

Today we will start our new unit. To begin the unit I will be showing you an old newspaper article. In that article you will find the first 8 definitions for the unit.

- Get in a group of about 4.
- As a class we will read the article.
- With your group make a list of the 8 words that you think will start our unit.

When you are done, call me over and I will tell you how many you have. You then try again and call me again when done. The more words you get, the bigger the advantage you have in round two of this game.

Can you be the first group to 8?

The Hamilton Spectator

Member of the Associated Press

ILLUSTRATED WEEKLY NEWSPAPER

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Astronaut Brings Home Unknown Substance

Cape Kennedy Air Force Station, Fla.

When the Gemini 4 spacecraft landed this week there was more than just the successful space walk to talk about. On board the massive ship was a very small piece of matter. This tiny rock like substance was captured, floating through space, and brought in by Lt Col Edward White as he recorded the United States' first ever venture outside of a spacecraft. The space rock, which is being called the White-rock (named after

its discoverer), is unlike anything found on earth and to this point scientists are still unsure of its make-up. The use of a scanning electron microscope (Cambridge Scientific Instrument Co.'s new "Stereoscan") has revealed that the White-rock is not a pure substance; in fact the results of the scan would suggest it is heterogeneous. In an attempt to determine the mixture of elements found within the White-rock, chemists ran tests with both hydrofluoric and sulphuric acids, hoping that

these solvents would break down the rock, allowing the resulting solution to be further tested. Unfortunately the White-rock did not act as a functional solute to either acid. The next step in determining the properties of this new material will be to make a mixture of ground dust from the White-rock and water, hoping that the two will bond and produce a homogeneous substance that may be studied to determine the usefulness of this space material.







Keep your list, and sit in your group.

At this point you are all still in the game... however that will end soon (insert evil cackle here).

One group at a time, in order, you will tell me one word you think is on the list. If you get it correct, you are still in the game. If you get it incorrect your team is eliminated.

Let the super awesome game of definition guessingness begin!

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| 1. Heterogeneous | A mixture, made up of parts that retain their own properties, even if these properties are not visible to the unaided eye. |
| 2. Homogeneous | A material having only one set of properties. |
| 3. Matter | Anything that takes up space, has mass, and is made up of particles. |
| 4. Mixture | A material made up of at least two different pure substances. |
| 5. Pure Substance | A material that is composed of only one type of particle; examples of a pure substance include gold, oxygen and water. |
| 6. Solute | A substance that can be dissolved in a solvent; for example, salt is a solute that dissolves in water. |
| 7. Solution | A mixture in which the distinct properties of the different substances are combined into one set of properties. |
| 8. Solvent | A substance into which a solute may be dissolved; for example, water is a solvent that dissolves sugar. |



You will need to know these definitions for both your first quiz and your first experiment.



Grade 7 Science

Unit 3: Pure Substances
and Mixtures