

Starting the School Year with Kognity

Topic: 1 The particulate nature of matter

Lesson: Ready for Action Lesson Plan

Subject: IGCSE Chemistry



What can I use this lesson plan for?

This is a great lesson plan for introducing students to the IGCSE Chemistry curriculum and Kognity's digital textbook features at the beginning of the school year. The activities in this lesson work well with remote or in person learning. As the year progresses, you can use these activities with different sections of the Chemistry digital textbooks.

Lesson Objectives:

Students will be able to apply Kognity's digital textbook features to classroom learning in IGCSE Chemistry.

Time Allotment:

Recommended time is *one hour*, however the revision activities provide opportunities for extension.

Materials:

[Lesson plan on subtopic 1.1, states of matter knowledge organiser](#), [Chemistry 1.1.1 powerpoint](#), [1.1.1 \(solids, liquids and gases\)](#), [1.1.2 \(Changing state\)](#) [1.1.3 \(Kinetic theory\)](#)



Note:

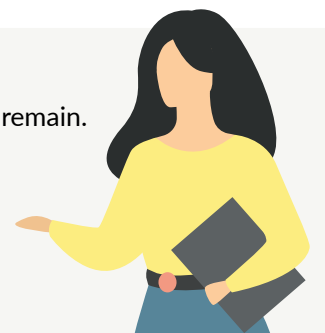
For an in-depth lesson with pedagogical guidance, please refer to this [lesson plan](#) which incorporates this [powerpoint](#) and this [knowledge organiser](#).

Activities with Kognity

Hook

1. Project the lesson's [powerpoint](#) (or share your screen)
2. Introduce students to subtopic [1.1](#) (the particulate nature of matter) by playing the following game called **Get Round the Back**.
 - Instructions: You are the coach of a sports team playing an invasion game. Your objective is to prevent the opposition invading your territory; you can do this in one of three ways:

1. Park the bus - Attempt to block as much space as possible by arranging your team in a fixed pattern in which the team must remain.
2. Together as One - The team members must remain linked but can move past one another.
3. One on One - Each player is free to move randomly throughout the space at any speed and in any direction.



- Choose a tactic and be prepared to discuss your strategy.

3. Discuss as a class:

- The benefits to your defence of your chosen strategy
- The weakness of your strategy
- The similarities and differences of this model to the arrangement of particles in a solid, liquid and gas substance

Introduction Activity

With the [overview](#) projected on the board (in person) or through screen share (remote), give a brief introduction of Kognity and the useful features for students, **by explaining that:**

- The content in each section of the book incorporates features like **videos, study skills boxes, models, and activities** to enhance students' learning.
- Each subtopic has a series of **section questions** at the end that allow students to check their knowledge and understanding in small increments.
- The **practice centre** has exam style questions, strength tests and battles for all topics that allow students to check their knowledge and understanding of each topic. As they engage with the **strength test and battles**, their **strength bar** (on the overview page) will increase, allowing them to keep track of their strong content areas and areas they need to work on.
- Teachers can assign readings and questions and can keep track of student progress.

Paired Activity

1. Ask students to find a partner and create a summary table outlining the key properties of each state of matter.
2. When they are done, instruct them to swap their table with another pair. Use section [1.1.1](#) of the Kognity IGCSE textbook to help you peer assess this table. How have they done?
3. Have students provide feedback to the other pair and obtain feedback for themselves.
4. Have students complete the section questions at the bottom of section [1.1.1](#).

Group Activity

1. Assign students to a group of four and give each group a different tactic from the hook activity. This part of the game is called **Half Time Changes**.
2. Explain to students that their tactics are not working, and they are losing. **Half Time Changes** is an opportunity to freshen things up. Students can either: put more energy in or choose to slow the pace a little.
3. Have groups consider both scenarios and discuss the following questions:
 - How will these changes impact the movement and arrangement of your team?
 - How do your changes mirror those within the states of matter when energy is added or taken away?
 - What happens to the particles within a substance when its state of matter changes?
4. After groups discuss, each group sends an envoy to a different group to share their ideas and thoughts. When the envoy returns, students can use their feedback to amend and improve their responses to the three questions.

Independent Activity

Students should use sections 1.1.1 - 1.1.3 to complete the [knowledge organiser](#).

Revision Activities

At the end of subtopic 1.1, there are several possible activities you can do with your class.

- Assign your students [Practice/Exam-style questions](#), where they can answer one to two questions for a specific subtopic that has already been discussed in class. These questions are modelled after IGCSE exams and are invaluable when students are preparing for exam papers.
- Create a [question](#) or [reading assignment](#) on any topic or subtopic. Then, have students head over to the [Assignments tab](#) to identify how assignments are presented to them.
- Have students go to the [practice centre](#) to take the 1.1 Strength test as a post assessment, or engage in a strength battle with a classmate (These questions encompass all of topic 1).