Video: Elements, Compounds, and Mixtures (20 min)

1. Give some examples of mixtures that exist in the environment?

Air – oxygen, carbon dioxide, nitrogen gases

Water – hydrogen & oxygen

Rock – quartz & mica

1. What knowledge do we use to separate mixtures? Give examples

Physical properties – boiling point, density

1. How are some pure substances separated (if possible)

Chemical properties - electrolysis

1. What type of pure substance can be separated?

Compound, e.g. H2O into hydrogen & oxygen

1. What kind of “particle” are compounds made of? Give an example

Elements make up compounds, hydrogen & oxygen make up water

1. What type of pure substance cannot be broken down by ordinary chemical means?

elements

1. Over 90 elements exist on earth (92 naturally occurring)
2. What knowledge can be used to identify an element?

Physical & chemical properties, luster, boiling point

1. What technology can be used to positively identify specific elements?

Spectrograph – identifies unknown atoms

1. Each element has a unique combination of protons, electrons and neutrons
2. Elements with similar structures have similar physical and chemical properties.