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Clothing Care

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Clothing Care

Laundry Basics

Using this guide and video program

Here is a brief introduction to the components of the “Clothing Care” program:

The **Summary** introduces the program.

The **Overview** section includes the script of the video.

The **Quiz** can be given to the viewers after watching the program, and there is an Answer Key at the end of this Guide.

The **Questions for Discussion** can be used for in-person discussion at the time when the video is watched.

Laundry Basics is a handout for students that summarizes all the basics of clothing care, including sorting laundry, washing, bleaching, drying, ironing, and stain removal.

The **Glossary of Care Label Terms** and the **ASTM Guide to Care Symbols** are other useful handouts.

The **For More Information** section lists some websites and books for further exploration.

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Summary

Clothing Care is a 25 minute live action video ideally suited for introductory units in clothing management – or for anyone who wants to learn the basics of clothing care. The program teaches:

- What are detergents, and how do they work?
- How to prepare and sort laundry.
- How to wash various kinds of fabrics, including wool and delicate garments.
- How to handle tough stains and protect fabrics.
- How to select the right bleach and use it correctly.
- Some basics of ironing.
- The correct way to store clothes.
- What is dry cleaning?
- When and why dry cleaning is required.
- How to select a quality dry cleaner.

Overview: Clothing Care

The Way It Used To Be

Before plumbing and electricity, washday required a person to haul 400 pounds of water from the outside pump, heat it to a boil on an open fire, scrub and rub a week's worth of clothing on a washboard, hang the wet clothes on a wash line outside (even in the cold) and carry the 400 pounds of dirty water back outside when finished.

And back then, many people wore more clothing – a LOT more. Men AND women dressed up wherever they went. Men usually wore suits and hats – even when playing sports, riding bicycles or walking in the park on a Sunday.

Back in 1917 women wore long, layered dresses and corsets fastened with steel stays. During World War I, women donated corsets to help the war effort. Their corsets yielded 28,000 TONS of steel – enough for two battleships!!

With so much clothing and washing so difficult, commercial laundries thrived even before 1920. People back then solved the “ring around the collar” problem by using detachable collars. Customers sent only the collar to the laundry and wore the shirt a few days more.

Washers And Dryers

The Maytag Company manufactured its first wringer washer in 1907, but some contraptions were around earlier. These labor-saving devices promised to make wash day quick and easy. We still don't like washing clothes, but with indoor plumbing, hot water, washing machines, dryers and dry cleaners it certainly is easier today.

When it's time to shop for a new washer or dryer, pay attention to the energy label. They compare the model's electricity consumption (in kilowatt-hours per year) with that of other models of a similar size. Consider choosing an Energy Star model. Even if it costs more, within a few years you'll have made up the difference in cost with your energy savings.

Also think about the type of washer that fits your needs. Front-loading washers use less water and need less soap than traditional top-loaders. They also wring clothes drier in the spin cycle, so they cut dryer time and energy use. While they cost twice as much as conventional washers, Consumers Union estimates that savings on water and energy bills will earn the money back in six years.

Even with the right washer and dryer it still takes attention and care to launder clothes so they wear out on you, instead of in the machine.

How Often To Wash

- The first thing to figure out is how often to wash your clothing and linens.
- Sheets need laundering once a week, more frequently if someone is sick.
- Change crib linens every day.
- Launder blankets once a month.
- Wash bath towels once a week, more frequently in hot humid weather.
- Launder kitchen towels daily if you do a lot of cooking (Once a week if you eat out most of the time).
- Wash shirts, pants, and shorts after each wearing, or after every second wearing if there are no stains or perspiration odor.
- Wash briefs and T-shirts after each wearing. Wash bras after every second wear. Wash underwear separately from other laundry.
- Launder socks and baby's laundry after every wearing.

Sorting Laundry: Check Your Pockets!

- Prepare and sort your laundry and your clothes will look a lot better.
- Check pockets so you don't give new meaning to the term "money laundering." Loose change can damage a washer and dryer.
- Find a tissue in a pocket and you'll miss removing a blizzard of lint from the dryer filter. Find an undetected lipstick or pen and save yourself from ruining the entire wash load.
- Zip zippers, tie drawstring pants, snap those snaps, hook your hooks and button your buttons.
This will prevent snagging or tearing fabric, damaging the interlocking mechanism on zippers, and pulling off buttons during washing.
- Turn corduroy fabrics inside out to keep the pile from matting. Turn knits inside out to protect them from snagging.

Separating, Preparing And Washing

Separate clothes according to the instructions on the care labels. Some clothes require cold water, others clean best in very hot water, others need hand-washing separately.

You can use a mild detergent to hand-wash in the sink, or buy special products (Woolite is one of the best known) and use them in cool water while hand-washing.

You can also hand-wash delicate garments with soap flakes (like Ivory), or even dishwashing soap. You will save some money this way as well. A very sudsy soap works best for wool. In fact, detergents will ruin wool. Remember those enzymes that "digest" protein? Well, they also digest wool itself. So keep detergents away from wool.

Soak the garment for only ten or fifteen minutes. Gently squeeze the suds through and avoid wringing or twisting the fabric.

"Dry Flat" is on the care labels of sweaters and other knit garments. Lay the garment flat on a clean towel or other absorbent surface. Hanging a wet, heavy knit can stretch the garment out-of-shape.

The label—"Machine Wash Separately"—warns to keep the garment apart from others. Why? It might pick up colors from other garments or perhaps it's especially delicate.

Set the washing machine to the "gentle" or "delicate" cycle for clothing that requires delicate care. On a delicate setting the machine agitator runs at a slower speed so it churns the clothes less. It may also rinse them for a shorter time.

Wash whites, or any clothing you bleach, separately from colored clothing.

Pile all your delicate, cold water cycle items together, then sort them into light and dark piles.

After you put all your white clothing together, decide if you want to bleach your whites and if so, start another pile for off-white items that you do not want to bleach.

When sorting through dark items, turn jeans inside-out before washing to minimize fading at the seams.

If you're washing a colored piece for the first time, make sure the colors won't run. Here's one way to test:

Dip a corner in warm water and press the wet fabric on a white paper towel. You should see no color bleed. If you do, the item is not colorfast and needs separate washing.

Wash towels and sheets together because they usually require hotter water than clothing.

Once you group your laundry, combine items into well-balanced wash loads. Combine small, medium, and large items. Washing a lot of heavy items together, say heavy towels, jeans and blankets, can throw the washer out-of-balance and create a loud, clunking noise. These heavy loads age a washer.

Some items do wash better in very hot water, but if you'd rather save energy and money, use the hot water for only the grimmest of items. Switching from hot to cold water saves money because 90% of the energy consumed in washing clothes goes to heating the water.

Detergents And Stain Removal

At your local store you can select from dozens of brands of powdered or liquid detergent. Most are packaged in superhero colors with short, easy to remember names. But what's in those boxes and bottles? And how do they work?

Follow the directions on the label, and any powder or liquid detergent will clean your clothes. Most also brighten and remove stains. Those with bleach, or bleach-alternative cleaning agents, often cost more.

Multiple-ingredient detergents are convenient, but they often work less well than plain detergent with separate products added when needed.

Label Ingredients

Here are typical detergent ingredients: Anionic and nonionic surfactants, sodium citrate, optical brighteners, enzymes, sodium carbonate, perfume.

A word you'll see on most labels is "surfactants". All detergents contain surfactants – they are cleaning agents that dissolve surface dirt so water can carry it down the drain. They're made from petroleum and natural fats and oils.

You often see the words "anionic" and "nonionic". Anionic cleaners have a negative electrical charge and work best in warm, soft water. Nonionic have a neutral electrical charge and work better with synthetic fabrics, in cooler, harder water. That's why many detergents contain both.

It might surprise you that one common ingredient in liquid detergents is also found in many food products like soft drinks and jelly: they contain sodium citrate. In the detergent it's used to soften water. In soft drinks it helps retain that bubbly carbonation. In jams and jellies it controls acidity.

Most detergents sold today contain whitening or brightening agents, sometimes called optical brighteners. These colorless dyes reflect normally invisible ultraviolet light to give garments an added glow. They make clothes brighter, but not really cleaner.

Another common detergent ingredient is an enzyme that breaks down proteins that cause stains. They "digest" stains much like the enzymes in your stomach digest food.

Another ingredient, sodium carbonate, is a water softener. It enhances the cleaning efficiency of the cleaning agents by inactivating the minerals that cause water "hardness".

Other detergent additives are perfumes and colorants. Fragrances provide a pleasant scent to fabrics, plus cover the odors of the detergents and soils in the washing solution.

Colorants provide a color pleasing to the eye.

Knowing that most detergents are similar, some people are satisfied to buy whichever brand is on sale.

Consumers with environmental concerns, or those who shop for people with sensitive skin or allergies, pay more for a vegetable-based detergent with no chlorine, phosphates, perfumes or dyes.

Detergents clean by making water wetter. They act more on water than on fabrics. The detergent helps the water penetrate the fabric, so it begins to sink almost immediately – it makes water wetter. The detergent then surrounds soil particles to prevent them from being re-deposited on the fabric. The soil particles are then rinsed away.

Stain Removal

You can take your more valuable stained clothing to a professional dry cleaner; work out other stains at home.

Since detergent chemistry works so well, do you need laundry additives to remove tough stains like grass, spaghetti sauce, grape juice, or ink?

Stain removers do work, but you can also use the detergent itself by applying it directly to the stain before washing. If you use powder detergent, make a paste before applying.

Booster products often have no ingredient list on the label, but analysis shows they are similar to detergents. Many of these products work well, but none will completely remove all stains.

To remove a stain, do *something* right away. The more time a stain has to soak into the fabric, the harder it is to remove. If a liquid is the cause, blot as much as you can with a paper towel or absorbent cloth.

Don't rub a stain. All this does is push the stain deeper inside the fabric. You want to pull the stain off, not push it in.

If possible, work from the back of the fabric. Why? So you don't push the stain all the way through the fabric. Stains are removed quickest by pushing them out from the back.

If the stain is grease or oil-based, use a powder like cornstarch or talcum to soak up the spot. The powder acts like a blotter. Again, don't rub the powder in; you want it to absorb the grease. Then brush it off.

If the stain is a solid like mud, dried egg yolk, or even dried paint, try gently scraping it off with a knife. Use a scraping motion. Do not cut toward the fabric or attempt to use the point of the knife.

Make sure you consider the fabric. A scraping strategy works great on sturdy cotton, but may shred delicate silk.

If a garment is dry clean only, take it to the cleaners as soon as possible. Wetting the stain may damage the fabric and make the cleaner's job more difficult.

Avoid heat until the stain is gone. Hot water and the heat of a dryer can set stains.

Bleach & Fabric Softeners

Once you've pretreated the stain, you can add chlorine bleach, or a bleach alternative to the wash water for extra stain fighting power. Chlorine bleach is a powerful stain remover and whitener. It whitens, removes non-grease spots, and removes mildew. But it should only be used on white fabrics and never on silk, wool, or spandex.

Bleach can cause runs on fabric dyes. It can also eat right through the garment if spilled on the fabric. That's why you should add bleach to water and not pour it directly on clothes. Follow instructions on the bleach container. Don't assume if a little bit works, more will work even better.

Care labels contain three possible messages about bleach.

1. "Bleach When Needed." This means any bleach may be used. White cotton fits this label.
2. "No Bleach" or "Do Not Bleach." That means avoid *any* kind of bleach for this garment.
3. "No Chlorine". That means you can use an oxygen-based bleach, or bleach alternative, but not chlorine bleach. An oxygen-based bleach is commonly called an "all fabric" bleach.

Non-chlorine bleach is mild and will not damage fibers or color, but it is not as powerful as chlorine bleach. In fact, it is so mild you might notice little if any difference over detergent alone. The container will clearly state "all fabric" or "OK for colored clothes."

Fabric Softeners

Detergents clean well, but they can leave clothes (especially synthetic fabrics) feeling scratchy – that's where fabric softeners can help. They do for your clothes what conditioners in shampoo do for your hair – soften it and make it more pleasant to touch.

Fabric softeners also reduce wrinkling and prevent the build-up of static electricity. Tests show that the best softeners are liquids you add to the rinse cycle.

It's important you add the softener toward the end of the washing – at the final rinse or drying. If you add it during washing it will actually prevent cleaning and will NOT soften.

For an automatic dispenser, add the softener with an equal amount of water to help disperse the liquid softener. This will help eliminate softener spots on clothes.

A fabric softener will solve static cling problems, and make separate dryer sheets unnecessary.

Drying

Remove items from the washer soon after it has stopped.

Hanging clothes out to dry on a clothesline allows the sun and wind to do what dryers need electricity or gas to do.

Hang jeans and pants with the ankle on top, and the weight of the waistband and pockets will help smooth out creases.

Use a clothesline or a drying rack for items with labels that say "drip dry": avoid heat and spinning with these garments.

When machine drying items, follow the label guide for drying. A label will give temperature guidelines and cycle settings to help you prevent shrinking or stretching your clothes.

Don't overload the dryer. Large loads will take longer to dry and wrinkle more easily.

Clean the dryer lint filter before each use. Clogged lint filters increase drying time, which uses more energy. More lint collects on clothes when filters are clogged.

A typical care label that says "machine wash/tumble dry" indicates that the garment can be machine washed and dried at any temperature.

Start a separate pile for delicate low heat items, and don't put them in with any sturdy heat items. They will not stand up well to the stress.

Many labels advise to dry clean. Manufacturers are required to label the garment with a safe way to clean, but not the ONLY way. Some dry clean only garments can be safely hand-washed.

Care labels sometimes instruct on how to use a dryer. "Tumble dry/Remove promptly" means just that. If clothes are left in the dryer they might become more "permanent wrinkle" than permanent press.

If you don't remember to remove clothes from the dryer on time, toss a damp towel in the dryer and rerun the load for a few minutes.

Care Labels

Care labels are not required on leather, fur, or suede. Leather or suede is best cleaned by a professional dry cleaner. But be prepared – it's expensive. A typical jacket will cost from \$20 to \$50 to dry clean.

Dry Cleaning

Some garments need professional cleaning, especially wool and suits. These garments cost more to maintain. They're like cars that need premium gas and a tune-up every three months.

Prices for dry cleaning vary considerably; they're often higher in large cities. If you do a lot of dry cleaning, shop around for the best service and price combinations. You might also shop around for an environmentally friendly or "green" dry cleaner.

Point out spots to the cleaner when you bring in your garments. An employee known as the "spotter" uses steam, brushes, and chemicals to get rid of the stain. Finding a dry cleaner with a skilled spotter is important.

A careful dry cleaner will also do minor sewing repairs like loose buttons and dangling hems.

Dry cleaning isn't really dry. In fact, it's similar to machine washing except a quick-drying chemical solvent is used instead of water. Moisture and steam are used in the cleaning to reduce wrinkles.

Clothing shouldn't have a chemical smell after dry cleaning. Proper drying and steaming removes most chemical odors.

Remove plastic bags from dry cleaned clothing so the air can remove the last residue of dry cleaning odor. Leaving bags on clothing can cause staining and yellowing.

Professional dry cleaning is best for your most valuable clothes.

A home dry cleaning kit can help get rid of wrinkles, deodorize, and remove light stains.

Hanging, Storing And Ironing

Careful storage is part of smart clothing care. Thin wire hangers are OK for a short time, but lead to distortion over time. Use thick or padded hangers for long-term storage. Store valuable formal wear in canvas hanging bags.

Knitted garments can lose their shape if hung. Store knits flat in drawers or boxes.

Clothing will need less ironing if you fold and hang items immediately after the dryer completes its cycle.

Straighten fabric lines and creases and brush out wrinkles.

Check care labels for specific instructions. Here are some general temperature guidelines.

Silk	Low heat
Synthetics	Low Heat
Wool	Low heat
Cotton	High heat
Linen	Highest heat

Sort clothing according to the amount of heat needed. Iron silks and synthetics on a low temperature. Cottons and linens require higher temperatures.

When ironing a shirt, start with small areas like collars, cuffs and sleeves. Leaving the front and back panels for last will reduce wrinkling.

Ironing helps clothes look better, but a high heat can harm some fabrics, so iron carefully and mindfully.

If you don't have time to iron, some garments will un-wrinkle if you hang them in a steamy bathroom or outdoors to dry.

Caring for clothes today is a lot easier than at any time in the past. Like many modern tasks, it requires far less muscle and far more know-how.

Clothing Care Video Quiz

1. Top-loading washers are more efficient than front-loading washers, because they use less water and soap.

True

False

2. Detergents contain an ingredient that dissolves surface dirt enabling water to carry it away. What is this ingredient called?

- A. Brightening or whitening agent
- B. Phosphate
- C. Surfactant
- D. Ionic or non-ionic phosphors

3. A detergent cleans primarily by . . .

- A. Softening the fabric to release dirt
- B. Whitening the fabric
- C. Making water wetter
- D. Using boosters and additives

4. When cleaning wool . . .

- A. Avoid using a detergent
- B. Always dry clean
- C. Dry by hanging outdoors or in a room with good circulation
- D. Use the "gentle" cycle on the washing machine

5. When working with a stain:

- A. Work from the back of the fabric if possible
- B. If a liquid is the cause, blot up as much as you can with a paper towel or absorbent cloth
- C. Do something right away
- D. Don't rub a stain deeper into the fabric
- E. All the above

6. Many detergents contain optical brighteners. These:

- A. Are dyes that reflect ultraviolet light to give a "glow"
- B. Are a type of ultraviolet bleaching agent
- C. Brighten clothes by lifting ground-in dirt
- D. Work much like non-organic boosters

7. Which would work best to clean a wool sweater or other delicate garment:

- A. Laundry detergent without phosphates
- B. Any laundry detergent
- C. A non-chlorine bleach
- D. Dishwashing soap

8. If you don't remember to remove permanent press clothes from the dryer in time, you can toss a damp towel in the dryer and rerun the clothes for a few minutes.

True

False

9. According to the video, the most important person in the dry cleaning process is:

- A. The spotter
- B. The presser
- C. The owner
- D. The sorter

Questions for Discussion

1. What did you learn in the video that you found most surprising – what was new for you?
2. What did you learn from the video that you will be able to make use of in your own clothing care?
3. Do you look at clothing care labels when shopping? How might a label influence what items you purchase?

Laundry Basics

How Often To Wash . . .

- Sheets: once a week, more often if someone is sick.
- Crib linens: change every day.
- Blankets: once a month.
- Bath towels: once a week, more frequently in hot humid weather.
- Kitchen towels: daily if you do a lot of cooking, otherwise once a week.
- Shirts, pants, and shorts: after each wearing, or after every second wearing if there are no stains or perspiration odor.
- Briefs and T-shirts: after each wearing.
- Bras: after every second wear. Wash underwear separately from other laundry.
- Socks: after every wearing.
- Baby's laundry: after every wearing.

Sorting The Laundry

- Check labels, and sort by:
 - color
 - fabric and construction
 - degrees of soil
- Set aside clothing that requires hand-washing or dry cleaning.
- Never wash pesticide-soiled clothes with family clothes.
- Avoid damage by:
 - Emptying pockets
 - Shaking out loose dirt from cuffs
 - Zipping zippers, buttoning buttons, hooking hooks, etc.
 - Tying sashes and strings loosely (avoid tangling)
 - Removing any pins, trims, belts that can't be washed
- Pre-treat any stains.

Washing And Bleaching

- Use the proper amount of detergent.
- Don't overload the washer.
- Set the temperature and appropriate cycle (normal, permanent press, gentle, etc.).
- If using bleach, use the proper kind and the proper amount at the right time. Add the bleach to water, don't pour it on clothes.
- If using fabric softener, add it toward the end of the wash cycle – at final rinse or drying. Adding it earlier will prevent cleaning and softening.

Drying And Ironing

- Shake out clothes before putting in the dryer or on clothesline.
- Check to see if stains have been removed.
- Clean out the lint filter.
- Don't overload the dryer.
- Set correct timing and heat level.
- Don't overdry the clothes (to avoid shrinking and wrinkling).
- Remove clothes promptly from dryer.
- Place clothes on hangers and smooth as needed.
- Iron clothes as needed, using recommended heat settings (See "Ironing Tips", below).
- If you don't remember to remove clothes from the dryer in time, toss a damp towel in the dryer and rerun the load for a few minutes.

Hanging And Storing

- Thin wire hangers are OK for a short time. Use thick or padded hangers for long-term storage. Store valuable formal wear in canvas hanging bags.
- Store knits flat in drawers or boxes – knits lose their shape over time if hung.
- Fold and hang items immediately after the dryer completes its cycle to reduce need for ironing.
- Straighten fabric lines and creases and brush out wrinkles.

Ironing Tips

- It's easier to iron damp, rather than fully dried, clothing. If some clothing items are too dry, try misting them with a spray bottle full of water.
- You can cut ironing time in half by putting a layer of aluminum foil underneath your ironing board cover. The foil reflects the heat, and heats the garment on both sides.
- Read the clothing care label on each item you are ironing in order to find the correct temperature setting.
- Begin by ironing garments requiring the lowest temperature and move on to those needing the highest.
- If the garment is extra thick, iron the inside first, then the outside.
- For corduroy, steam the material first – it helps to work out the wrinkles.
- For shirts, start with cuffs and collars inside out. Move on to the yolk or shoulder area of the shirt, then down toward the sleeves. Do the body and front panel last. This order helps avoid wrinkling.
- Iron shirt collars on both sides, with the inside first. Iron inward from the point of the collar to avoid pushing any creases to the tip.
- Use a sleeve board for ironing sleeves, or use a rolled-up towel in sleeves so they can be pressed without leaving creases.
- Hang shirts up immediately after ironing to keep them from wrinkling. Button the top and center buttons.
- For sensitive or dark fabrics, use a pressing cloth between the fabric and the iron to prevent damage to the fabric (any thin white cotton linen cloth will do).
- Follow the manufacturer's instructions for maintaining and cleaning your iron. This will result in more effective ironing, and better looking clothes.

Note: Some of the text above comes from

"Quick 'n Easy Stain Removal"
Publication Pm-858

available free online from Iowa State University Extension, at:

<http://www.extension.iastate.edu/Publications/PM858.pdf>

Stain Removal Basics

- Take care of stains promptly – do *something* right away. Fresh stains are much easier to remove than those over 24 hours old.
- Blot up any excess liquid with a clean white cloth or paper towel. Remove excess solids by gentle scraping or chipping with a dull knife or metal spatula. With some solids, such as heavy amounts of surface mud, removal may be easier after the stain has dried. Brush off the excess before the clothing is submerged for washing.
- Avoid rubbing the stained area with a linty terry towel or a dark-colored cloth.
- Don't rub a stain deeper into the fabric. You want to pull the stain off, if possible, not push it in. Work from the back of the fabric.
- Never rub a fresh stain with bar soap.
- Check laundry for stains before washing. Many stains need pretreatment.
- Inspect wet laundry before drying to be sure a stain has been removed. If a stain is still evident, do not dryer dry. The heat of drying makes the stain more permanent.
- Before starting on the stain, test stain removal agents on a seam or hidden area of the garment to be sure they do not affect the color or sheen of the fabric.
- Avoid excessive rubbing unless the fabric is tough and durable. However, gentle to vigorous rubbing and agitation under running water helps remove dried food, protein, or oil stains from shirts or jean-weight fabrics made of cotton or cotton/polyester blends.
- Do not iron or press stained fabrics until the stain is completely removed. Heat sets most stains.
- Wash heavily stained items separately. Soil and stains can be re-deposited on cleaner clothing during laundering.
- **Never wash family clothes with pesticide-soiled clothes.**
- Avoid using hot water on stains of unknown origin. Hot water can set protein stains like milk, egg, or blood.
- Use the water temperature recommended on stain removal products and detergents. Hot water should be between 120 and 140°F, warm water between 85 and 105°F, and cold water between 65 and 75°F. Water below 60°F is too cold for detergents to be helpful.
- Note: Stains on most garments labeled "dry clean only" cannot be successfully treated at home. If a garment is labeled "dry clean" or "professionally dry clean", blot up the excess stain and take the garment to the cleaner as soon as possible (within 24-48 hours).

Care Label Terms

Cool Iron: Use the lowest temperature setting on the iron. Do not use hot and warm settings.

Delicate or Gentle: Set machine on delicate or gentle setting (slower agitation, and reduced agitation time)

Durable Press, or Permanent Press: Set machine on permanent press setting (includes a cool-down rinse and reduced spin cycle)

Hand Wash, Cold: Wash by hand, using cold water. (Should not be machine washed, and warm or hot water should not be used.)

Iron: It's safe to use high, medium, or low iron settings.

Machine Wash: Use washing machine. Unless a temperature is specified (e.g. "Cold"), any temperature is usable.

Machine Wash, Cold: Use washing machine, on cold setting (do not use warm or hot setting)

Machine Wash, Warm: Use washing machine, on the warm setting (not the hot setting)

No Bleach, or Do Not Bleach: Do not use bleach of any kind.

Only non-chlorine bleach: As needed, non-chlorine bleach can be used. (Chlorine bleach might harm the garment.)

Wash Separately: Wash the garment by itself.

Tumble Dry: Dryer can safely be set on high, medium, or low temperature settings.

















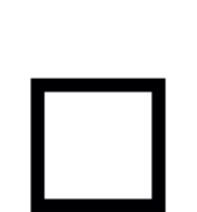






























Tumble Dry, Medium: Medium setting, or low setting, can safely be used. Don't use high setting.

Tumble Dry, Low: Low setting on the dryer is safe for use; don't use medium or high.

Warm Iron: Medium setting is usable. Do not use hot settings.

With Like Colors: Wash with colors of similar hue and intensity.

ASTM GUIDE TO CARE SYMBOLS

 <p>Wash</p>	<p><u>Machine wash cycles</u></p>    <p>normal permanent press delicate / gentle</p> <p>&</p> <p><u>Water temperatures</u> (maximum)</p> <table border="1" data-bbox="592 535 982 682"> <thead> <tr> <th>very hot (140F)</th> <th>hot (120F)</th> <th>warm (105F)</th> <th>cool/cold (65-85F)</th> </tr> </thead> <tbody> <tr> <td>60</td> <td>50</td> <td>40</td> <td>30</td> </tr> <tr> <td>••••</td> <td>•••</td> <td>••</td> <td>•</td> </tr> </tbody> </table> <p>symbol (s) dots & °C.</p>  <p>hand wash</p>	very hot (140F)	hot (120F)	warm (105F)	cool/cold (65-85F)	60	50	40	30	••••	•••	••	•	<p>Warning symbols for laundering</p>  <p>do not wash</p>  <p>do not bleach</p>  <p>do not dry (used with do not wash)</p>  <p>do not iron</p>
very hot (140F)	hot (120F)	warm (105F)	cool/cold (65-85F)											
60	50	40	30											
••••	•••	••	•											
 <p>Bleach</p>	 <p>any bleach when needed</p>  <p>only non-chlorine bleach when needed</p>	<p>Additional instructions (in symbols or words)</p>  <p>do not wring</p>  <p>do not tumble dry</p>  <p>in the shade (added to line dry, drip dry, or dry flat)</p>  <p>no steam (added to iron)</p>												
 <p>Dry</p>	<p><u>Tumble dry cycles</u></p>    <p>normal permanent press delicate / gentle</p> <p>&</p> <p><u>Tumble dry heat setting</u></p>      <p>any heat high medium low no heat/air</p>  <p>line dry / hang to dry</p>  <p>drip dry</p>  <p>dry flat</p>	<p>Additional instructions (in symbols or words)</p>  <p>do not wring</p>  <p>do not tumble dry</p>  <p>in the shade (added to line dry, drip dry, or dry flat)</p>  <p>no steam (added to iron)</p>												
 <p>Iron</p>	<p><u>Iron when needed--dry or steam</u></p>    <p>maximum temperature 200°C (390F) high 150°C (300F) medium 110°C (230F) low</p>	<p>Additional instructions (in symbols or words)</p>  <p>do not wring</p>  <p>do not tumble dry</p>  <p>in the shade (added to line dry, drip dry, or dry flat)</p>  <p>no steam (added to iron)</p>												
 <p>Dryclean</p>	<p><u>Dryclean - normal cycle</u></p>  <p>any solvent</p>  <p>perchloroethylene or petroleum solvent</p>  <p>petroleum solvent only</p>	<p><u>Dryclean - modified cycle</u></p>    <p>do not dryclean</p>												

For More Information...

Websites:

An excellent internet resource for everything about laundry and clothing care (website for The Soap and Detergent Association):

<http://www.cleaning101.com>

Iowa State University Extension Service—another excellent resource:

<http://www.extension.iastate.edu/homefamily/clothing/care.htm>

Books:

Laundry: The Home Comforts Book of Caring for Clothes and Linens, by Cheryl Mendelson (New York: Scribner, 2005). A complete guide to caring for clothes. Over 350 pages — lots of information!

Laundry: The Spirit of Keeping Home, by Monica Nassif (San Francisco: Chronicle Books, 2003). A shorter (84 page) treatment of the basics of clothing care.

Quiz Answer Key

1. False. It's front-loading washers that are more efficient.
2. C. Surfactant
3. C. Making water wetter
4. A. Avoid using a detergent
5. E. All the above
6. A. Are dyes that reflect ultraviolet light to give a "glow"
7. D. Dishwashing soap
8. True
9. A. The spotter