

Symbolic Representations

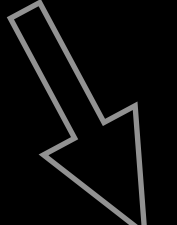


Chemistry Essentials - 011

Processes



Representations

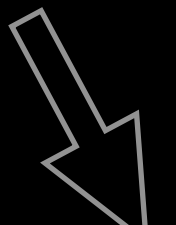


Symbolic
representaions

Particulate
drawings

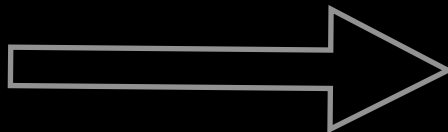


Conservation of
Matter



Calculate reactants
or products.

Macroscopic
movement

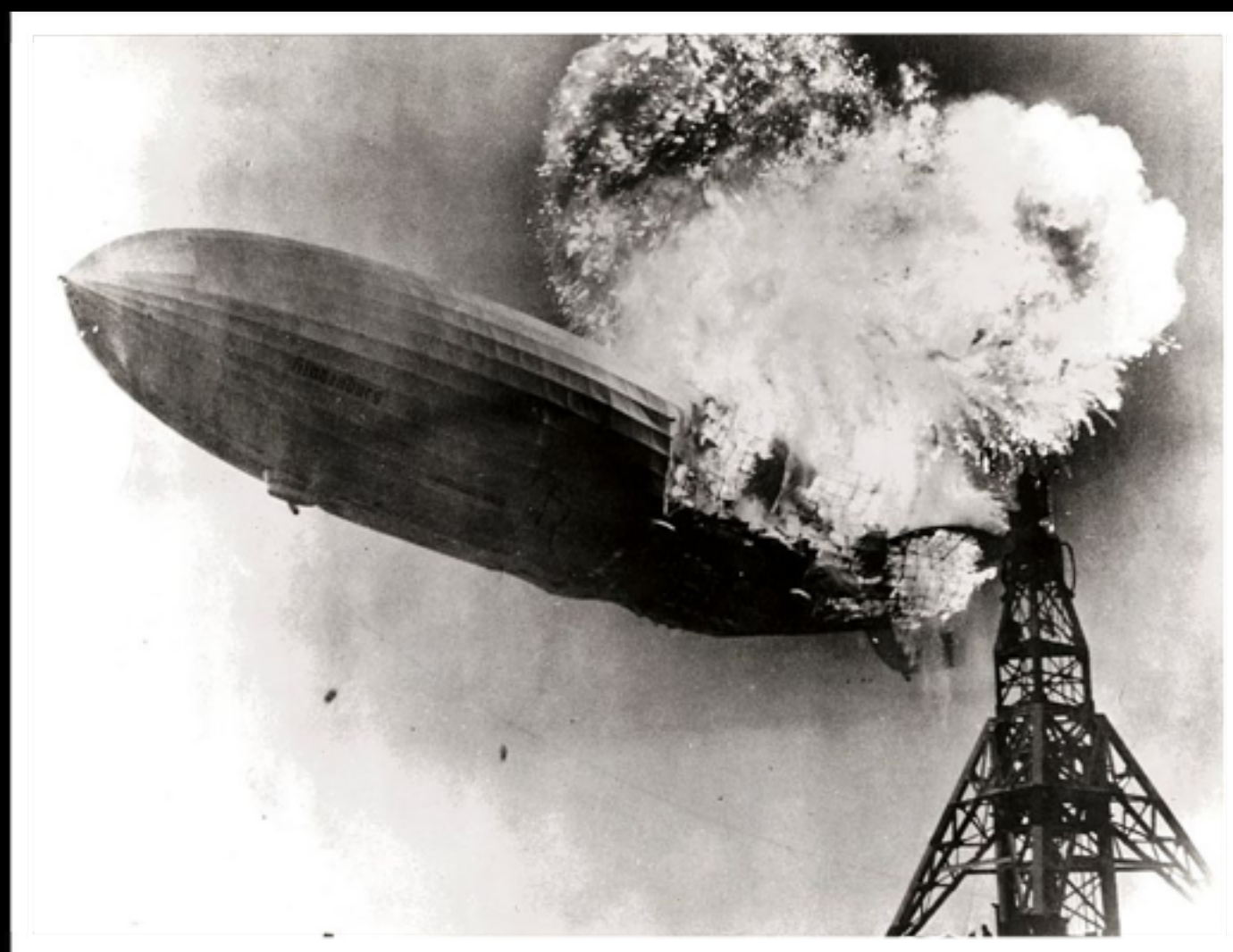


Carbon cycle



Physical Change

Water changes phases



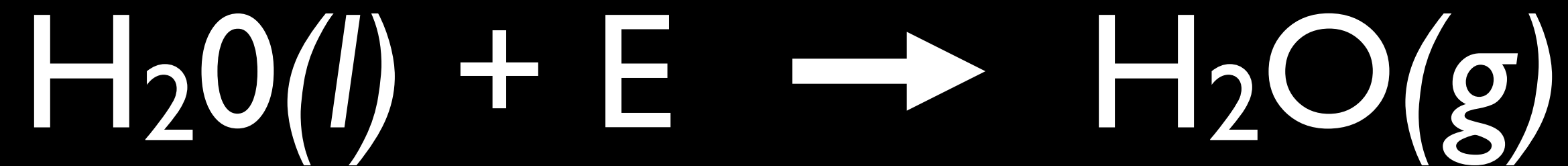
Chemical Change

Hydrogen combustion

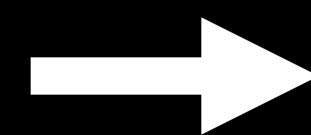
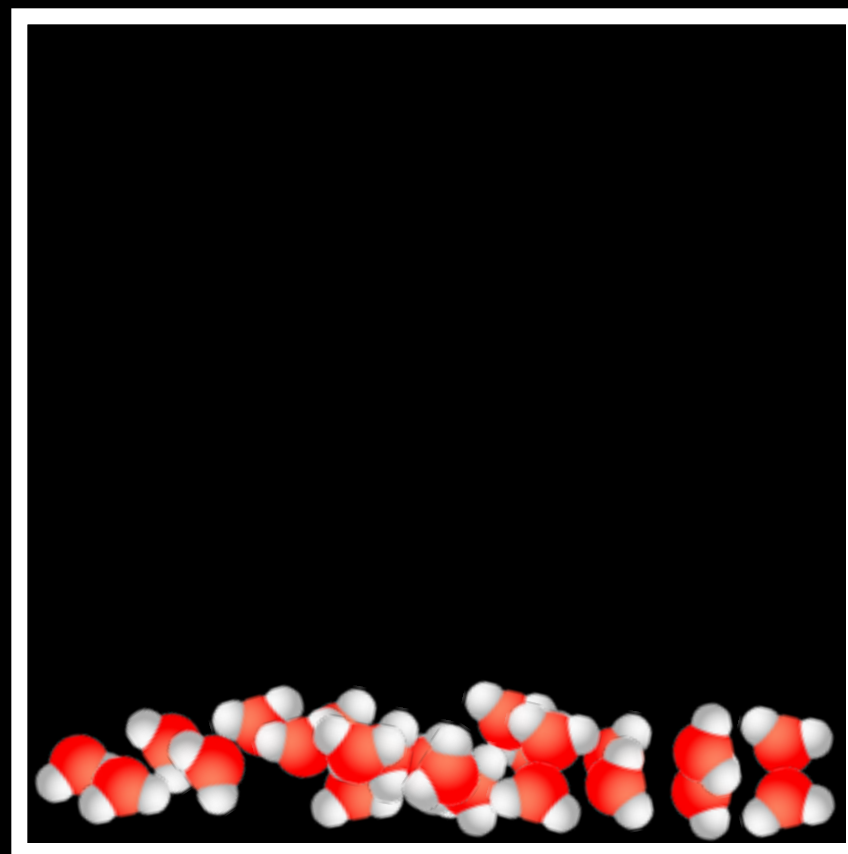


Water changes phases

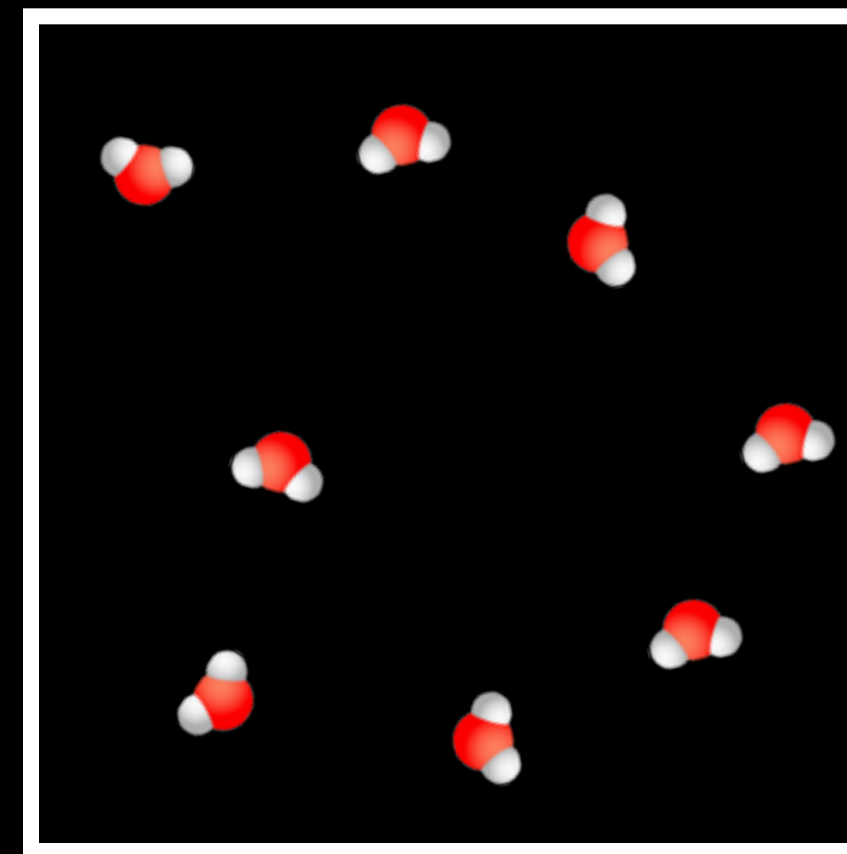
Symbolic

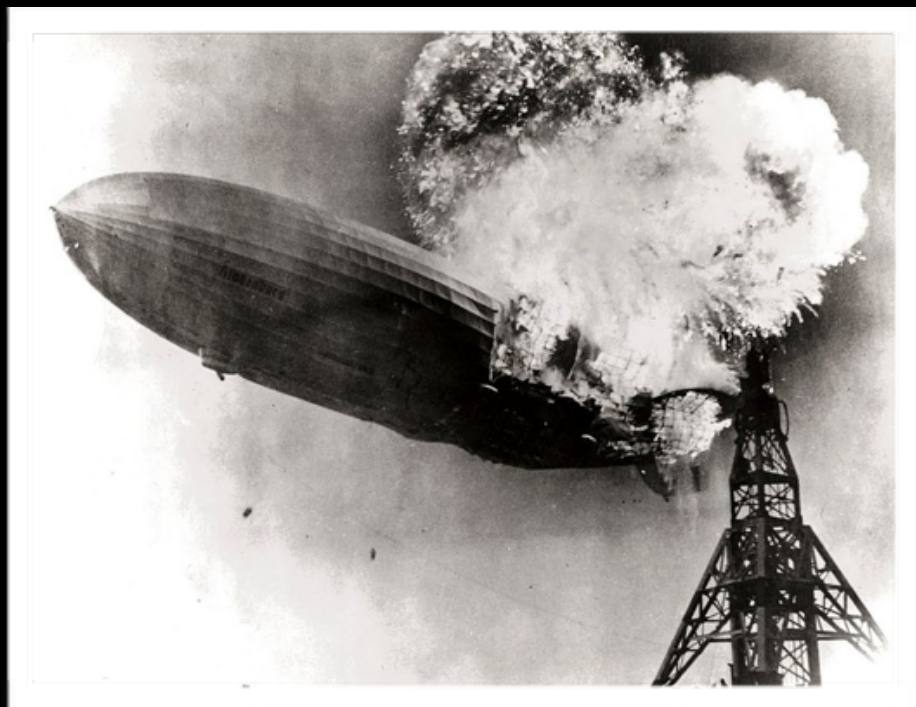


Particulate



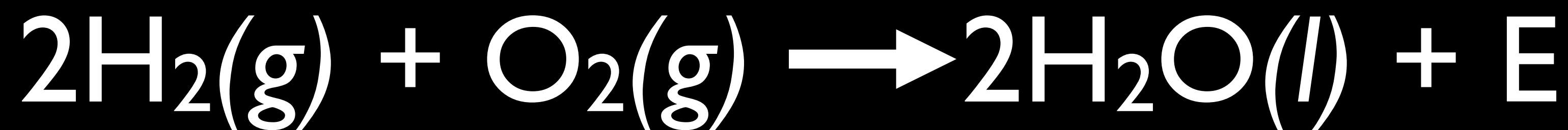
heat



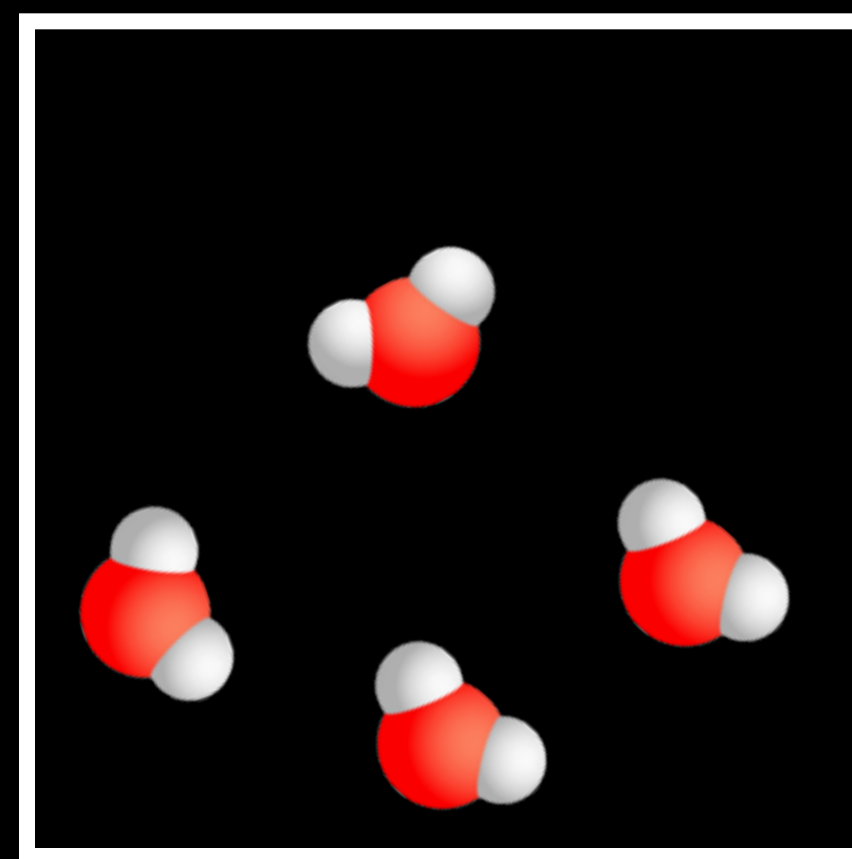
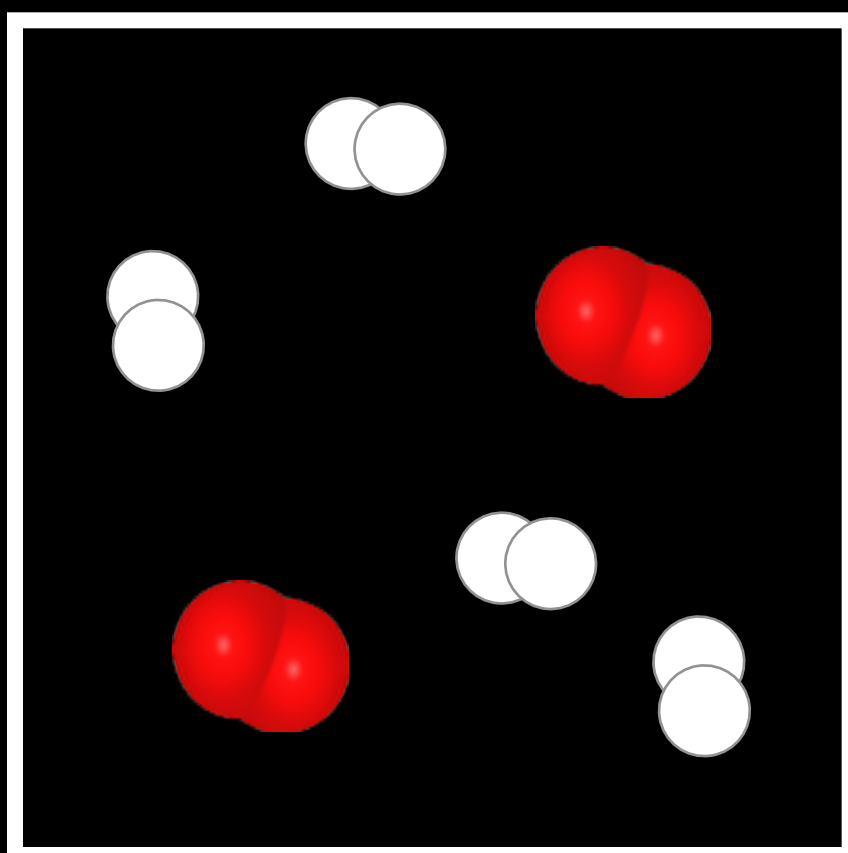


Hydrogen combustion

Symbolic



Particulate



Conservation of Matter

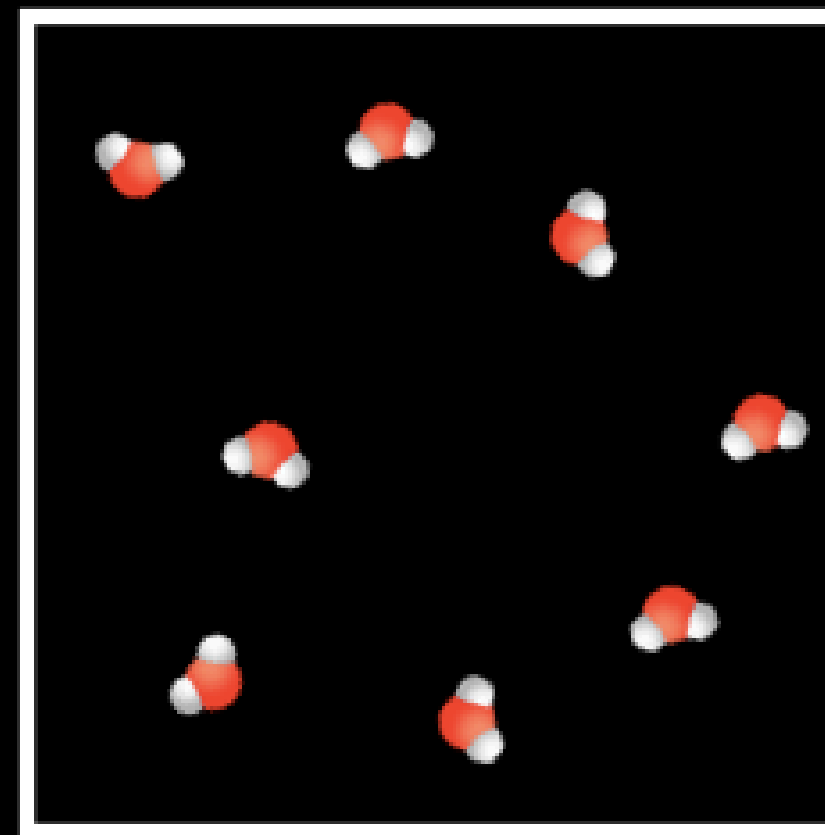
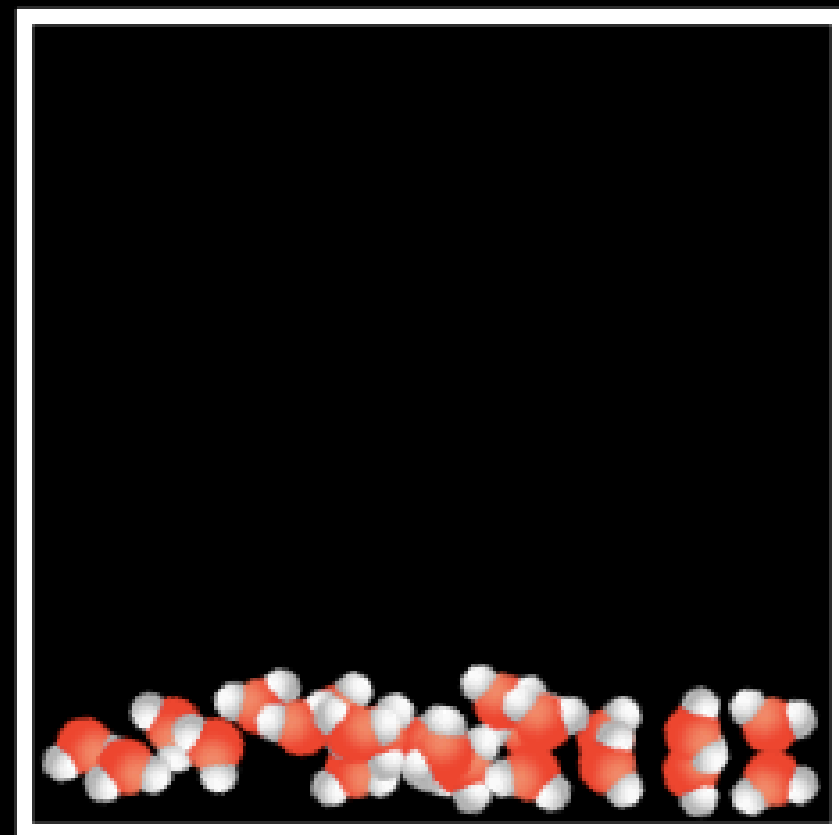
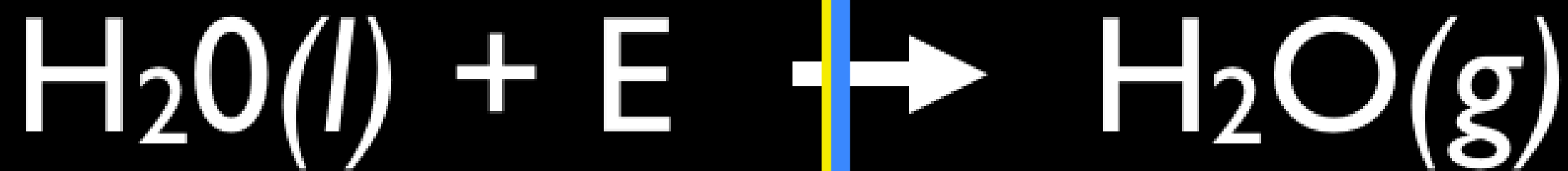
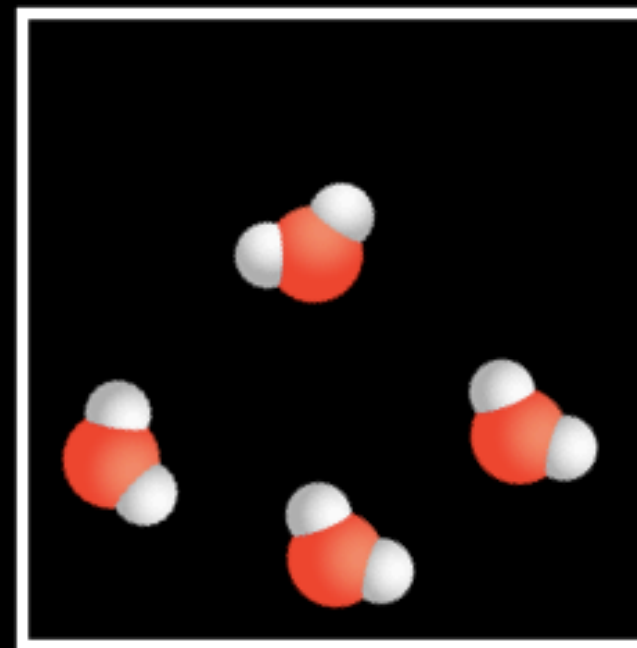
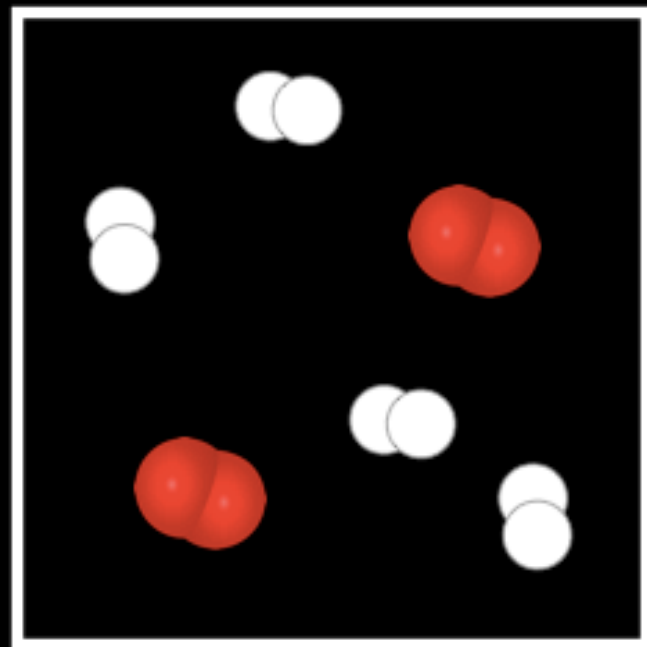


Marie-Anne and Antoine Lavoisier

Chemistry

Qualitative → Quantitative

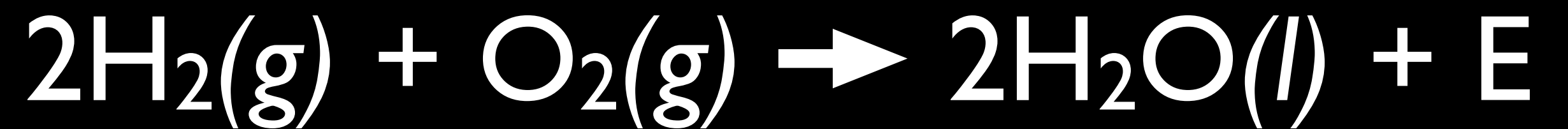
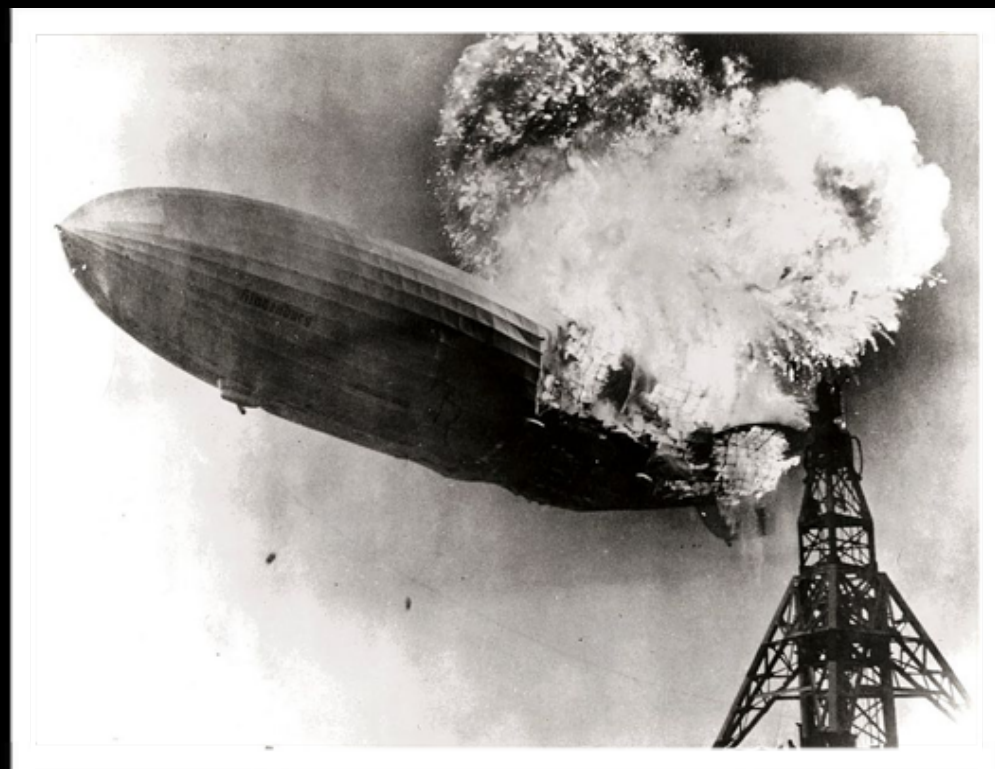
Mass Before = Mass After



heat

Calculations

The Hindenburg carried 1.77×10^4 kg of hydrogen. This combined with 1.42×10^5 kg of oxygen during the explosion. If all of the hydrogen completely reacted how much water was formed?



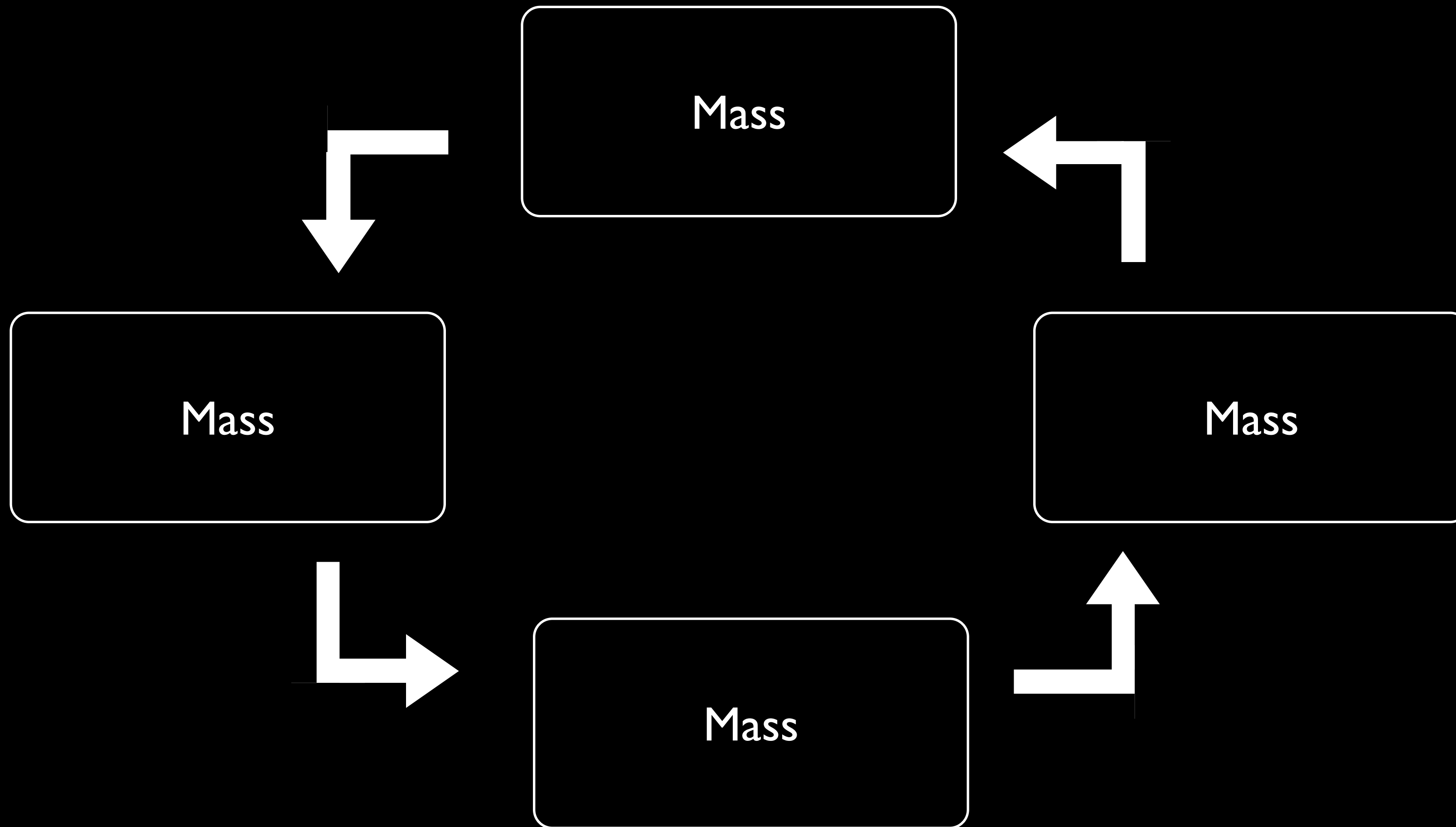
$$1.77 \times 10^4 \text{ kg} + 1.42 \times 10^5 \text{ kg}$$

$$.177 \times 10^5 \text{ kg} + 1.42 \times 10^5 \text{ kg}$$

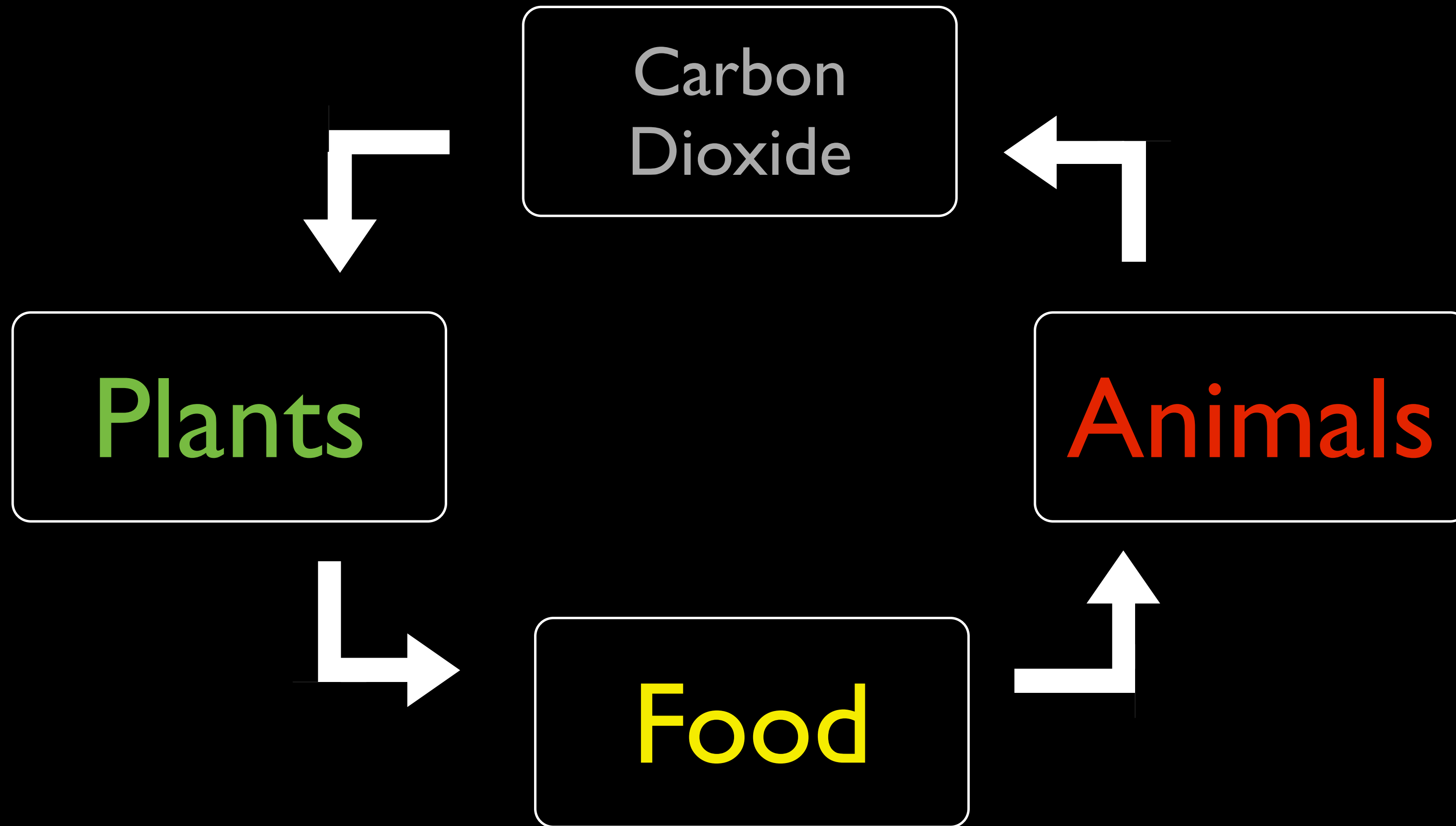
$$1.60 \times 10^5 \text{ kg}$$

176 tons

Cycles



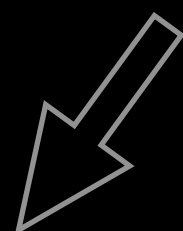
Carbon Cycle



Processes



Representations



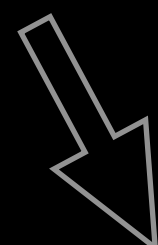
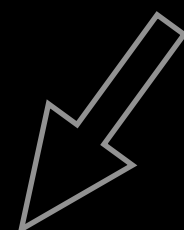
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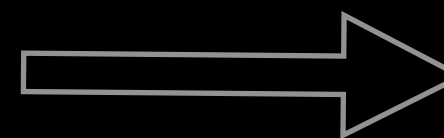


Conservation of
Matter



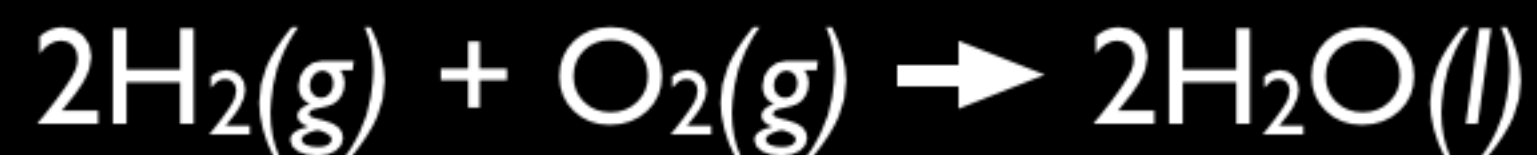
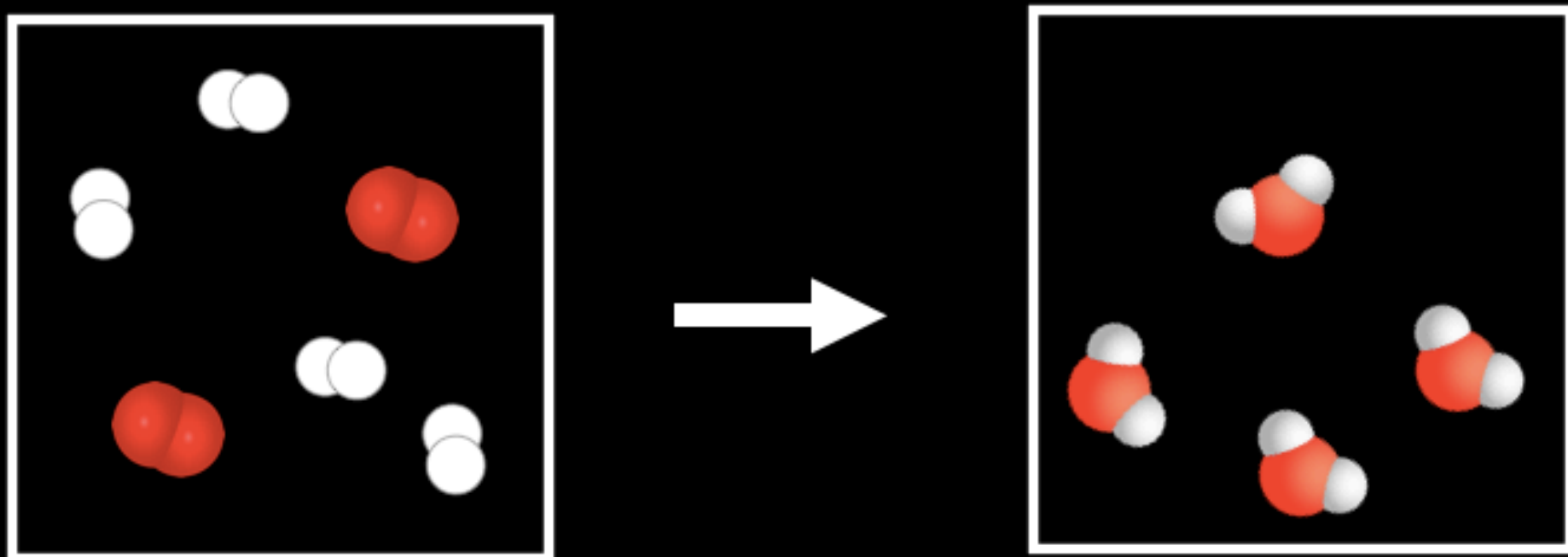
Calculate reactants
or products.

Macroscopic
movement



Carbon cycle

Did you learn?



$$1.77 \times 10^4 \text{ kg} + 1.42 \times 10^5 \text{ kg}$$

To express the conservation of mass qualitatively and quantitatively.

Acknowledgements

“File:Candle Flame (1).jpg,” August 5, 2013. [https://en.wikipedia.org/wiki/File:Candle_flame_\(1\).jpg](https://en.wikipedia.org/wiki/File:Candle_flame_(1).jpg).

“File:David - Portrait of Monsieur Lavoisier and His Wife.jpg,” August 5, 2013. http://en.wikipedia.org/wiki/File:David_-_Portrait_of_Monsieur_Lavoisier_and_His_Wife.jpg.

“File:Hindenburg Burning.jpg,” August 5, 2013. http://en.wikipedia.org/wiki/File:Hindenburg_burning.jpg.

File:Kochendes wasser02.jpg, n.d. http://commons.wikimedia.org/wiki/File:Kochendes_wasser02.jpg.

File:Oxygen Molecule.svg, n.d. http://commons.wikimedia.org/wiki/File:Oxygen_molecule.svg.



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