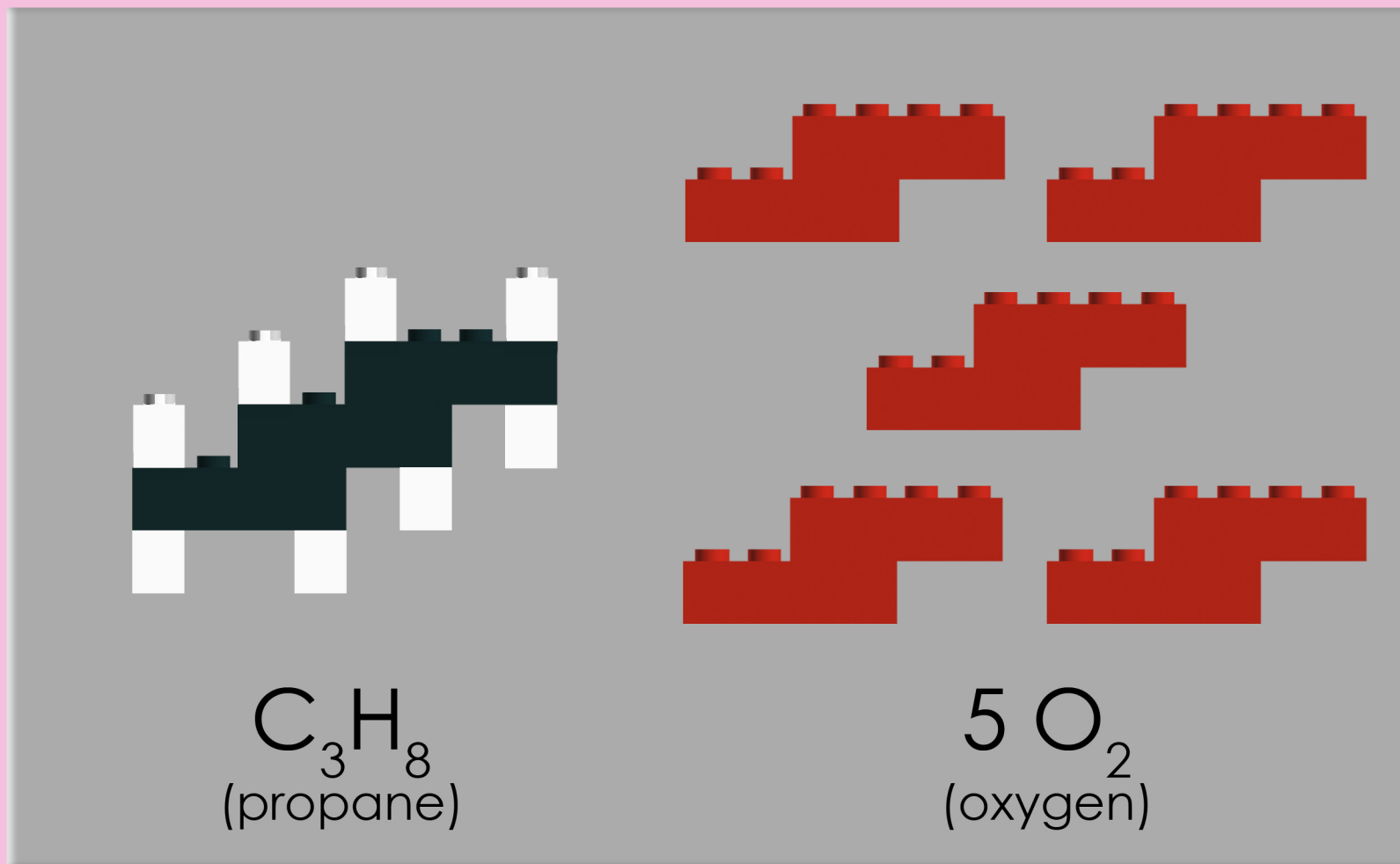


Burning Fuel

Complete Combustion

Combustion is a chemical reaction.

Build the fuel and oxygen molecules with LEGO® bricks. Place them on their pictures.



The image shows two molecular models constructed from LEGO bricks on a grey background. On the left, a propane molecule (C₃H₈) is built with three black bricks representing carbon atoms and eight white bricks representing hydrogen atoms. On the right, five oxygen molecules (5 O₂) are built, each consisting of two red bricks representing oxygen atoms. Below the propane model is the chemical formula C₃H₈ (propane). Below the oxygen models is the chemical formula 5 O₂ (oxygen). To the right of the models is a yellow starburst labeled 'spark' with a black arrow pointing right, labeled '(TURN OVER)'.

C_3H_8
(propane)

$5 O_2$
(oxygen)

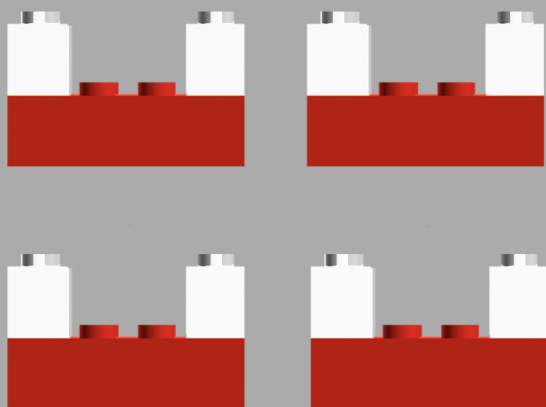
spark
→
(TURN OVER)

Burning Fuel

Complete Combustion

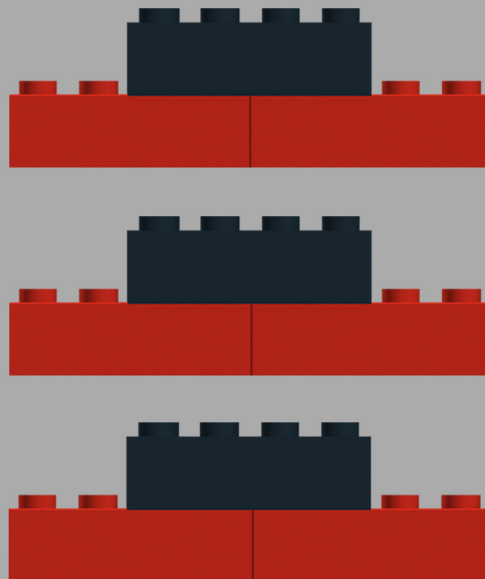
When there is plenty of oxygen available, fuel burns completely, producing only carbon dioxide and water. This reaction is called **complete combustion**.

- 1 Take apart the fuel and oxygen from Side 1. Make as many water molecules as you can with the same LEGO® bricks.



H_2O
(water)

- 2 Make carbon dioxide molecules with the leftover bricks.



CO_2
(carbon dioxide)

- 3 Combustion increases CO_2 (carbon dioxide) in the air. Excess carbon dioxide contributes to climate change by keeping more heat in the atmosphere.

