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**ABSTRACT**

Water is simply defined as universal solvent for it provides nourishment to prove existence to earth and to humans itself. It is also termed as amphoteric or having positive and negative end that can act as an acid or base. This activity aims for us to know the importance of water to living things on earth, knowing its structure, forms, processes and properties. It also aims to have a better understanding about the types of bonding of polar molecules and how water becomes the universal solvent itself. The method used in this activity was experimental research wherein data are collected from test tubes using different chemicals namely NaCl, sugar, gelatin, CuSO4, lard and ethanol in which we used two solvents namely the water and CCl4 proving the solubility and insolubility of chemicals. The gathered data guides the findings in which lard is the only substance that appears insoluble to water and soluble to CCl4. Emphasizing that water have its versatile characteristics, truly universal solvent for its polarity and its solubility to other substances. We therefore conclude that water is considered the universal solvent due to its versatility and polarity and plays a crucial role of being a medium for chemical reactions

**INTRODUCTION**

In the said activity, Water is simply defined as universal solvent for it gives sustenance to prove existence to earth and to humans itself. It is also termed as amphoteric or having positive and negative end that can act as an acid or base. This activity aims for us to know the importance of water to living things on earth, knowing its structure, forms, processes and properties. It also aims to have a better understanding about the types of bonding of polar molecules and how water becomes the universal solvent itself. The method used in this activity was experimental research wherein data are collected from test tubes using different chemicals namely NaCl, sugar, gelatin, CuSO4, lard and ethanol in which we used two solvents namely the water and CCl4 proving the solubility and insolubility of chemicals. The gathered data guides the findings in which lard is the only substance that appears insoluble to water and soluble to CCl4. Emphasizing that water have its versatile characteristics, truly universal solvent for its polarity and its solubility to other substances. transient acute global cerebral dysfunction (Wilson and Morley, 2003). Mild dehydration can also negatively affect physical performance, leading to reduced endurance.

The important role of water doesn’t only apply to human beings; water is also an important tool for the environment to ensure survival of natural systems for the benefit of all. It is used to target specific outcomes for plants or animals by providing the right amount at the right time for them to feed, breed and grow. It is also a critical tool to support the health of rivers and wetlands and in doing so support the communities that rely on them. Water for the environment supports the health of the river and other bodies of water so that it can in turn provide for human needs. The New South Wales (NSW) government also published an online article stating that water for the environment is vital to help maintain a healthy, productive and resilient river systems for the benefit of plant, animals and people.

Water is a very dynamic and versatile compound in which it has both remarkable physical and chemical properties which include cohesion which creates surface tension, adhesion which allows to be held to other substances, high specific heat, density neutral pH and the most well- known universal solvent. In this activity we talked to determine the properties of water that make it suitable for sustaining life in biological systems.

Water is a polar molecule because the oxygen molecule has a slightly negative charge and the hydrogen molecules have a slightly positive charge. Water has special properties that make it unusual and complex. After doing our laboratory work we’ve learned that when we mix chemicals in a substance the result would become different or sometimes the same. Like in mixing water in NaCl, sugar, gelatin, CuS𝑂4, lard, and ethanol all the substance are soluble in water except the lard and gelatin. While in CC𝐿4 all the substance are insoluble except the lard. The polarity of water helps it to form bonds with itself and other substances which is helpful in the survival of many living organisms. We therefore conclude that water is considered the universal solvent due to its versatility and polarity and also plays a crucial role of being a medium for chemical reactions

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