

Starting the School Year with Kognity

Topic: 5 Electricity and Magnetism

Lesson: Ready for Action Lesson Plan

Subject: IBDP Physics



What can I use this lesson plan for?

This is a great lesson plan for introducing students to both the Physics curriculum and Kognity's digital textbook features in 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 topics in the Physics digital textbook.

Lesson Objectives:

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

Time Allotment:

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

Materials:

[5.2.1](#) (circuits, potential and currents), [5.2.2](#) (circuits and resistance)

Activities with Kognity

Hook

Introduce students to Kognity by directing them to a Strength Battle (in the Practice section). Ask students to compete against each other (or the Kogbot) on a topic of their choosing and come up with a small reward for the winner (optional).

This introduces one of the key advantages of Kognity; the ability for students to learn and practice on their own in a more dynamic way.

Introduction Activity

Give a brief introduction of more useful Kognity features for students, **by explaining that:**

- The content in each section of the book incorporates features such as **videos**, **external links**, **simulations**, and **example questions** to enhance students' learning.
- Each subtopic has a series of **section questions** 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.

Group Activity

1. As a class, ask students to go to section 5.2.2 (circuits and resistance) and identify a **simulation** or an **interactive graph**. These are integrated into the lessons, to help students visualize concepts. Ask them to experiment with the different simulations.
Note: Figure 4 (resistance calculator), the 3D model (current in a wire), or Figure 9 (resistance value tool) are good examples for students to identify.
2. Have students identify the following **boxes** in sections [5.2.1](#) and [5.2.2](#):
 - Definition
 - Important
 - Be Aware
 - Exam Tip
 - Theory of Knowledge
3. Explain that, when reading on their own, students should pay special attention to these boxes - they contain key information or tips for getting the most out of their work.

Independent Activity

1. Have students read the Theory of Knowledge Box in [5.2.1](#) and write the answers to the questions in their [Kognity notebooks](#):

Reflecting on Aron's quote, consider the following knowledge question:

- What is the benefit of using analogies to explain scientific phenomena?
- What are some of the risks in relying on analogies to explain scientific phenomena?
- Why can one analogy be considered good while another one poor at explaining the scientific phenomena? What is necessary for an analogy to be considered good?



2. After students have responded to the questions independently, have them share their answers with a partner.

Revision Activities

The following are different revision activities you can do with your class on any Physics subtopic:

- Have students respond to the Checklist prompts at the end of each section in their [Kognity notebooks](#).
- Assign 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 IB exams, so they will prove invaluable when students are getting ready for papers 1-3.
- Create a [question](#) or [reading assignment](#) on any topic or subtopic. Then, have students head over to the [Assignments tab](#), so they can identify how assignments are presented to them, and can complete their first graded homework/activity on Kognity.