

Dear Educator,

Problem solving is an important skill for consumers today, and **WD-40®**, in its distinctive blue and yellow can, has been helping consumers solve problems for more than 50 years. Generations of Americans have turned to this inexpensive, easy-to-use product to lubricate locks and hinges, protect sports equipment from rust, and solve countless other everyday problems in and around the home.

That's why the award-winning curriculum specialists at Young Minds Inspired (YMI) have teamed with WD-40 Company to provide you with this unique consumer education program for students in middle school and high school. Designed to foster core critical thinking and communication skills, the program turns household problems into "teachable moments" that can help motivate your students to become informed and creative consumers.

As they complete the program's activities, which align with the National Standards for Family and Consumer Sciences, your students will learn how **WD-40** and other common household products can solve an array of problems. Students will consider the importance of preventive maintenance in prolonging the life of equipment, tools, and recreational items, all while reducing the need for expensive repairs. And, students will engage in creative problem solving as they inventory their everyday environments—classroom, home, and garage—to identify innovative and inexpensive new ways to fix and repair household items.

What's more, we've included a coupon for a FREE WD-40® Smart Straw® can so you can demonstrate its many uses with your students.

We urge you to share this valuable program with other teachers in your school. Although these materials are protected by copyright, you may make as many copies as you need for use in your classroom. Please return the enclosed reply card to let us know your opinion of the program. We depend on your feedback to continue providing free educational programs that make a real difference in the classroom and the lives of your students.

Sincerely,



Dr. Dominic Kinsley
Editor in Chief
Young Minds Inspired



YMI is the only company developing free, innovative classroom materials that is owned and directed by award-winning former teachers. Visit our website at www.ymiclassroom.com to send feedback and download more free programs. For questions, contact us at **1-800-859-8005** or e-mail us at feedback@ymiclassroom.com.

Program Objectives

- To help students become informed, creative consumers.
- To explore innovative uses for common household products.
- To introduce the multiple ways students can use WD-40 and other common products to maintain household items and reduce the need for expensive repairs.

Target Audience

This program has been designed for use with students in middle school and high school family and consumer science classes.

Program Components

- This teacher's resource guide.
- Four reproducible student activities.
- A colorful take-home handout/mini-poster for students to share with their parents.
- A coupon for a FREE WD-40® Smart Straw® can.
- A reply card for your comments.

How to Use This Program

- Review the activities and schedule them into your classroom lessons.
- Photocopy and distribute the four student activities. The teacher's guide contains directions for implementing each activity in your classroom.
- Provide each of your students with a copy of the take-home handout/mini-poster.

National Standards for Family and Consumer Sciences

The activities in this program address the following National Association of State Administrators for Family and Consumer Sciences Education Standards:

Reasoning for Action

Standard 1: Evaluate reasoning for self and others.

Standard 2: Analyze recurring family, workplace, and community concerns.

Standard 3: Analyze practical reasoning components.

Standard 4: Implement practical reasoning for responsible action in families, workplaces, and communities.

Standard 5: Demonstrate scientific inquiry and reasoning to gain factual knowledge and test theories on which to base judgments for action.

Activity	National Standards Addressed
1. Household Problems – What Are the Solutions?	Standards 1, 3, 4
2. Doing Your Homework Before Home Work	Standards 1, 2, 3, 5
3. If It Ain't Broke, It Won't Need Fixing	Standards 1, 2, 3, 4, 5
4. Consumers, Unite!	Standards 1, 2, 3, 4, 5

Activity 1 Overview HOUSEHOLD PROBLEMS— WHAT ARE THE SOLUTIONS?

Part A: Introduce this activity by asking your students how they have used common household items in innovative ways to solve problems—for example, using a melon-ball scoop to make meatballs, or affixing a Velcro® strip to shore up the hem on a skirt. Did their invention come about as a result of an emergency, a need to fix something quickly, or just plain curiosity? Then have students complete the quiz either individually or as a class. Be sure to allow time for discussion.

Answer Key: 1-B; 2-A; 3-B; 4-E; 5-D; 6-E; 7-D; 8-D; 9-C; 10-A; 11-B; 12-C; 13-E; 14-C; 15-A; 16-C; 17-A; 18-B; 19-E; 20-C

Part B: Now challenge your students to think creatively and consider how they could improvise to solve a problem. To help them get started, offer the following examples:

- Use a plastic drinking straw to get ketchup out of the bottle. Stick the straw in and pull it back out to create an air pocket that makes the ketchup start flowing.
- Use a rubber band when you can't find a pencil with an eraser. Fold the rubber band a few times and erase away.

Activity 2 Overview DOING YOUR HOMEWORK BEFORE HOME WORK

Part A: Talk with your students about the advantages of being an informed and creative consumer. Explain that it is important to learn as much as possible about a

product before making a purchasing decision, and to think about other ways in which to use products you already have around the home. For example:

- **Baking soda**—to absorb odor in the cat box or laundry hamper.
- **Vinegar**—to remove ballpoint pen marks from almost anything and to clean the track ball on your computer mouse.
- **Duct tape**—to repair a broken CD case or hang pictures in your locker.
- **Club soda**—to remove bird droppings from the car windshield and remove puppy accident stains from carpet.
- **WD-40**—to make closet door hinges stop squeaking; to remove duct tape from just about anything.

Conclude the activity by asking students to share examples of incidences where they have been both informed and creative when making a purchasing decision. What about incidences where they have not? What were the consequences?

Part B: Students can work individually or in teams. Students might make their own initial choices, then discuss and combine their ideas to create a team list. Be sure to provide time for students to share their lists and explain the choices they made during both parts of this activity.

Activity 3 Overview IF IT AIN'T BROKE, IT WON'T NEED FIXING

Part A: Introduce this activity with a class discussion about the benefits of preventive maintenance. Then, encourage students to use the Internet and do some comparison shopping to find the best prices for the items on their lists that might need to be replaced. Ask students to consider how much longer a well-maintained item might last, as opposed to one that was not cared for properly.

Part B: Encourage students to “think outside of the box” as they complete this part of the activity. For example, if a shower head is clogged, students can unscrew it, and put it in a pot of one-part vinegar to eight-parts water. Then, bring it to a boil, and simmer for 15 minutes. The clog will be gone. As for that alarm clock, if it falls and the case cracks, they can always put it back together with duct tape!

Activity 4 Overview CONSUMERS, UNITE!

Part A: Once your students have made their lists, provide time for them to share what they found. How many students listed the same kinds of things? What was the most unique use they listed? What are their general observations about the uses of WD-40?

Part B: To complete the learning and stimulate your students' creativity and ingenuity, have students try out one of their own ideas for using WD-40 to solve a problem. They can describe their experience in the space on the activity sheet and then discuss the results in class.

Before students begin, remind them that to be safe using any product, they need to:

1. Read the product label for approved uses.
2. Use products in well-ventilated locations.
3. Avoid breathing in vapors or mist.

Some aerosols, and other consumer products, are being used by young students to get high (a.k.a. “huffing”). However, the propellant in WD-40 does not allow this effect, therefore WD-40 is not an inhalant. Please note that if a student experiments with WD-40 by inhaling, it could have a negative effect on the brain. If you would like to share more information about the “huffing” topic with your class, please reference www.inhalants.org.

4. Keep products away from heat, sparks, pilot lights, and open flames.
5. Keep your work area clean.

Online Resources

- WD-40: www.wd40.com
- National Association of State Administrators for Family and Consumer Sciences Education Standards: www.aafcs.org/FCSstandards
- Young Minds Inspired: www.ymiclassroom.com

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The uses of WD-40 described here were provided to WD-40 Company by end-users of the product, and do not constitute recommendations or suggestions for use of WD-40 by WD-40 Company. These uses have not been tested by WD-40 Company. Consumers should exercise common sense whenever using WD-40. Always follow the instructions and take heed of any warnings printed on the WD-40 packaging.



HOUSEHOLD PROBLEMS— WHAT ARE THE SOLUTIONS?

Part A Many products have uses other than the ones the manufacturer originally considered. Consider baking soda. Sure, it's used in cooking, but it's also found in millions and millions of refrigerators to control odors.

How much do you know about the uncommon uses of common products that are probably in your house, garage, or workshop? Write the letter of the product that you might use to solve each of the household problems in the list below.



A. Baking soda



B. White vinegar



C. WD-40®

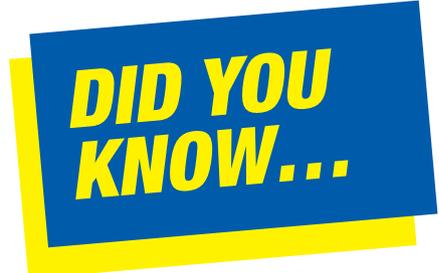


D. Duct tape



E. Club soda

- _____ **1.** Shines the chrome on the car.
- _____ **2.** Eliminates stinky odors from shoes.
- _____ **3.** Repels ants.
- _____ **4.** Makes shucking oysters easier.
- _____ **5.** Patches holes in a window screen.
- _____ **6.** Removes the swimming pool “chlorine green” from blonde hair.
- _____ **7.** Catches crawling and flying pests.
- _____ **8.** Repairs a ripped hem.
- _____ **9.** Keeps garden tools rust free.
- _____ **10.** Makes the dog smell better.
- _____ **11.** Helps remove manufacturing chemicals from new clothes.
- _____ **12.** Removes rust from saws.
- _____ **13.** Keeps plants watered and healthy.
- _____ **14.** Keeps a bicycle chain from getting rusty.
- _____ **15.** Removes grease from pots and pans.
- _____ **16.** Stops hinges from squeaking.
- _____ **17.** Polishes tarnished silver.
- _____ **18.** Kills grass on walks and driveways.
- _____ **19.** Cleans jewelry.
- _____ **20.** Keeps lawnmower wheels turning smoothly.



Part B Can you think of some other products that you could use in a unique or different way to solve a household problem? Warm up by thinking of innovative uses for the items listed. Then add ideas of your own.

Product	How It Would Work
Plastic drinking straw	_____
Rubber band	_____
_____	_____
_____	_____
_____	_____

One of the best ways to prevent something from rusting is to get rid of the moisture on or around it. WD-40® was originally developed as a rust prevention solvent for the aerospace industry. As it took 40 attempts to get the water displacing formula just right, the name WD-40 stands for Water Displacement, 40th attempt. To find more interesting facts about this amazing product, visit the WD-40 website at www.wd40.com.





DOING YOUR HOMEWORK BEFORE HOME WORK

Part A Creative consumers have found more than 2,000 uses for WD-40®, ranging from automotive repair to removing price stickers. It just shows how innovative thinking can turn a product into a problem-solver.

You've already learned some surprising uses for WD-40 and the other products listed on the right. What other uses can you find? Take a look around your classroom and your home for problems you think each of these products might solve. Describe your innovative ideas in the spaces provided. Need a hint to get started? Do some online research to find out more about the problem-solving potential of each product.



Product	Problems It Could Solve
Baking soda	1. _____ 2. _____
White vinegar	1. _____ 2. _____
Duct tape	1. _____ 2. _____
Club soda	1. _____ 2. _____
WD-40	1. _____ 2. _____

Part B For creative consumers, every problem has a solution—and oftentimes, that solution is WD-40. WD-40 is an especially versatile product, and people continue to find new ways to use it.

See for yourself by visiting the WD-40 website at www.wd40.com/uses-tips. Browse by category to learn some of the ways WD-40 solves problems in the home, garden, garage, and workshop, and how consumers have used this all-purpose product to maintain cars, trucks, sports and recreation equipment, and as a helper in crafts and hobbies. As you browse, create your own Creative Consumer Showcase by listing your favorite uses for each category shown in the chart below.

WD-40 CREATIVE CONSUMER SHOWCASE

Most Innovative Uses	Most Amazing Uses	Most Practical Uses	Wackiest Uses

DID YOU KNOW...



The WD-40® No-Mess Pen® features a special pen-shaped applicator for precision application—perfect for lubricating hinges, doors, and drawers, removing sticky labels, gum, and crayon—without messy overspray! To find out more, visit the WD-40 website at www.wd40.com.





IF IT AIN'T BROKE, IT WON'T NEED FIXING

Part A As the old saying goes, “An ounce of prevention is worth a pound of cure!” You’d probably never leave your bicycle or roller blades out in the rain, because they’d most likely rust. But even when they’re stored properly, they still have to be maintained. Quick maintenance tricks, like spraying WD-40®, can save you cash, because when you take care of your things, they last longer.

What’s your favorite sport or hobby? List some of the equipment you use in the first column. In the second column, describe how you care for the item to make it last. Then, to see how much maintenance matters, use the last column to list how much it would cost to replace each item. You can use the Internet to find replacement costs. We’ve provided an example to get you started.

Equipment	How to Care for It	Cost to Replace It
Home telescope	Store extra eyepiece in a sealed plastic bag	\$75.00



Part B Now, let’s see how you can start saving money by thinking creatively about household maintenance and repair. Listed below are some everyday items and some typical mishaps that could prove costly. For each situation, describe how a common product like WD-40 could save the day. Then list situations you’ve experienced in your own home and how you could solve or prevent the problem with a little innovation. If you need some help, there are plenty of ideas on the Internet.

Household Item	The Situation	Cost-Saving Solution
Alarm clock	The case cracks when you knock it off the bed table	
Shower diverter (knob)	Stuck	
Kitchen floor	Chair marks after months of family meals	

DID YOU KNOW...

WD-40 products now feature a permanently attached straw called the Smart Straw® that sprays two ways—as a wide spray pattern or narrow stream. To find out more, visit the WD-40 website at www.wd40.com.



Dear Parent,

Your child is currently completing a special program in family/consumer science class that is designed to foster critical thinking and communication skills while encouraging him or her to be an informed and creative consumer. The program, developed by curriculum specialists Young Minds Inspired, features a remarkably versatile product that you are probably familiar with—WD-40®.

Your child will learn some of the multiple ways that WD-40 and other common products can solve household problems and help your family save money through preventive maintenance and repair. In the process, he or she will identify creative ways to use WD-40 and other everyday products at school, at home, and in other areas of family life.

We encourage you to get involved in this activity. Talk with your child about his or her ideas and share your thoughts as well!

To provide some conversation starter ideas, this handout includes a mini-poster listing 50 of the more than 2,000 uses innovative consumers have found for WD-40. We encourage you to visit the WD-40 website at www.wd40.com to learn more.

Dr. Dominic Kinsley
Editor in Chief
Young Minds Inspired





WD-40® The Little Can with Thousands of Uses

It Lubricates... It Protects... It Penetrates... It Displaces Moisture

1. Drives out moisture from trunk locks.
2. Stops squeaks on rollerblades.
3. Drives out moisture from ignition coils.
4. Helps break in baseball gloves.
5. Stops squeaks on bicycle seat posts.
6. Helps remove skid marks from cement.
7. Removes scuff marks from cars caused by shopping carts.
8. Removes crayon from vinyl surfaces.
9. Keeps car locks from freezing during winter.
10. Dissolves grease.
11. Protects windshield wiper blades.
12. Lubricates shower door rollers.
13. Helps remove broken keys from locks.
14. Helps free stuck battery cables from terminals.
15. Helps remove corrosion in flashlight battery compartment.
16. Lubricates fuse box hinges.
17. Quiets squeaky piano pedals.
18. Lubricates sliding power saw guides.
19. Penetrates and frees stuck buttons on telephones.
20. Helps loosen rusty parts on lawnmowers.
21. Lubricates locks on lawnmower control cables.
22. Loosens height adjuster on lawnmower wheels.
23. Lubricates staple guns.
24. Stops squeaking on windshield wipers.
25. Lubricates sticky drawers.
26. Softens stiff leather sandals.
27. Prevents rust on clamps.
28. Loosens rusted screws on outdoor furniture.
29. Penetrates to help open stuck paint can lids.
30. Lubricates sticky drawers.
31. Stops squeaks on car doors.
32. Loosens screws on toilet seats.
33. Lubricates fans.
34. Lubricates moving joints of a futon.
35. Helps stop squeaks on skateboard wheels.
36. Lubricates vacuum cleaner wheels.
37. Stops squeaks on swing sets.
38. Drives out moisture from flooded engines.
39. Stops squeaks on training wheels.
40. Stops squeaks on ski boots.
41. Drives out moisture from fishing tackle.
42. Lubricates flag on mailbox.
43. Keeps rubber door weather gaskets soft and pliable.
44. Helps remove stickers and gum.
45. Unclogs shower diverter.
46. Lubricates wood screws for easier installation.
47. Removes oil-based paint from paint brushes.
48. Lubricates and improves electrical contacts on model train tracks.
49. Dissolves glues.
50. Eases installment of rubber hand grips on bicycles.

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