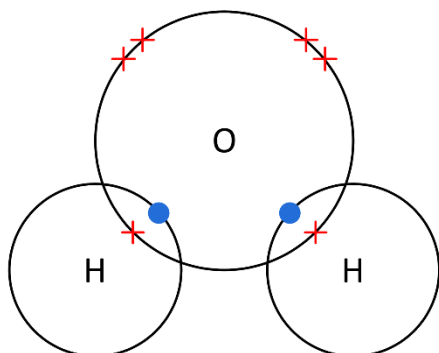


Name:

Class:



Complete the figure to show the arrangement of electrons in a water molecule.



Explain how a catalyst increases the rate of a reaction.

A catalyst lowers the activation energy and provides an alternative reaction pathway.

Both points must be mentioned for the answer to be accepted.

Describe a test to show that a compound contains bromide ions.

Test: add nitric acid and silver nitrate.

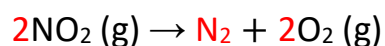
Positive result: if bromide ions are present a cream precipitate will form.

Some fireworks contain a number of metal ions. Why is it difficult to tell which ions?

The colours can mask each other.

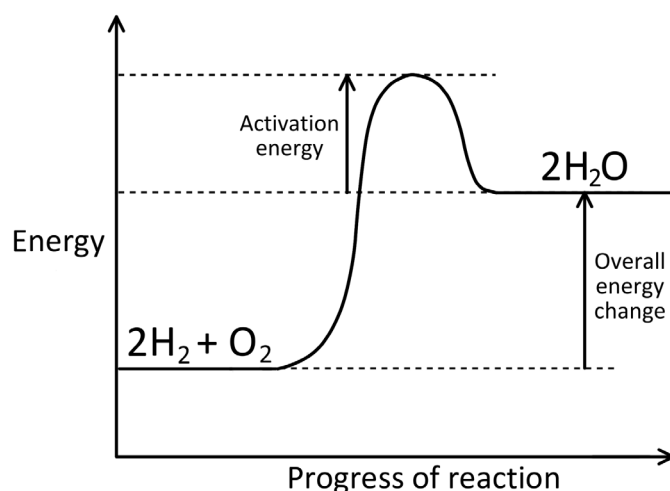
Accept it can be hard to tell colours apart.

Balance the following equations.



A student drew a reaction profile for the reaction between hydrogen and oxygen.

The figure below shows the student's reaction profile.



The student made two errors when drawing the reaction profile.

Describe the two errors.

A description to include:

- Activation energy is not labelled correctly.
- The reactants should be higher than the products.

Note: The reaction is exothermic. The profile drawn is for an endothermic reaction.