LEARNING AS ONE NATION

Expanded Project

SHS LEARNING ACTIVITY

Name: _____ **Score/Mark:** _____

Grade and Section: _____ **Date:** _____

Strand: ☐ STEM ☐ ABM ☐ HUMSS ☐ ICT (*TVL Track*)

Subject: *Physical Science (Chemistry)*

Type of Activity: ☑ Concept Notes ☐ Skills: Exercise/Drill ☐ Illustration ☐ Performance Task ☐ Essay/Report ☐ Others: _____

Activity Title: **LA16: Key Ingredients in Cleaning Agents**

Learning Targets:
1) To describe and identify the common key ingredients in cleaning agents.
2) To give the use of other ingredients in cleaning agents.

Reference: *(Author, Title, Pages)* (Web) American Cleaning Institute. *About Cleaning Product Ingredients* | cleaninginstitute.org

Cleaning agents are products used to prevent the spread of infectious diseases and are employed in cleaning. Summarized below are some of the key active ingredients in cleaning agents.

Key Ingredients	Uses and Examples
Solvents	Aid in the dissolution of other key ingredients. **Examples**: water, ethyl alcohol, acetone
Surfactants	Act as the main force in cleaning, with a high concentration in cleaning formulations. **Examples**: sodium/ammonium lauryl sulfate, sodium stearate
Builders	Aid in the action of surfactants by reacting with minerals found in tap water, which lessen the activity of surfactants **Examples**: citric acid, gluconic acid, acetic acid, glycolic acid
Enzymes	Help to remove stains and help to wash clothes in cold water. **Examples**: proteases, amylases, lipases, cellulases
Fragrances	Create a pleasant smell when added to the cleaning product. **Examples**: essential oils
Preservatives	Added to make the product stable and safe for a long period of time and to protect the product from microbial spoilage. **Examples**: isothiazolones, aldehydes
pH adjusters	Used to adjust the pH of the cleaning product, either to a more acidic or more basic pH range. **Examples**: acetic acid, ammonia
Antimicrobial/ Disinfecting ingredients	Aid in further reduction of microbial growth. **Examples**: quaternary ammonium compounds, bleach
Additional ingredients	**Dyes** – give product color. **Examples**: mauve, indigo, sepia **Thickeners** – give the cleaning product proper viscosity or thickness in flowing. **Examples**: gelatin, agar, xantham gum, sodium alginate, pectin **Foam enhancers** – create suds or bubbles. **Examples**: sodium laureth sulfate, cocamidopropyl betaine