

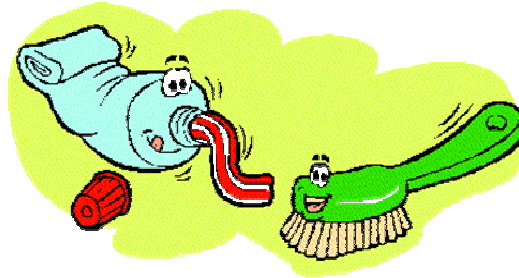
Name: _____

Date: _____

Per: _____

Group Members: _____

TOOTHPASTE WITH A TWIST



PURPOSE:

You have been selected to create a "marketable" product (used by most people every day) that is made from minerals...toothpaste! It is important that the toothpaste removes plaque (a sticky film of bacteria), helps fight against tooth decay, cleans and polishes your teeth and has an appealing taste. Your goal is to:

1. Create a toothpaste using MINERALS
2. Keep an ACCURATE account of all of your ingredients.
3. State why you used each ingredient.
4. Decide on a BRAND name, logo (product symbol) and slogan.
5. Design your toothpaste label.

MATERIALS:

Calcium Carbonate	Sodium Bicarbonate (Baking Soda)
Water	Sweetener
Fluoride	Hydrogen Peroxide
Food Flavoring	Food Coloring

INSTRUCTIONS:

1. Everyone will start with a basic recipe of Calcium Carbonate & Sodium Bicarbonate. Mix this powder with a VERY small amount of water to form a paste (2-3 mL)
2. Taste a small amount of the paste with a toothpick. Discuss possible improvements with your group. (Don't use the toothpick more than once)
3. Keep an ACCURATE record of your ingredients and make sure you state a valid reason for each addition.

TOOTHPASTE WORKSHEET

Group No. _____

Product Brand Name _____

Ingredient	Amount (# of drops/scoops)	Reason for ingredient
Calcium Carbonate	$\frac{1}{2}$ teaspoon	
Sodium Bicarbonate (Baking Soda)	$\frac{1}{2}$ teaspoon	
Water	2-3 mL	

Color: _____

Flavor: _____

Slogan: _____

Questions:

1. Why do you think consumers would buy your toothpaste?
2. Compare a commercial brand of toothpaste ingredients with your own. Are there any similarities or differences? What are they?
3. How many minerals can you identify in your sample of commercial toothpaste? List them.
4. What mineral is added to toothpaste to fight cavities?

Name: _____

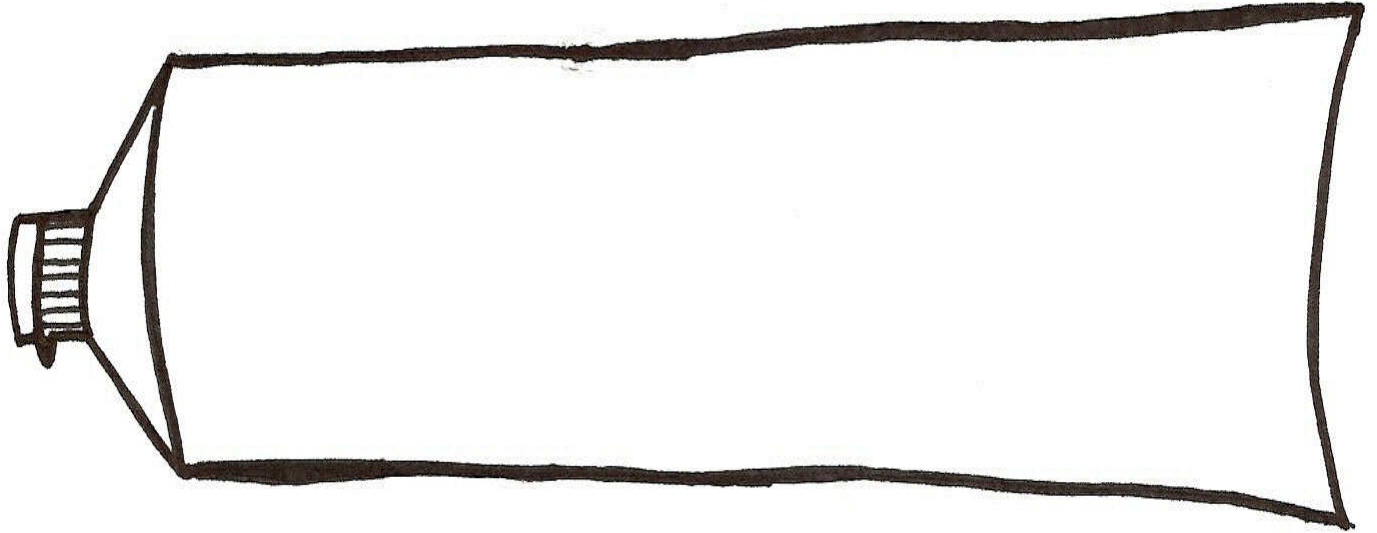
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Per: _____

DESIGN YOUR TOOTHPASTE LABEL

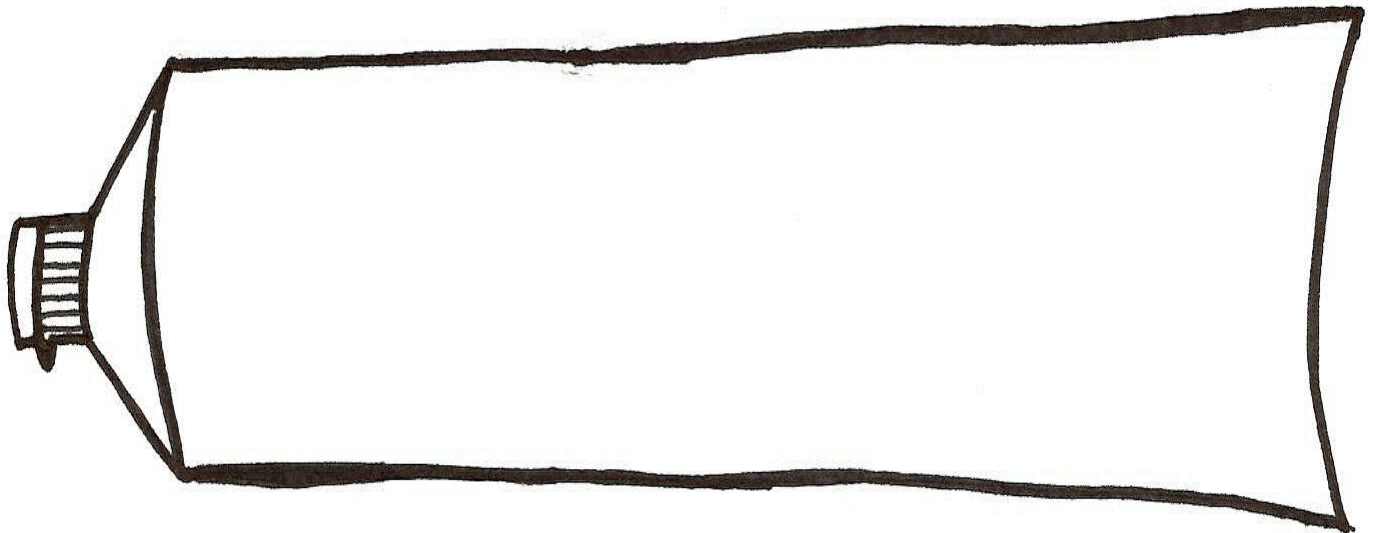
Design your toothpaste label. Do not forget to add the brand name, logo and slogan. All three (3) need to be on the front side of your product.

Front side:



It is also important to let the consumer know what is in your toothpaste. Make sure you list ALL of the ingredients on the back of your tube along with any other images or important information.

Back side:



Common Toothpaste Ingredients

- **Calcium Carbonate** is an abrasive that gives toothpaste its cleaning power. It helps remove stains, plaque and polish teeth.
- **Sodium Bicarbonate** (Baking Soda) is added because it is abrasive and acts as a whitener. It combines with acids in our mouth and releases carbon dioxide. This carbon dioxide gas is what makes toothpaste foam.
- **Fluoride** hardens teeth against decay and helps prevent cavities. However, fluoride should not be given to children under the age of 6 as it can lead to mottling of enamel.
- **Hydrogen Peroxide** is a whitener. It bleaches teeth and kills germs
- A small amount of **sugar** in the form of saccharin is added to make toothpaste taste better.