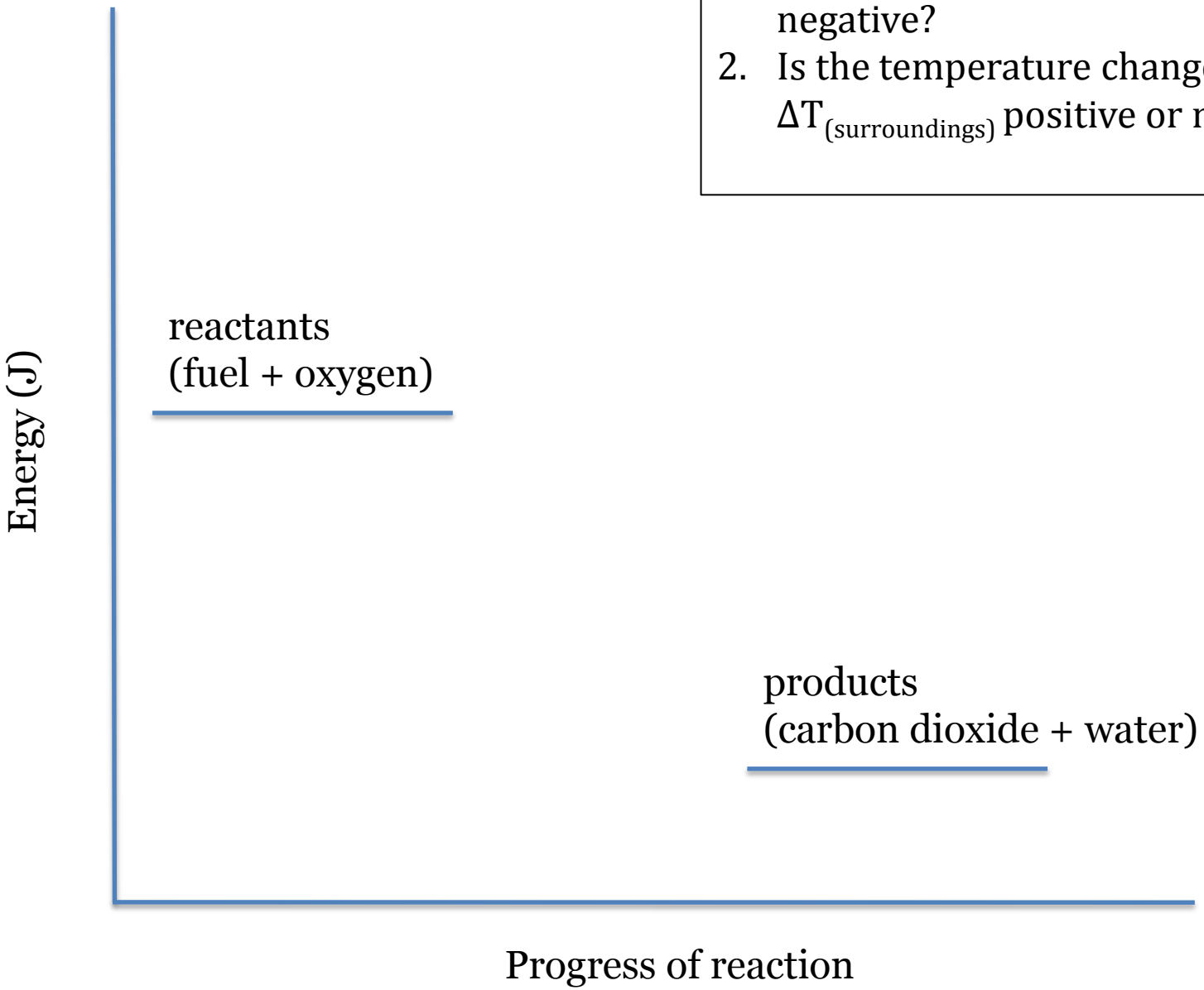
Topic	Exothermic reactions, ΔH and ΔT	**Level**	GCSE (or any course for students aged 14-16)
Outcomes	1. Draw and understand an energy level diagram for an exothermic reaction 2. Explain changes to ΔH and $\Delta T_{(surroundings)}$ for an exothermic reaction		
Information for teachers	• Use this activity once you have introduced the concept of an enthalpy change. Students should already be familiar with exothermic and endothermic reactions as well as combustion reactions. Students first complete the energy level diagram and then use this, alongside the key words, to explain why combustion keeps us warm.		

Questions

1. Is the enthalpy change, ΔH, positive or negative?
2. Is the temperature change $\Delta T_{(surroundings)}$ positive or negative?



The men in the picture are warming themselves by the fire. Can you use the words below to explain why burning wood releases energy.

products fuel

combustion

exothermic

energy heat

enthalpy change (ΔH) surroundings

Temperature (T)

How many did you get?

Wood is the fuel. The fuel reacts with oxygen in the air to form the products, carbon dioxide and water. This reaction is called combustion. Energy is transferred from the reactants to the surroundings by heat. The temperature (T) of the surroundings will increase. We call this energy change an enthalpy change (ΔH).