FASHION DESIGN GEORGIA STANDARDS

• MSFCS7-FD1
  • B & C

• MSFCS6-FD1
  • C & D
OBJECTIVE FOR TEACHERS:

- LEARN “WHAT’S IN THE LAUNDRY ROOM?” CURRICULA
- LEARN ABOUT LAUNDRY SOAP VS LAUNDRY DETERGENT
- LEARN HOW TO MAKE POWDER LAUNDRY SOAP
STEM (Science, Technology, Engineering and Math) Education: This lesson will go through the science of laundry detergent and laundry soap. Throughout the lesson students will learn about the science behind elements of washing clothes. The math portion of this lesson will help students understand the best way to determine the affiance cost of washing laundry.
WHAT'S IN THE LAUNDRY ROOM?

OBJECTIVE: THE STUDENTS LEAVE THE SESSION WITH THE SCIENCE OF THE LAUNDRY ROOM AND BASIC LAUNDRY ROOM SKILLS. THEY WILL GAIN KNOWLEDGE ON LAUNDRY ROOM SAFETY, MAKING SUSTAINABLE OR GREEN CHOICES, REDUCING COSTS AND CARING FOR THEIR CLOTHING.
BUILD YOUR LAUNDRY KIT:

LAUNDRY SOAP KIT
- BIN FOR STORAGE
- AIR TIGHT CONTAINERS
- CHEESE GRATER
- ¼ & 1 CUP DRY MEASURING CUP
- BAKING SODA
- WASHING SODA
- 2 BARS LAUNDRY BAR & STAIN REMOVER
GAMES & HANDOUTS

• GAMES:
  • LAUNDRY SORTING
  • WHY YOU SHOULD WASH?

• HANDOUTS
  • AMERICAN CLEANING INSTITUTE.
  • ENSURE CHILDREN KEEP THEIR HANDS OFF LIQUID LAUNDRY PACKETS
  • LAUNDRY ROOM CHECKLIST
  • FABRIC CARE
  • GOING BEYOND GREEN
  • STUDENT NOTES OUTLINE / MATH WORKSHEET
How many of you do your own laundry?

Why this is important – Because clothing textiles accounts for about 10.9% of the home budget (U.S. Department of Labor, Bureau of Labor Statistics, 2017).

How many loads of laundry does your family do in a week? Americans wash about 300 loads of laundry each year (Energy Star, 2018).
Fashion and Clothing:
Before we jump into laundry care, let’s talk about why we choose our clothes and how we hear about fashion.

Why do you choose the clothes you wear?
Apparel Selection: personality, self-concept, fashion, needs, finances, safety, peers, weather, occasion, dress codes, personal priorities

How does fashion news travel?
Advertisements, fashion magazines, catalogues, newspapers, live models, celebrities, pattern companies, mannequins

Where are places we shop for clothes?
Department stores, mail-order catalogs, outlet stores, flea markets, garage sales, yard sales, thrift stores, online.
The next part of the lesson is to talk about laundry room safety with the students. And these are the handouts you have in the material to share with your students.
GOING BEYOND GREEN

TRACKING YOU TO PAY CLOSES
ATTENTION TO WHEN YOU ARE
WASHING
How do you know what the correct amount of laundry detergent to use?
   Read the labels (Handout: Fabric Care)

Can you overcrowded a washing machine?
   Yes if you put to many clothes in the washer than your using too much energy and your clothes are not getting clean.

Did you know that washing your clothes on the coldest water setting helps?
   It can help save energy, because you are not heating up water. And most laundry detergents are designed to perform in cold water.
Powder Laundry Soap:
Ingredients:
8 cups of baking soda
6 cups of super washing soda
2 bars Fels Naptha soap bar

Grate soap adding it to baking soda and washing soda.
Mix all ingredients together and store in an airtight container.
Use 1/8 to 1/4 cup per load.
Note: All of these ingredients can be found in the laundry aisle of most stores.

*When I am teaching it to the sixth grade participants. I have the students grate the soap, measure the washing soda and baking soda. During this time we talk about the differences in baking soap on the baking aisle and the baking soda on the cleaning aisle.
(Surfactants are classified by their ionic (electrical charge) properties in water: anionic (negative charge), nonionic (no charge), cationic (positive charge) and amphoteric (either positive or negative charge)).

Remember homemade laundry soap may not be the best choose for every person. You can have a buildup of soap on clothing and in the washing machine.

Soaps and detergents react differently to the minerals in the water. If you have hard water you will see a stronger reaction to laundry soaps on leaving behind insoluble films on your laundry.
Alkalis are found in personal cleansing, laundry, dishwashing and household cleaning products.

- It can be used as neutralize or adjust acidity of other ingredients.
- Alkalinity can be useful in removing acidic, fatty and oily soil
- Alkalis are in detergents as the surfactants.
- The alkalis that are most commonly used are sodium and potassium hydroxide. (Other examples: ammonium, ethanolamine, carbonate, and sodium silicate)
- Overall, alkalis make detergents more effective with other ingredient.
Soaps and detergents are one of three elements need to help clean.

- Chemical energy – provided by the soap or detergent
- Thermal energy – provided by warm or hot water
- Mechanical energy – provided by a machine or hand

These three energies combined help to get the oily, greasy and soil out of the clothes. The water molecules need detergent to grab onto and the mechanical energy is the last part that helps get the soil out of the clothes.
**Powder detergents** – are best for lifting out clay and ground-in dirt

**Liquid Detergents** work best on getting (example: oily soils) and for pretreating soils and stains
In the development of the math sheet. I used the same brands for A, B, C, and D.
If brand A costs $11.97, brand b costs $9.94, brand c cost $8.99 and brand d cost $9.97. What is the average cost to wash your clothes with pods?

Pods Average Cost: ________

• Brand A washes 42 loads, brand b washes 35 loads, brand c washes 32 loads and brand d washes 67 loads. What is the average loads washed at pod average costs $10.22?

• Pod average load: _____

• Cost per load: _____ (Cost) divided by _____ (Load) = _____ (Cost per load)

If brand A costs $11.97, brand b costs $9.94, brand c cost $8.99 and brand d cost $9.97. What is the average cost to wash your clothes with pods?

Pods Average Cost: $10.22

Brand a washes 42 loads, brand b washes 35 loads, brand c washes 32 loads and brand d washes 67 loads. What is the average loads washed at pod average costs $10.22?

Pod average load: 44

Cost per load: $10.22 (Cost) divided by 44 (Load) = $0.23 (Cost per load)
If brand A costs $11.97, brand b costs $9.94, brand c cost $12.49 and brand d cost $5.96. What is the average cost to wash your clothes with pods?

Pods Average Cost: $10.09

Brand a washes 64 loads, brand b washes 64 loads, brand c washes 53 loads and brand d washes 54 loads. What is the average loads washed at pod average costs $10.09?

Liquid average load: 59

Cost per load: $10.09 (Cost) divided 59 (Load) = $0.17 (Cost per load)
If brand A costs $12.96, brand b costs $20.44, brand c cost $4.68 and brand d cost $11.12. What is the average cost to wash your clothes with pods?

Powder Average Cost: $12.30

Brand a washes 68 loads, brand b washes 150 loads, brand c washes 40 loads and brand d washes 58 loads. What is the average loads washed at pod average costs $12.30?

Powder average load: 79

Cost per load: $12.30 (Cost) divided 79 (Load) = $0.16 (Cost per load)
Cost per load: $9.98 (Cost) divided 128 (Load) = $0.08 (Cost per load)
Why Should You Wash

• A sniff test might tell you that you wore enough deodorant, but it will not help you decide if you need to wash clothes.

• Fabric type, wear and weather all play a factor in when you should wash your clothes. In the south, hot weather may result in excess sweat and the need to wash some clothes more often.

• There are more tips found through The American Cleaning Institute to help you determine when it is time to wash some clothes.

We will play a game to see if you know how these twelve items need to be washed and then we will review together.

Instructions for the game Why You Should Wash:
- Divide the youth into groups of 3 to 4
- Give each team a bingo card and the twelve clothing pieces. (You can print these off in advance and have them laminated for reuse.)
- Let the youth see if they can match the right clothes to the right cleaning
patterns. Give them about 5 minutes and then talk about their matches compared to the correct answers.
Laundry Sorting

Instructions for the Laundry Sorting game:
- Divide the participants into groups of 3 to 4
- Give them the pictures of the sorting baskets and the clothing articles. (The cards can be printed in advance and laminated for reuse.)
- Give the participants approximately five minutes to sort their laundry into the four baskets. Talk about why they chose to put specific clothes into specific baskets. Share with them the importance of the sorting process into like-colors, like-fabrics, and like-soil for better cleaning of the clothes.
Please send these back to me. So I can see the feedback on teaching the laundry lesson to the students.
EVALUATION

THANK YOU FOR JOINING
“WHAT’S IN YOUR LAUNDRY ROOM?”

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