NO PREP

Laundry Basics

Sorting, Washing, and Stains

Includes: Student reading, case study, differentiated questions, teacher key

Name: Period: Date:

Laundry Basics: Sorting, Washing, and Stains

The Chore Nobody Teaches You

Laundry is one of the few genuinely universal adult tasks, and it is also one of the few that most people learn by accident, usually after ruining something. The consequences are quietly expensive. A single wash that turns a load of white shirts pink, or shrinks a pair of pants two sizes, or sets a stain permanently, costs more than a month of doing it correctly would have. Understanding laundry starts with recognizing that a washing machine is doing four things at once, and each one can either clean a garment or destroy it. Water carries away soil and dissolves detergent. Detergent contains surfactants, molecules with one end that grabs oil and another that grabs water, which is how greasy soil that water alone cannot touch gets lifted off fabric and carried down the drain. Agitation provides mechanical energy, physically knocking soil loose. Heat accelerates all of it, which is why hot water cleans faster and also why hot water causes most laundry damage. The skill of doing laundry well is really the skill of giving each garment enough of those four forces to get clean and

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Sorting Is Not Optional

Sorting exists because a single load applies identical treatment to everything inside it, so the load can only be as aggressive as its most fragile member can survive. Sort along three lines. Sort by color first, separating whites, lights, and darks, because dye that is not fully colorfast releases into the wash water and redeposits on lighter fabric. New red and dark blue garments are the most notorious offenders and are worth washing separately for their first few cycles. Sort by fabric type and weight second. Heavy items like jeans, towels, and canvas are abrasive and will physically

wear down lightweight knits and delicates tumbling against them, and towels shed lint that clings permanently to synthetics. Delicates, anything with beading or lace, and anything labeled gentle cycle belong in their own load or in a mesh bag. Sort by soil level third, because heavily soiled work clothes release grime into the water that lightly worn shirts will pick up. A few habits go with sorting: close zippers so the teeth do not snag knits, fasten hooks, empty every pocket because a single forgotten tissue coats an entire load, and turn dark jeans and printed graphics inside out so abrasion happens on the inside face rather than on the part everyone sees.

Water Temperature Is a Real Decision

The temperature dial is the setting with the largest consequences and the least understanding behind it. Hot water cleans most effectively, dissolves detergent fully, and is the right choice for heavily soiled work clothes, sturdy whites, and items that need sanitizing such as bedding after an illness. It is also the setting that shrinks fabric, fades color fastest, and permanently sets protein stains. Warm water is the middle ground for moderately soiled everyday clothing. Cold water protects color and prevents shrinking, uses dramatically less energy because heating water is most of the electricity a washer consumes, and is the correct default for the majority of modern loads. Cold washing works far better than it used to for a specific reason: today's detergents contain enzymes, biological catalysts that break down particular soil types, and the common ones are engineered to remain active at low temperatures. Protease breaks down protein soils like blood and food, amylase attacks starches, and lipase targets fats. Those enzymes are also the reason hot water backfires on certain stains, because heat denatures protein, essentially cooking blood, egg, milk, or sweat into the fibers where no detergent can retrieve it. The practical rule is to wash cold by default, use warm for genuinely dirty everyday loads, and reserve hot for sanitizing and heavy soil on fabrics you know can take it.

Stains: What Actually Works

Stain removal has a small number of rules that cover most situations. Act fast, because a fresh stain sits on the surface and an old one has bonded chemically to the fiber. Blot, never rub, since rubbing drives the stain deeper and abrades the fabric surface into a permanently fuzzy patch. Work from the outside of the stain toward the center so it does not spread into a larger ring. Always test a stain

treatment on a hidden area, such as an inside seam allowance or hem, before applying it to the front of a garment. The single most important rule concerns heat: never put a stained garment in the dryer, because dryer heat sets most stains permanently, which is why a stain that survives a wash cycle is usually still removable and the same stain after one dry cycle usually is not. Match the treatment to the stain type. Protein stains, which include blood, milk, egg, and sweat, require cold water, because hot water cooks the protein into the fabric. Grease and oil stains need a surfactant to break the oil apart, and dish soap works well because it is formulated for exactly that. Tannin stains such as coffee, tea, wine, and fruit juice generally respond to cool water and an oxygen-based product rather than to soap. Dye-based stains like ink often need a solvent such as rubbing alcohol, applied with the stain face down onto a clean towel so the ink transfers out of the fabric instead of through it.

Bleach, Dryers, and the Lint You Should Worry About

Chlorine bleach is powerful and narrow. It whitens and disinfects, but it also weakens fibers with repeated use, cannot be used on wool or silk at all because it destroys protein fibers, and strips color from anything that is not truly white. Oxygen bleach, sold as a color-safe powder, is gentler and works on colors, though it takes longer and works best in warm water. One rule is absolute and has nothing to do with laundry quality: never mix chlorine bleach with ammonia or with any product containing it, because the combination releases chloramine gas, which is genuinely dangerous to breathe in an enclosed laundry room. Dryers deserve equal caution. Heat is what causes most shrinkage, so pulling clothes out slightly damp and hanging them to finish is the cheapest way to extend a garment's life. Overloading a dryer means clothes tumble in a wet lump, dry unevenly, and wrinkle badly. The lint trap should be cleared every single cycle, both because a clogged trap is a leading cause of household dryer fires and because of what lint actually is. Lint is not dirt. It is fiber that has broken off the garments themselves, which means every dryer cycle is physically removing material from your clothing. That is the clearest possible evidence that gentler, cooler, less frequent drying is not just an environmental preference but the difference between a shirt that lasts two years and one that lasts six. A few final habits close the loop. Do not overload the washer either, because clothes need room to move for agitation to reach them, and a drum packed

to the top produces a load that is simultaneously under-cleaned and over-abraded as garments grind against each other with no water circulating. Measure detergent rather than pouring by eye, since excess detergent does not rinse out completely and the residue left in the fibers attracts soil, making clothes get dirty faster. Remove laundry from the washer promptly, because damp fabric sitting in a warm drum develops mildew within hours and that smell is difficult to remove once it sets. And hang or fold items while they are still slightly warm from the dryer, which does most of the work that ironing would otherwise have to do.

Key Information: Laundry Rules That Prevent Damage

Detail	Information
Surfactant	Detergent molecule that grabs oil at one end and water at the other
Sort By	Color, then fabric type and weight, then soil level
Cold Water	Protects color, prevents shrinking, saves the most energy
Hot Water	Sanitizes and cuts heavy soil, but fades, shrinks, sets protein
Enzymes	Protease for protein, amylase for starch, lipase for fats
Protein Stains	Blood, milk, egg, sweat; cold water only, heat cooks them in
Dryer Heat	Sets stains permanently and causes most shrinkage
Never Mix	Chlorine bleach and ammonia release dangerous chloramine gas

Case Study: Terrence's First Month of His Own Laundry

Terrence moves into his first apartment in August and does laundry for the first time without anyone watching. Week one, he washes everything together on hot to save quarters, and a new red athletic shirt turns six white undershirts a uniform dusty pink. Week two, he gets a bloody nose during a basketball game, rinses the shirt in hot water at the sink because hot seems more powerful, and then dries it. The stain is now a permanent brown shadow. Week three, he crams two loads into one machine, and everything comes out still faintly dirty. His neighbor, who has done laundry at that machine for nine years, watches him unload and offers exactly three sentences of advice. Terrence writes them on the inside of his laundry room cabinet: sort it, wash it cold, and never dry anything you have not already gotten the stain out of. By October he has not ruined anything else.

1. Terrence used hot water on the blood stain because hot seemed more powerful. Explain what the reading says actually happened to that stain.

2. His neighbor's three sentences cover only two of the three bad weeks. Match each sentence to the week it would have prevented, explain why it works, and name the week none of them fixes.

Multiple Choice

1. Why must protein stains like blood be treated with cold water?

    a) Cold water is the only setting suitable for enzyme activity

    b) Hot water denatures the protein and sets the stain

    c) Hot water causes the dye around it to bleed

    d) Cold water dissolves detergent more completely

2. What is a surfactant able to do that plain water cannot?

    a) Raise the temperature of the wash cycle

    b) Prevent any delicate fabric from shrinking in heat

    c) Grab onto oily soil and carry it away in water

    d) Restore color to a garment that has faded

3. According to the reading, what is dryer lint actually made of?

    a) Detergent and soap residue left behind in the wash

    b) Fiber that has broken off the garments themselves

    c) Soil particles loosened during agitation

    d) Airborne dust pulled in by the dryer vent

Matching

Write the letter of the correct definition on the line next to each term.

Term	Definition
1. ___ surfactant	A) A color-safe whitener that works more slowly than chlorine
2. ___ enzyme	B) Blood, milk, egg, or sweat, which heat will cook into the fabric
3. ___ protein stain	C) Describing dye that stays put instead of bleeding into the wash
4. ___ oxygen bleach	D) A molecule that bonds to oil at one end and water at the other
5. ___ colorfast	E) A biological catalyst in detergent that breaks down a soil type

Fill-in-the-Blank

1. You should blot a stain rather than _____ it.

2. The enzyme that breaks down protein soil is _____.

3. Bleach mixed with ammonia releases dangerous _____ gas.

Short Answer

Answer each question in 2-4 complete sentences.

1. Why does the reading say a load can only be as aggressive as its most fragile item?

_____

_____

_____

2. Explain why cold washing works better today than it did for earlier generations.

3. Why is clearing the lint trap described as both a safety issue and a clothing issue?