Answer sheet

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IG Teaching Hubs Chemistry Worksheets

Lesson 88 – Worksheet 2

In a reversible reaction the products can reform the original **reactants**. At the start:

* the forward reaction happens **quickly** and gets slower over time
* the reverse or backward reaction does not happen, but it gets **faster** in time.

At a certain point, the forward and the reverse reactions occur at the **same** speed. At this point **dynamic** equilibrium has been achieved. At equilibrium the forward and **reverse** reactions are in balance. After this point the **proportions** of reactant and product in the mixture stay the same. It is a dynamic **equilibrium** because the forward and reverse reactions are still **ongoing**.

Dynamic equilibrium can only occur in a **closed** system. This is a system where substances cannot enter or **leave** the container where the reaction is taking place.

Lesson 88 – Worksheet 3

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* the forward reaction happens **quickly** and gets slower over time
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IG Teaching Hubs Chemistry Homework sheets

Lesson 88 – Homework

**1 a** the symbol indicates that the reaction is reversible

**b** that the forward and backward reactions continue to occur

**2 a** CaCO3(s) 🡪 CaO(s)  CO2(g)

**b** CaO(s)  CO2(g) 🡪 CaCO3(s)

because the product gases will be lost and the backward reaction cannot occur

**3** If hydrated copper(II) sulfate is **heated** it changes from a bright blue colour to **white**. It is still copper(II) sulfate but it now contains no **water**. The chemical term for a substance that contains no water is **anhydrous**. If water is added to the copper(II) sulfate it will **change** back to its original colour. **Heat** will also be given out. This shows us that a **reversible** reaction has taken place. If ammonium chloride crystals are heated they separate in to **ammonia** gas and hydrogen chloride gas, which are both **colourless**. As these gases **cool** they change back into ammonium chloride, which forms white **crystals**. The reaction is reversed as the **gases** cool down.