Welcome to

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- find out more about Complete Science for Cambridge IGCSE® Kerboodle
- view sample content

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Complete Science for Cambridge IGCSE®

What is Kerboodle Online Practice and Assessment?
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Kerboodle Online Practice and Assessment blends assessment focused resources with online functionality to help you build exam potential and measure progress. It’s intuitive to use, customizable and you can access it online anytime.

Kerboodle Online Practice and Assessment helps you:

- Support confidence and ability with interactive, online exam practice
- Monitor each student’s progress and support stronger achievement with powerful assessment tools
- Improve potential and apply exam skills in practice with the unique *On Your Marks* activities

Use Kerboodle alongside the updated editions of the bestselling *Complete Science for Cambridge IGCSE* – our most challenging 14-16 Science course.
Two online learning components are available:

- **Kerboodle Online Practice and Assessment** – practice, assessment and exam skills resources, available as an annual subscription for an unlimited number of users

- **Online Student Books** – core classroom texts that support and extend Kerboodle Online Practice and Assessment

*They are automatically included for teachers and available to purchase separately for students.

You can choose to use one or the other, or both – whatever will work best for you and your students.
Exam Skills
What types of Exam Skills resources are included?

- **On Your Marks: Understand and prepare**
  - 30 focused activities that aid concept comprehension while familiarizing students with sample exam questions
    - Allows students to consider what kind of answers perform well in assessment
  - Students can review sample answers to exam questions, read the associated examiner feedback and grade the answers themselves. This prepares them for the ‘On Your Marks: Test’, when they will answer the question themselves
On Your Marks: Understand and Prepare

Disease: Understand and prepare

**Part I: Understand and prepare**

The first task you should complete when answering an examination question is to check that you understand the question.

You should ask yourself:
- What are the key words? What do they mean?
- What style of answer is needed?
- What information should be included to obtain a high mark?
Assessment
How does the Assessment Module work?

There is an entire suite of digital assessments that are written in Cambridge exam style and have been developed to help accurately prepare learners and build confidence.

- You can assign digital assessments to your students to complete independently
  - You can also provide them with relevant supporting materials, before they complete the assessment
- The quizzes are auto-marked to save you time and help you easily measure progress
What types of assessment resources are included?

- **On Your Marks: Test**
  - 30 interactive activities per science that encourage students to apply the skills they have learnt to real science questions, getting them to think critically about – and improve – their own performance
  - These tests follow the On Your Marks: Understand and Prepare activities that prepare students for these tests

- **Quizzes**
  - **Assessment quizzes** gauge overall understanding of a topic and provide feedback upon completion of the quiz
  - **Interactive quizzes** keep learners engaged with a variety of activities to reinforce key topics
  - **Feedback quizzes** help students identify their strengths and weaknesses with customized feedback to each answer, in addition to summative feedback at the end of the quiz
  - All quizzes are automarked

- **Exam-style papers**
  - Ready-made practice papers allow students to check their knowledge and identify areas for improvement
On Your Marks: Test

Disease: Test

Part III: Try it yourself

In this section you will write your own answer to the question using the ideas you have covered in parts I and II of this activity.

Remember to use the marking criteria you have already seen to help you form a high level answer to the question.
Assessment Quiz

4.1 Quiz: Work and energy

Put each scenario into the correct box according to whether work is being done or not.

- kicking a ball
- lifting a suitcase
- ironing clothes
- pushing a toy car along the ground
- cycling at a steady speed
- comet moving steadily across the galaxy
- lying in a hammock
- sleeping
- watching a film

Work done

No work done

Cambridge IGCSE Physics
Kerboodle
Interactive Quiz

2 Interactive quiz: Separating substances

4 Drag and drop the labels to label the distillation apparatus.

Cambridge IGCSE Chemistry
Kerboodle
Feedback Quiz

2.3-2.6 Feedback quiz 1: Enzymes and biological molecules

1 Which statement is true about enzymes?

- Enzymes can only be used to break things down
- Enzymes are used up in a reaction. **X**
- Enzymes are a type of catalyst.
- Enzymes bind to many different types of molecules

Incorrect. Enzymes are biological catalysts that can be used to speed up reactions without being used up in the process. See Topic 2.5 Enzymes control biochemical reactions in living organisms in your Student Book for more information.

Cambridge IGCSE Biology
Kerboodle
Exam Style Papers

Candidate Name:

Exam-style questions

CHEMISTRY PAPER 3 Core 1 hour 15 minutes

Answer questions on the Question Paper.
Answer all questions.
A copy of the Periodic Table is printed on page 13.
What is the Markbook?

The Markbook is the record of all work you have sent to your students, as well as the place where you see submitted work, assign marks and run reports.

In this section you can:

- See submitted work from students, including individual answers to interactive quizzes
- Assign marks and run reports to measure achievement across a group, or across a student’s different assessments
- Access three different types of reports: diagnostic, group and student
- Export report data to load into another system, or print for records or parent information
Example of a diagnostic report
Example of a group report

2. GROUP REPORT

Class 12 - Markbook Report

<table>
<thead>
<tr>
<th>TITLE</th>
<th>DUE DATE</th>
<th>SCORE</th>
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<tr>
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<td>25/10/2013</td>
<td>54 %</td>
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<td>Joanna Clarke</td>
<td>11/31</td>
<td>35 %</td>
</tr>
<tr>
<td>Jean Georges</td>
<td>21/31</td>
<td>68 %</td>
</tr>
<tr>
<td>Mark Jones</td>
<td>19/31</td>
<td>68 %</td>
</tr>
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</table>

Average Group Scores:
- 54 %
- 35 %
- 72 %
Example of a student report

3. STUDENT REPORT

Mark Jones - Markbook Report

<table>
<thead>
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<th>MARKS A/Y</th>
<th>MARKS %</th>
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<td>2.2 Summative assessment</td>
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<td>Incomplete Submission</td>
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<td>3.1 Summative assessment</td>
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<td>2 Summative assessment</td>
<td>25 Jan</td>
<td>10 / 51</td>
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Supporting resources:

Digital Books
What are the Online Student Books?

Online Student Books are digital versions of the complete print Student Books, which can be used as your core classroom texts.

You can access your Online Student Book from a range of devices, provided you have access to the internet.

The IGCSE Science Kerboodles include access to an Online Student Book to support your teaching:

- Display the Student Book at the **front of the class**
- Add extra information, reminders and examples via **digital post-it notes**
- Highlight, annotate and zoom in on **specific features**
- Jump straight to **related resources** from particular pages or chapters

Teachers will automatically have access to the digital book within the “Digital Book” tab of their Kerboodle; student access can be purchased via the [Oxford University Press website](https://www.oup.com).
### 4.3 The Ionic Bond

**How sodium and chlorine atoms bond together**

- Sodium (Na) atom loses one electron, forming a sodium ion (Na⁺).
- Chlorine (Cl) atom gains one electron, forming a chloride ion (Cl⁻).

**Total charge 0**

- Sodium ion, Na⁺
- Chloride ion, Cl⁻

**It contains one Na⁺.**

Since it is made of ions, sodium chloride is called an ionic compound.

Ionic compounds are held together by strong ionic bonds.

### Other ionic compounds

- When a sodium atom and a chlorine atom react together, the sodium atom loses one electron and the chloride atom gains one electron.
- The resulting compound is sodium chloride (NaCl).

### Magnesium oxide

- Magnesium (Mg) atom has 2 outer electrons and an oxygen (O₂⁻) ion.
- Magnesium loses its 2 outer electrons and chloride ions gain them.
- The resulting compound is magnesium chloride (MgCl₂).

**The ions attract each other because of their opposite charges.**

### Magnesium chloride

- Magnesium (Mg) atom has 2 outer electrons and an oxygen (O₂⁻) ion.
- Magnesium loses its 2 outer electrons and chloride ions gain them.
- The resulting compound is magnesium chloride (MgCl₂).

**The ions attract each other because of their opposite charges.**

- Sodium (Na⁺) and chloride (Cl⁻) ions attract each other.
- The resulting compound is sodium chloride (NaCl).

**Magnesium oxide**

- Magnesium (Mg) atom has 2 outer electrons and an oxygen (O₂⁻) ion.
- Magnesium loses its 2 outer electrons and chloride ions gain them.
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**Magnesium chloride**

- Magnesium (Mg) atom has 2 outer electrons and an oxygen (O₂⁻) ion.
- Magnesium loses its 2 outer electrons and chloride ions gain them.
- The resulting compound is magnesium chloride (MgCl₂).

**The ions form a lattice. The compound has an overall charge.**

**Below are two more examples.**

**Describe in your own words the structure of solid sodium chloride, and explain why its formula is NaCl.**

**Explain why:**

- **a** magnesium ion has a charge of 2⁺
- **b** the ions in magnesium oxide stay together
- **c** magnesium chloride has no overall charge
- **d** the formula of magnesium chloride is MgCl₂.

**Sample of the Online Student Book**
So the compound has no overall charge.

Since it is made of ions, sodium chloride is called an ionic compound.

The lattice grows to form a giant 3-D structure. It is called 'giant' because it contains a very large number of ions. This giant structure is held together by strong ionic bonds.

Atoms combining to form giant 3-D structures

How solid sodium chloride is formed

When sodium reacts with chlorine, billions of sodium and chloride ions are formed. The ions attract each other because of their opposite charges. Like the positive sodium ions and the negative chlorine ions, they group to form a lattice. The ions are held together by strong ionic bonds.

Magnesium oxide

Magnesium oxide has a giant structure. Each magnesium atom is held together by a huge number of oxide ions. In total, there are 1 magnesium for each oxide ion, so its formula is \( \text{MgO} \).

Magnesium chloride

Magnesium chloride has a giant structure. Each magnesium atom is held together by a huge number of chloride ions. In total, there are 2 magnesium for each chloride ion, so its formula is \( \text{MgCl}_2 \).

The charge on each magnesium ion is 2. So the total charge on the ions is 2.

The charge on each chloride ion is 1. As there are 2 chloride ions, the total charge on the ions is 2.

The total charge on the ions is 2. But sodium chloride has no overall charge.

Describe in your own words the structure of solid sodium chloride, and explain why its formula is \( \text{NaCl} \).
Personalizing Kerboodle
How is Kerboodle customizable?

If you want to, you can really make Kerboodle your own. It offers so many customization options that enable you to tailor the content to fit your needs. For example, you can:

- Upload your own content and share this with your department
- Create student groups within a course for bespoke assignments or reporting
- Add your own folders, grouping content in your own way
Next steps

If you like what you see, we can arrange a trial subscription for your school. This means we’ll give you free access to Kerboodle for one month. After a month, we’ll automatically send you an invoice for a 12 months’ subscription, and you can continue using Kerboodle for the next 12 months.

If you decide Kerboodle isn’t for you, just email us at schools.enquiries@oup.com within your first 30 days of access and we’ll cancel your trial subscription immediately.

Place your order

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3. Email us at schools.enquiries@oup.com, or, if you’re in the US, us.k12education@oup.com