

Lesson Five: Learn about Exothermic and Endothermic Reactions

Key Concept: The importance of this lesson is to give an introduction to what happens when elements come together or break apart. This lesson will show one of the important attributes of a fuel cell is and how it works and what the benefits are.

Activity:

See what happens when we expose iron, water, activated carbon and salt to air? What happens when we mix ammonium nitrate and water?

Important words:

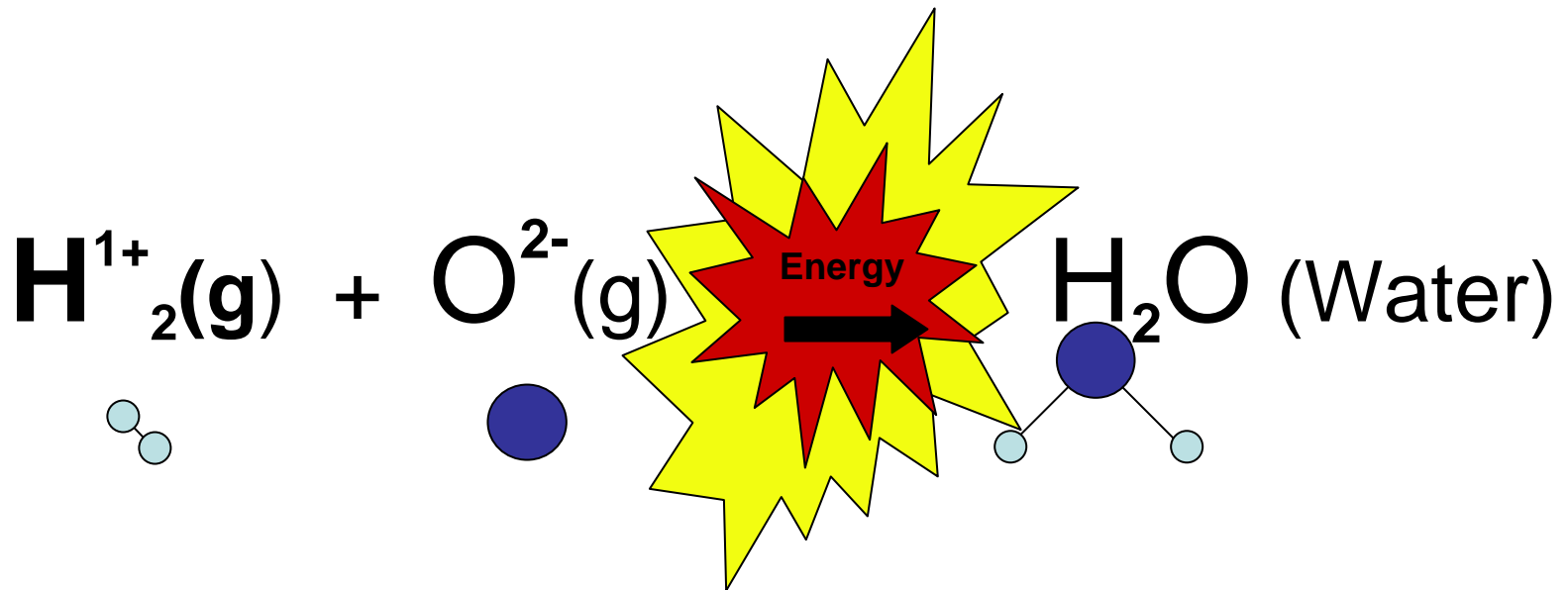
Composition

Exothermic

Endothermic

Chemical Equations

Composition



What happens here besides composition?

Activity:

What happens when we expose iron, water, activated carbon and salt?

What kind of reaction happens?

What happens when we mix ammonium nitrate and water?

What kind of reaction happens?

Initial Energy



**Energy Out
Exothermic**

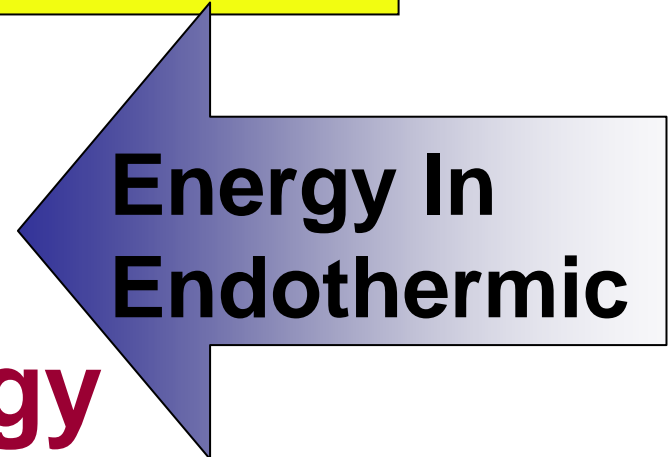


Final Energy



Heat out to...

Final Energy



Initial Energy



Heat in from...

**Let's see if we can
see this process
Happen.**

Some Questions:

What happens in an exothermic reaction?

How about an endothermic reaction?

What's important about a fuel cell?



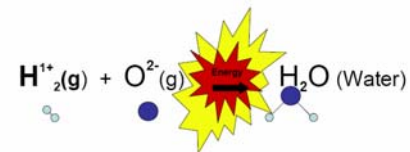
CERTIFICATE OF
Participation
PRESENTED TO

Future Fuel Cell Scientist of America

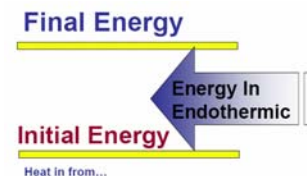
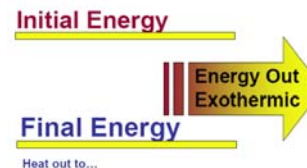
For Completing Lesson Five:
Endothermic and Exothermic Reactions

Mentor: _____

Chemical Equations
Composition



What happens here beside composition?



End of Lesson Five