THE EDUCATION FUND

FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

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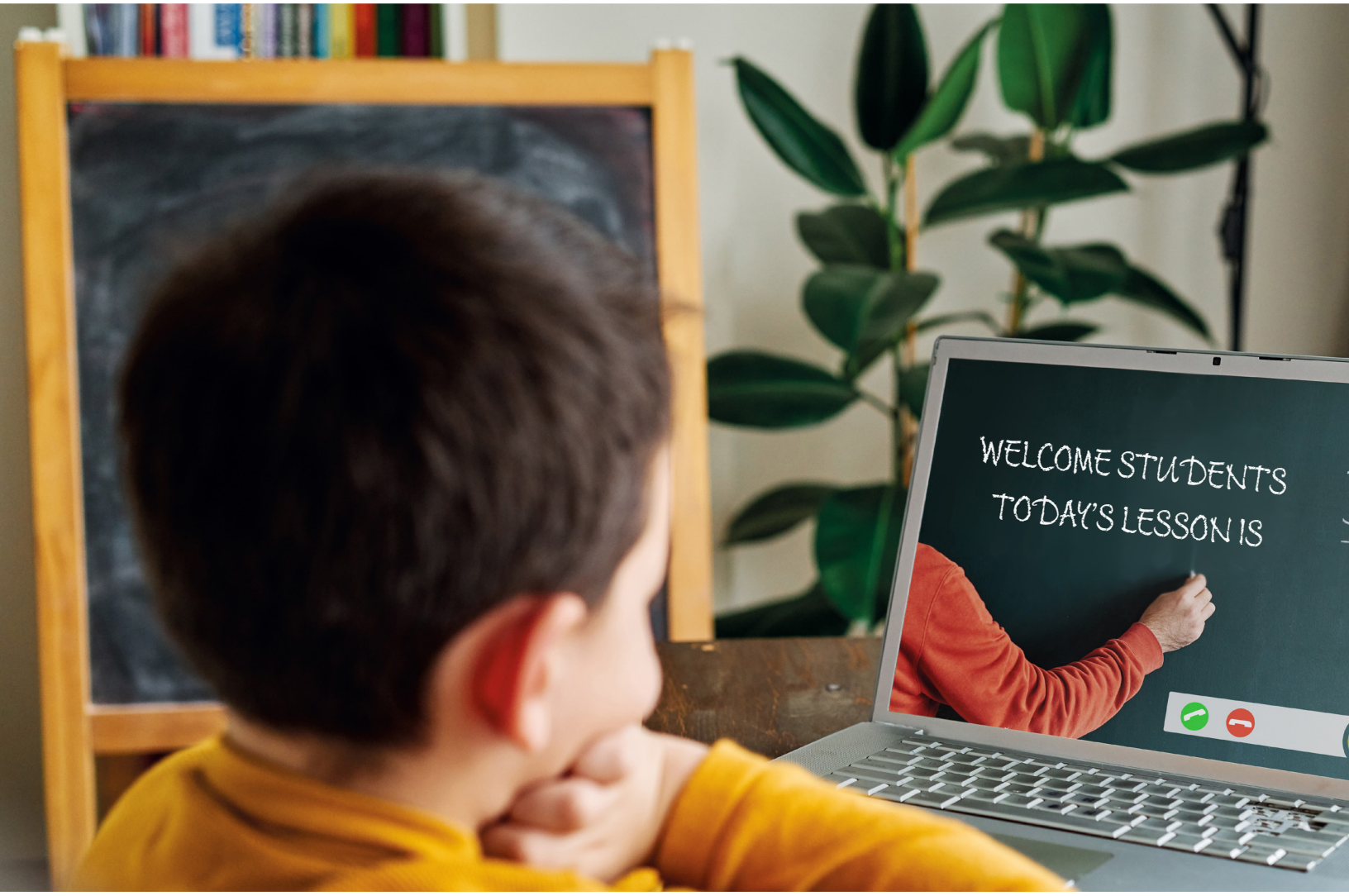

idea packet

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Clean Hands, Essential Oils, and Bubbles...Oh my!

Clean Hands,

Essential oils and Bubbles…….

Oh my!

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School code # 5601

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Goals and Objectives

As a classroom teacher, I work with students with diverse academic, social and emotional needs. However, I have noticed one common self care issue that all students seem to have always displayed over the years. They were not washing their hands properly or not at all. They complained about the school soap and they were not interested in the science behind handwashing.

The goal of “Clean hands, Essential oils and bubbles” was to teach students how to take preventative measures against getting sick from the corona virus, the importance of proper handwashing and how to be conscious and responsible for their own self care needs.

The main objective of the project is for students to create their own personal self made hand foaming personalized hand wash that they can have access to throughout the day. The students are given the opportunity to blend, create and design their own personal foaming hand soap that they will be excited to use.

Florida Standards

Science Grade 2:

SC.2.L.14.Pa.1 Recognize one or more external body parts.
SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free explorations, and generate appropriate explanations based on those explorations.
SC.2.N.1.In.1 Ask questions and make observations about things in the natural world.
SC.2.N.1.Su.1 Answer yes and no questions and make observations about common objects and actions in the natural world.
SC.2.N.1.Pa.1: Request a change or help to solve a problem in the environment.
SC.2.N.1.5 Distinguish between empirical observations (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think). Cognitive Complexity: Level 2: Basic Application of Skills & Concepts

Science Grade 3:

SC.3.N.1.3 Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.

SC.3.N.1.6 Infer based on observation.

SC.3.N.1.7 Explain that empirical evidence is information, such as observations or measurements, which is used to help validate explanations of natural phenomena.

Math Grade 3:

MAFS.3.NF.1.1 Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a /b as the quantity formed by a parts of size 1/b.

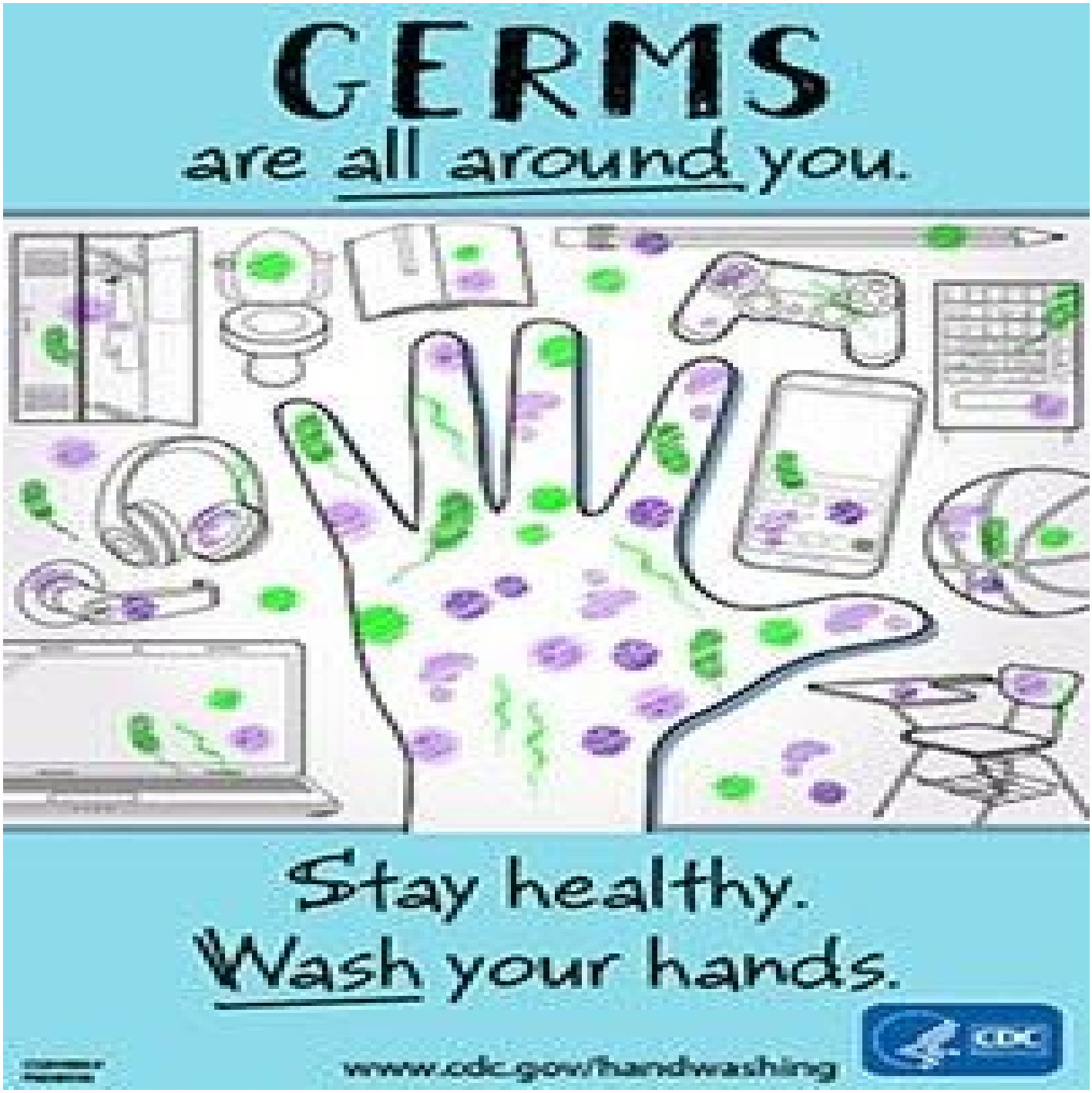
Course Outline/Overview

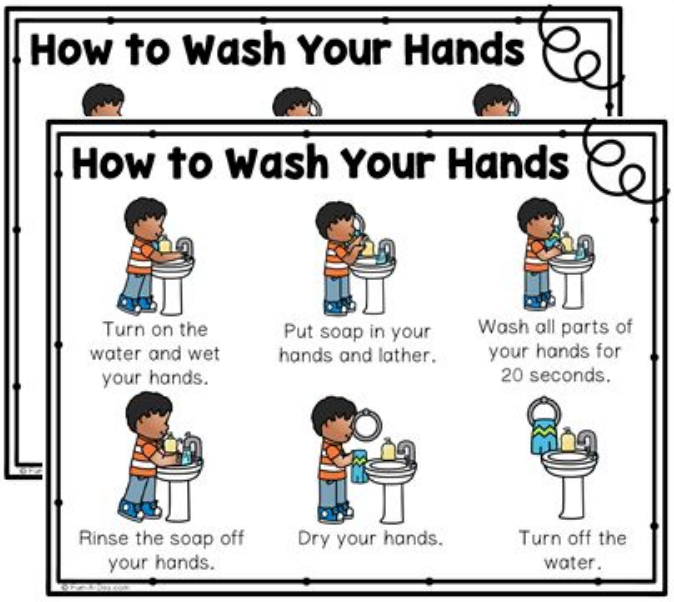
This project teaches students the basics of using their senses to make empirical observations and using tools, make measurements through the process of creating their own antibacterial personal foaming soap using essential oils. With slight modification, this project can be included in grade levels k-5 as students will learn science and math using cross curriculum connections. Students take on the challenge of learning and investigating about germs and how they stick to the surface of our bodies especially our hands. They will understand that germs can have a negative impact on the body if they don't wash their hands regular with soap and water.

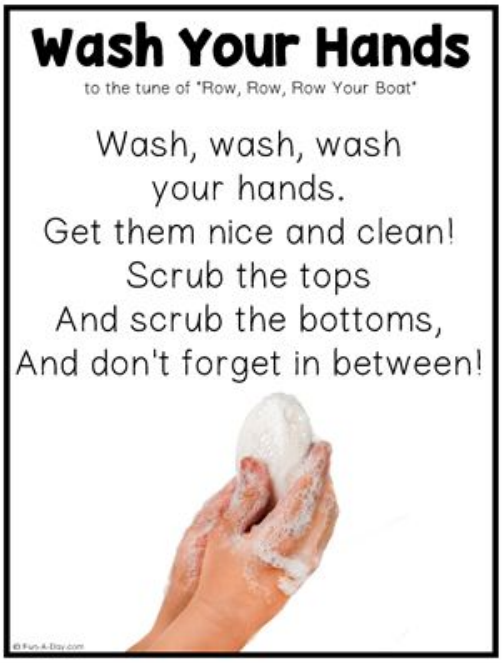
Through observation and practice, students will learn how germs scatter when soap is introduced to its surface. Students will watch a short clip of a basic science demonstration using black pepper, soap, water, and their finger as a catalyst as they observe how germs scatter when soap is introduced into the solution. The teacher will explain to students that this occurrence will happen because when soap is added to water it lowers the surface tension of the water causing the water molecules on the surface to "scatter" or pull away from the point where you added the soap. Students/ teacher will perform the demonstration afterward. Students will log the data and results in their science journals. Students will also write a prediction in their journal book about what will happen when you add soap to the solution, before they watch the video.

This project also creates a great teaching opportunity to demonstrate proper handwashing techniques and to talk about Carona virus and other viruses that attacks

our bodies during the cold and flu seasons. Student will learn that the best defense to ward off any virus is through proper handwashing. Show students the posters below on page 7 and ask them for their interpretation of what they see in the “Germs are all around you poster”. Remind them that germs are found everywhere! They are all around us therefore, anything they touch such as the objects or items found in the picture will carry germs. That’s why the process of handwashing is so important. Encourage students to sing the handwashing song twice to the tune of Row, row, row your boat as they are washing their hands. By doing this they are meeting the CDC guidelines of washing their hands for 20 seconds. Have students write the 6 steps of handwashing in their journal book as shown in the poster below on page 8. (To get a full pdf of the poster and song on page 8 please go to to www.Fun-A-Day.com to get print out). To complete the project, students will become familiar with the following essential oils (lemongrass, lavender, orange, eucalyptus, rosemary, peppermint) that are natural and with plant based ingredients. Student will enjoy the scents from these oils as they use it in their foaming hand soap.

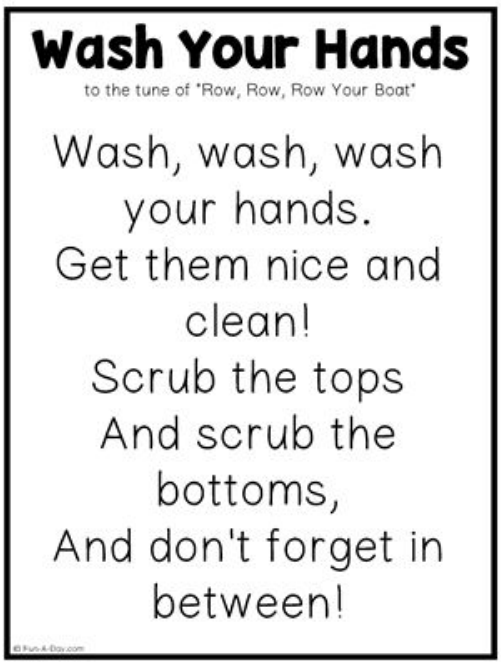

GERMS
are all around you.
Stay healthy.
Wash your hands.
www.cdc.gov/handwashing
CDC

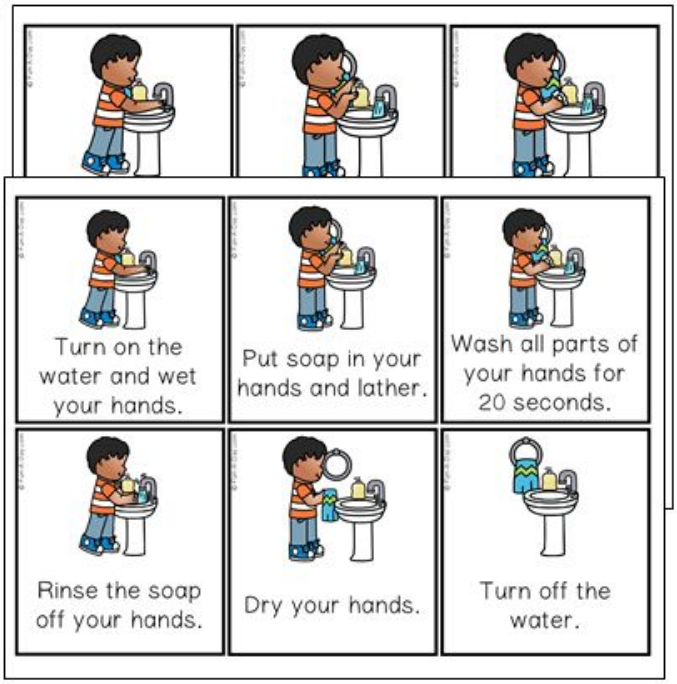




Hand Washing Freebies

12 pages for Fun-A-Day's email community





Classroom Preparation for the project:

Break students up into groups of 4 or 5 depending on the class size. From the organized group make sure that their is a team captain chosen. Inform the team captain that their job will include bringing back some of the materials to their group. Captains will fill 3 beaker/ container/ plastic cups(have kids label them) with each of the following; castille soap,distilled water,and olive oil. Next, put on tray essential oils, measuring spoons and paper towel. Bring these items back to group. Teacher will create stations at each table and direct students to navigate through each station with their groups. One station can be exploring the different essential oils scents so students will be familiar with which blend they will use in their end product. The next station will be exploring and familiarizing themselves with the various science measuring tools that will be used for measurement of their project i.e measuring cup, 1tbls, ½ tsp and funnel. . The next station will be the foaming soap bottles and top, each student will take one set with them before heading back to their seats. After this station direct students to sit with their designated groups and direct captains to fullfil their roles at this point. Teacher will prepare a separate table of the the main materials that the captains will take back with them on a tray to their group. (you may want to create a check list for the captains of items) Have a table with a gallon castile soap bottle, distilled water, olive oil, essential oils, paper towels, measuring spoons, and funnels that the captain will put on a tray to take back to their group.

Materials:Flat table surfaces, trays, paper towels, funnel, castile soap, foam soap bottle and dispenser, essential oils, measuring spoons, cup, distilled water, labels, olive oil.

Lesson Plans

Weeks 1-2

Objectives:

Students will use their olfactory sensory to learn about essential oil and its purpose . They will analyze and discuss the source of the scents of the oils using their 5 senses and discuss with each other the plant origin each scent came from.

Materials:

Box of (6/7) essential oils per group of 5 or 6 students

Cotton ball

Tape

List of each oil and its purpose

- Lavender- calming
- Rosemary- alert
- Peppermint- awake
- Lemongrass and orange - uplifting
- Eucalyptus- breathe
- Tea tree- cleansing

Beginning the lesson:

1. Teacher will explain to students that essential oils are made from plants and put through a distillation process to get the oils from the leaves.

2. Break students into groups of 5. Teacher will pass around any of the following leaves to the students ie oregano leaves, rosemary sprigs, mint leaves, basil leaves, or bay leaf (use any leaf that has a scent) . Have students rub the leaf between their hands and have them smell their hands. Explain to students that the scents are oils left behind from the leaves. This is the same oil that is found in the bottle they will explore.
3. Encourage students to express their feelings towards the smell and what mood changes does it have on them. Does it make them happy, does it remind them of something, does it make them hungry, tired, or calm?

Continuing the lesson:

1. Students will be placed in groups of 5. Explain to students to each take 7 cotton balls .
2. Place the box of essential oil in the group. Explain to students that they will not be smelling the scents directly from the bottle. They will be applying 1 drop of each scent to the cotton ball.
3. Have student open the essential oils caps and tell them not to look at the label of the oils. Place one drop of oil on their cotton ball and guess what the scent is and its plant origin.
4. Have the student tape the cotton ball in their journal and write under it the name of its plant origin. They may discuss and share with the members in their group.
5. After students complete this assignment, have them look at the name listed on the bottles and check if they were correct in naming its plant origin. Have students write the correct name of each scent above the cotton ball.

6. Have students discuss what was their favorite scent to their group and have them write in their journal book what is the purpose for using one of the scent from the list above and to include its plant origin.

Assessment: Students will write in their journals what was their experience of extracting oils from a leaf compared to smelling the actual essential oil stored in the bottle? How can this oil help them? What uses could this oil have on their mood?

Week 3-4

Objective:

Students will watch a brief video on a science demonstration of how germs scatter when soap is used. In addition, students will also watch brain pop videos on the topic.

Materials:

Dishwashing soap

Large bowl for teacher demonstration

Small paper bowls for group or individual demonstration

Black pepper

Container of water or gallon water bottle

Beginning the lesson:

1. Teacher will explain to students that germs are everywhere. This is why it is so important to always wash your hands.
2. Students will watch youtube video: Germs movie for kids virus and bacteria introduction. (link found in resources)

3. After watching the video have students look at the Germs all around poster on page 7 and ask them questions about what they just learned from the video and what was their initial prediction of the poster. Did their prediction match what they saw in the video?
4. Next have students watch the brain pop video washing hands. (video link found in resources)
5. Teacher will go to www.Fun-A-Day.com to download pdf activities of hand washing poster, cut and paste activities and handwashing song to have students complete worksheets in class.

Continuing the lesson:

1. Teacher will play the video :Make germs scatter demonstration video(link found in resources)
2. After video, teacher will perform the demonstration as a whole group and have students observe the process.
3. Teacher will put students in groups of fives and have each member in the group assigned a role. Each group will perform their own “make germ scatter” demonstration and discuss the findings within their group. Students will create a data of the science process and its results in their journals.

Assessment:

Students will do both easy and hard quiz from the brain pop video: Washing hands

Week 5-6

Objective:Students will watch a video on how do soap and water make us clean. Then they will watch a brainpop video on colds and flu.(link for videos are found in resources) During week 6 students are now ready to create their project.

Materials:

1. 1 box of essential oils per group
2. Gallon of distilled water (depending on number of students you may need to buy 3)
3. Foaming bottles and caps
4. Small funnel for either each students or for students to share
5. 1 tbls measuring spoon, 1 tsp measuring spoon, 1 measuring cup per group
6. 1 bottle of Dr. Brommer's castille soap
7. Small containers to pour the distilled water into for captains to take to their groups
8. You can choose to use extra virgin olive oil or coconut oil

Beginning the lesson:

1. Students have already been informed about how important it is to use soap when washing their hands.
2. Have students watch the brain pop video on: How does soap and water make us clean?
3. Encourage students to take notes in their journal book of what they learned from the video. After video, students will refer to their notes and answer the question: How does soap and water make us clean?

4. Have students watch the brain pop video: Colds and flu
5. After video, put students in groups of 5 and have students discuss with each other what preventative measures are they going to take from spreading germs to others and getting better?

Continuing the lesson:

1. Students are now ready to create their project of making their own personal foaming hand soap.
2. Put students in groups of 5 and explain to them that there will be a group captain who will be gathering the materials to bring it back to the group.
3. Refer to page 9 for classroom preparation for the project.
4. Teacher will create stations for student groups to explore the materials that they will be using to make their project.
5. After group exploration, **students will return to their seats and be sure to tell them** to **each take one set of the foaming soap bottle and lid back with them.** The captains will be provided with a list and then assigned to gather the items on their list to take back to their group. (check list will be found in resources page 19.)
6. With materials availabe in their groups, students will get their foaming bottles and add 1tbls of castile soap into it, ½ tsp (olive oil or coconut oil) in it. The additive of the oil is for moisturizing during the handwash. 8 drops of their choice of essential oils. (They can combine two scents by adding 4x4) fill distilled h2o just up to the indentation or nape of the bottle. Rember when the pump goes in it will take up space, so do not fill all the way to the top. Incase you have some spills,

that's what the paper towel or napkins are for. Students will shake and them use on wet hands to get a nice scented foaming lather.

7. Remind them to wash their hands using the steps from their posters.
8. Let the fun begin! Have students use their products at the sink if time is available.

Assessment:

Hard and easy quiz on brain pop video:Cold and Flu

Journal entry: students will write about their experience of making their own hand foaming wash. They will write steps on how they will be using it . Include in the writing why is it important to use soap for washing their hands.

Resources:

https://www.fantasticfunandlearning.com/make-germs-scatter-science-demonstration.html?jwsource=cl make germs scatter demonstration video

https://jr.brainpop.com/health/bewell/washinghands/ Washing hands

https://jr.brainpop.com/health/bewell/coldsandflu/ colds and flu

https://www.youtube.com/watch?v=7D0eIsuZC3w Germs movie: virus and bacteria introduction

https://www.youtube.com/watch?v=XntinCBEC9U How do soap and water make us clean?

www.Fun-A-Day.com pdf activities of handwashing poster, song, and cut and paste

Places to purchase materials:

Essential oils: Amazon $13.95 **ArtNaturals Aromatherapy Top-6 Essential Oil Set - (6 x 10ml Bottles) - 100% Pure of the Highest Therapeutic Grade Quality - Premium Gift Set – Lavender, Peppermint, Tea Tree, Eucalyptus**

Castile soap:Target- Dr. Brommer Castile soap(unscented)

50 ml Foaming bottles with lids: Amazon $9.99 **50ml Foaming Soap Dispenser, Soap Pump Bottles, Empty Plastic Travel Bottles, Set of 25**

Distilled water: Windixie, Target, publix, Walmart,

Measuring cups: found in science kits or purchased from Walmart or Target

Measuring spoons 1 tbsp, ½ tsp: found in science kits or purchase from Walmart

Olive oil- supermarket, Target or Walmart

Papertowels: purchas at Walmart or Target or use the school's paper napkin

Funnels- order on line amazon $5.99 Small Clear Plastic Mini Funnels for Bottle Filling, Perfumes, Essential Oils, Science Laboratory Chemicals, Arts & Crafts Supplies by (12 Pack)

Container for pouring water into- purchase from Target or Walmart

Captain List: Foaming handsoap project

Captain and group #

Project Items List	Place check mark next to each item
Tray	
1 measuring cup	
Container of water	
1 box of essential oil	
Paper towel/ napkins	
1tbls (table spoon) measuring spoon	
½ tsp (tea spoon) measuring spoon	
5 funnels	