

NAME:

SECTION:



SPLITTING WATER



OBJECTIVE Using the Fuel Cell (electrolyzer) in the DIY Kit, you will be able to:

- Identify hydrogen and oxygen as the molecules detach from each other using the H2DIY Science kit;
- Measure the ratio of oxygen to hydrogen in water;
- Analyze hydrogen's effectiveness as an energy source.

What is hydrogen?

Who uses hydrogen?

Describe one method of generating hydrogen:

Follow the instructions provided in the Splitting Water Presentation and/or watch the video for more specific instructions. As you are doing the experiment, check the two syringes and observe how they get filled up with gases.

Answer the following questions:

What is an electrolyzer?

Which of the two syringes moved faster towards 20 ml?

Which side did hydrogen come out of? Why?

Explain why the oxygen went to the opposite side:

TAKE NOTES AS
THE TEACHER
GIVES
PRESENTATION



NAME:

SECTION:



SPLITTING WATER



Compare the amount of hydrogen generated to the amount to the oxygen generated.



Divide the hydrogen amount by two. You should get the amount of oxygen.

FORMULA:

$$\frac{? \text{ ml of hydrogen}}{2} = ? \text{ ml of oxygen}$$

Hydrogen to oxygen ratio: $\frac{\text{ml of hydrogen}}{2} = \underline{\hspace{2cm}} \text{ ml of oxygen}$

What does it mean?

This is where water gets the name (or chemical formula): .

Remember that we used pure distilled water. that means that the components of pure water are: and .

What can we do with hydrogen and oxygen?



LESSON 3