never leave them unattended, use safety latches on doors and cabinets, and teach them to stay away from heat sources. Also, provide child-appropriate tables, stools, and tools for children who want to help with kitchen tasks, and supervise them at all times. Finally, model safe work habits for children.
7. The Heimlich maneuver is a way to dislodge an object from the throat of a choking person by applying a series of upward thrusts on the abdomen. Cardiopulmonary resuscitation, or CPR, is a technique used to revive a person whose breathing and heartbeat have stopped. Chest compressions and assisted breathing can help to get the heart and lungs working.

Critical Thinking
8. Jarred did the right thing by quickly sweeping up the broken pieces. However, he should have sealed them in their own bag before placing them in the wastebasket. If they are simply loose in the wastebasket, they could cut a person who handles it or reaches into it.
9. The cook might have used baking powder or flour to put out the fire, which caused an explosion; used water to put out the fire, which caused grease to splatter; or carried a burning pan to the sink or outside, causing a bigger fire when air fanned the flames.

10. This situation is dangerous for several reasons. The child should stand on a safe step-stool or work at a child-size table. She should not be using a dull knife, which is more dangerous than a sharp knife because it is likely to slip. Her parent is distracted by the phone and cannot supervise the child properly.

11. Have each team demonstrate a different task, such as allowing a child to help in the kitchen, using household chemicals, working at the range, or putting out an imaginary fire. Encourage students to think of actions or information their peers might leave out of demonstrations.

12. Eladio should choose a wooden spoon. Regular plastic utensils are flammable and give off poisonous fumes when they burn.

13. Students’ flyers will vary depending on their findings. Encourage students to experiment with font sizes, styles, and colors to design eye-catching and informative flyers about opportunities for first aid education. Use the flyers to create a colorful classroom display.

**Real-World Skills**

**Problem-Solving Skills**

14. The Tamakos have a curious toddler who is constantly opening the lower cabinet doors in their kitchen. Yesterday, he pulled out a heavy pan, and his mother tripped on it. Today, he smashed his finger in a cabinet. What can the Tamakos do?

15. Assign each group a different aspect to assess. For example, one group might assess the knives for sharpness, while another may assess the cords of electrical appliances. A group might note that 23 out of 40 knives were in need of sharpening or that 4 cords had exposed wires. Have students note and report their findings. Point out that routine assessments are as useful for preventing accidents in home kitchens as they are in school foods lab.

**Interpersonal and Collaborative Skills**

15. Assess Safety Follow your teacher’s instructions to form small groups. Work together to evaluate the safety of one aspect of your schools foods lab, such as tools, equipment, cords, accessibility to first aid, or handhelds of fire extinguishers. What changes would be helpful?

**Financial Literacy Skills**

16. The Cost of Carelessness Research the average cost of a doctor’s visit in the United States. Then research the cost of a basic knife sharpener. How much money could a person save by buying a sharpener to prevent a dangerous cut and avoid a visit to the doctor?

16. Answers may vary. A doctor’s visit may cost anywhere from $95 to $265. A basic knife sharpener can be found for between $5 and $20 so prevention could save from $75 to $260. Point out that by preventing injuries through such habits as keeping knives sharp, students can save money that would be spent on costly doctor visits.

**TechnoLab**

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**Real-World Skills**

**Problem-Solving Skills**

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Academic Skills

Food Science

17. Carbon Dioxide Fire Extinguishers
A carbon dioxide fire extinguisher works by eliminating oxygen and replacing it with carbon dioxide. Combining baking soda (a base) with vinegar (an acid), creates carbon dioxide to put out a flame.

Procedure
Under your teacher’s supervision, place a small candle in a flameproof safe container. In a large glass, place a tablespoon of baking soda, then add about 2 tablespoons of white vinegar, mixing. Watch the foam until it dies down. Light the candle, and pour the contents of the glass (carbon dioxide gas) over the flame. (Don’t pour out the liquid.)

Analysis
Why did the flame go out? How did the carbon dioxide stay in the glass? Write a paragraph to summarize the results of the experiment.

Mathematics

18. Kitchen Hazards
You have read the results of a survey comparing the various types of kitchen accidents. According to this survey, 50% of all kitchen accidents are cuts; 25% are burns; 15% are falls; 7% are due to electric shock; and 3% are poisoning. Create a circle graph to show this data.

Starting Hint
Multiply each percent by 360° to find the angles of each section.

Reading Comprehension
Re-read the section about cord safety on page 307. Then select the best answer to the question.

20. What can you do to prevent accidents caused by cords in the kitchen?
   a. Keep cords tidy and away from water by stapling or nailing them in place.
   b. Keep cords organized by putting as many as possible in one electrical outlet.
   c. Do not try to fit a polarized plug into a non-polarized outlet.
   d. Avoid electrocution by unplugging cords by pulling on the cord, not the plug.

Test-Taking Tip
Before you answer a reading comprehension question, closely read the answers. Some answers may seem correct, but they contain subtle errors. Pay attention to every word.

English Language Arts

19. A-Z Safety Lists
Write an A-Z list of safety tips for the kitchen in which each tip corresponds to one letter from the alphabet. For example, the first tip might be “Appliances should be unplugged when not in use.” The second could be “Bake safely by using oven mitts to handle hot items.” Each tip should be a complete sentence, and be written in your own words.

NCTE 5
Use different writing process elements to communicate effectively.

NCTM Data Analysis and Probability
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

NCTS B
Develop an understanding of interactions of energy and matter.

NCLB connects academic correlations to book content.