**Academic Year 2021 – 2022**

**Science Department Curriculum**

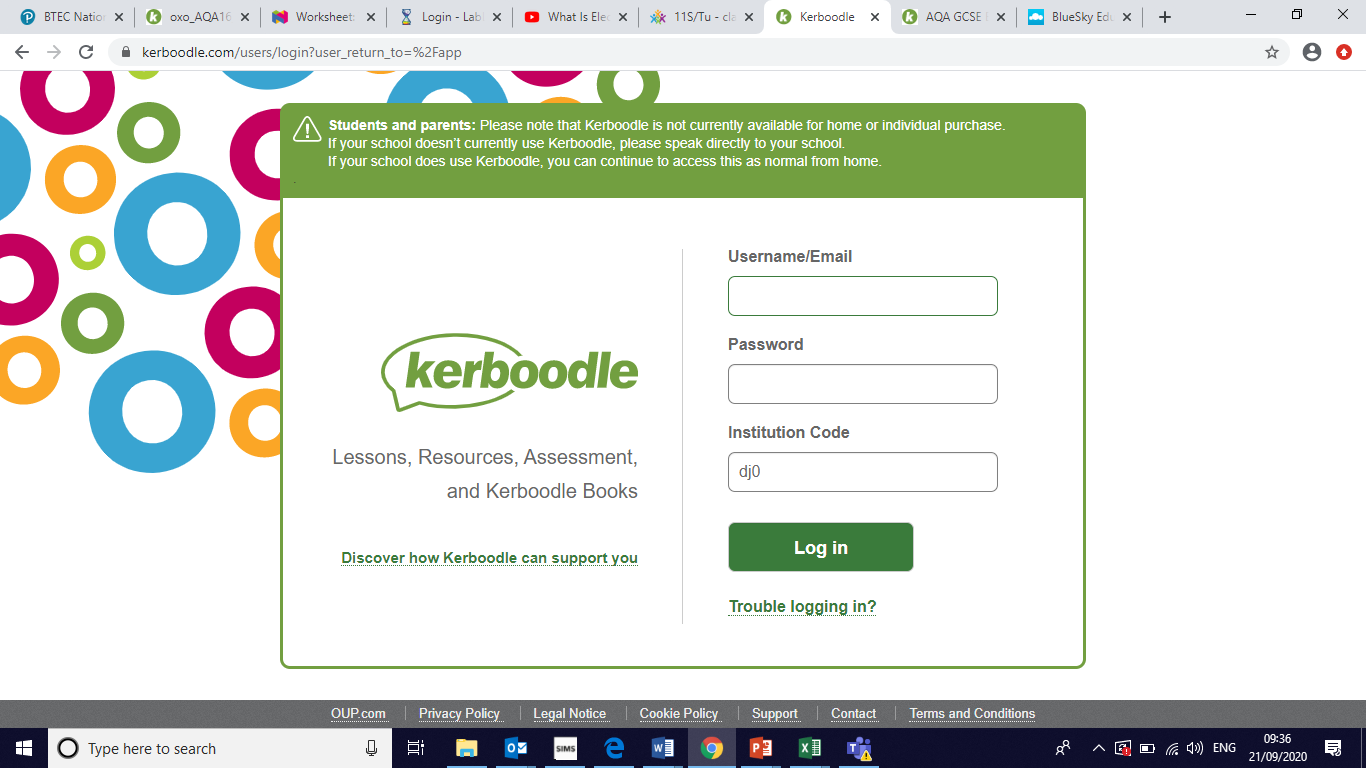
**Remote Learning Plan – Schemes of Learning Overview**

**KS4 Science**

Students will follow the sequence of the online textbook from AQA answering questions as they go. Each lesson they will be assigned a task for the pages used from that lesson.

**Kerboodle:**

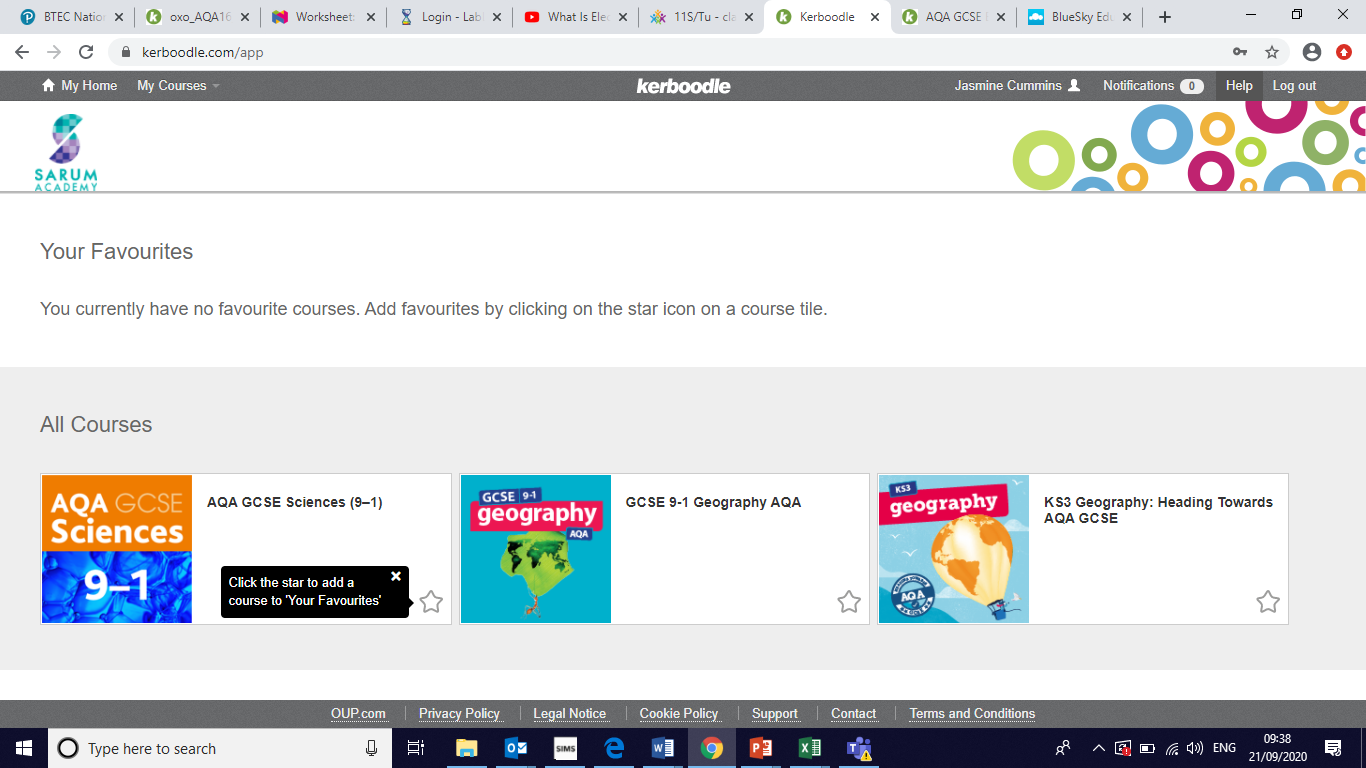
* In the search bar type in [www.kerboodle.com](http://www.kerboodle.com)



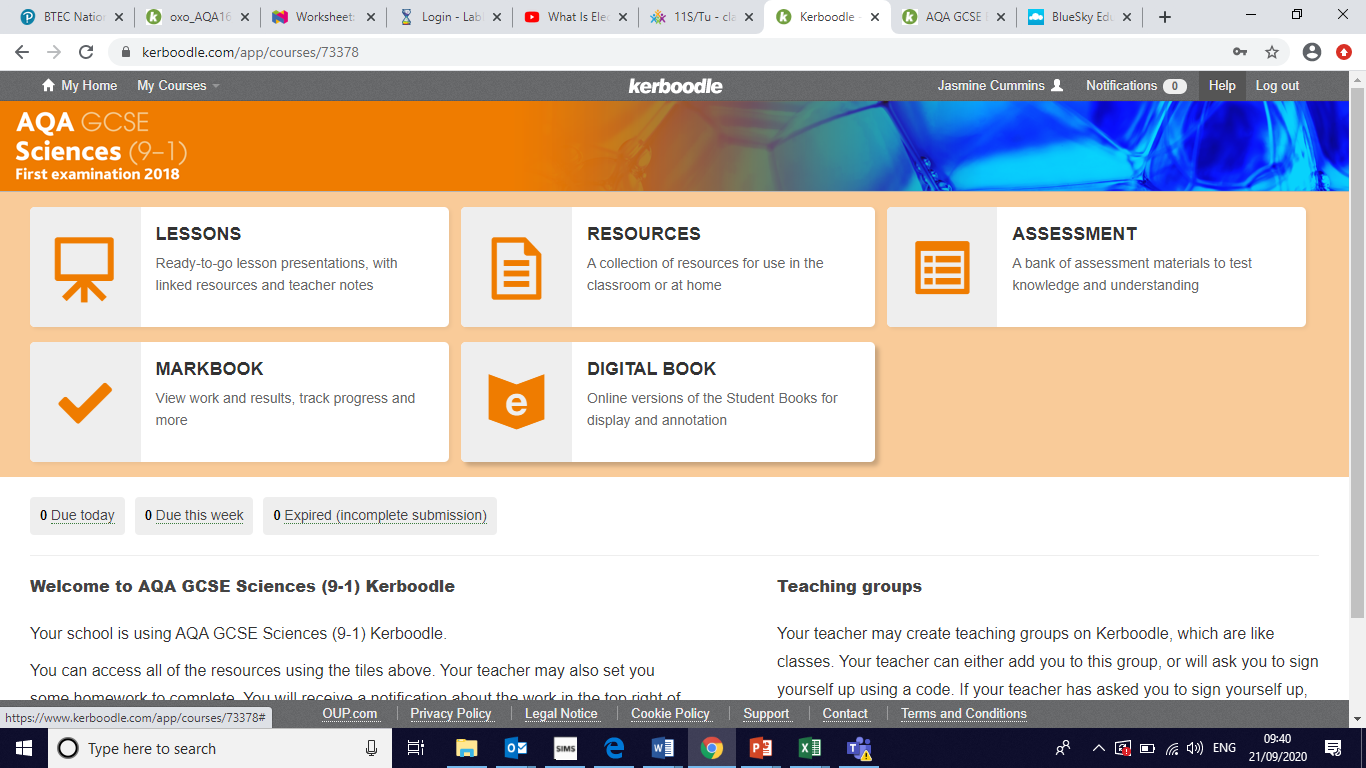
Username: your first initial and second name i.e Dave Smith = dsmith

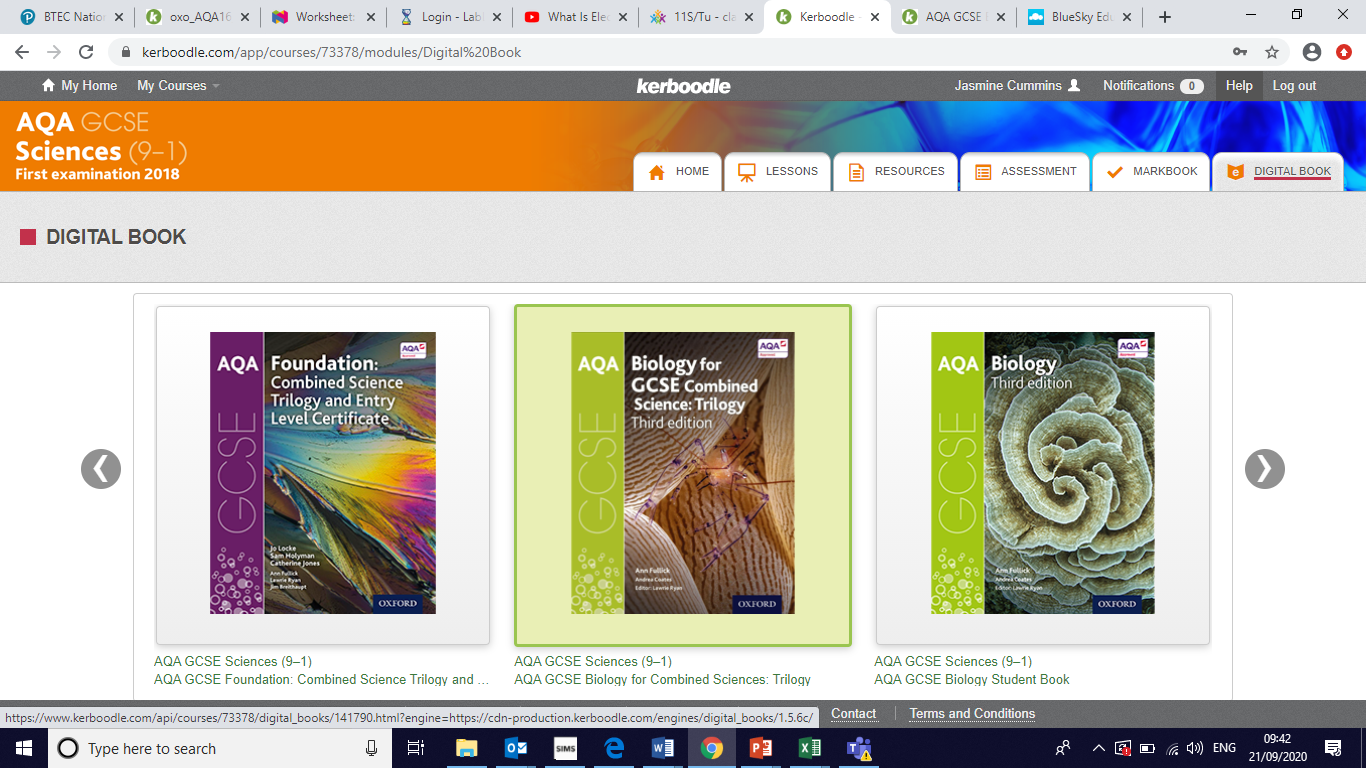
Password – default password = your usename i.e dsmith but then after logging in you can change your password.

Institute code- dj0

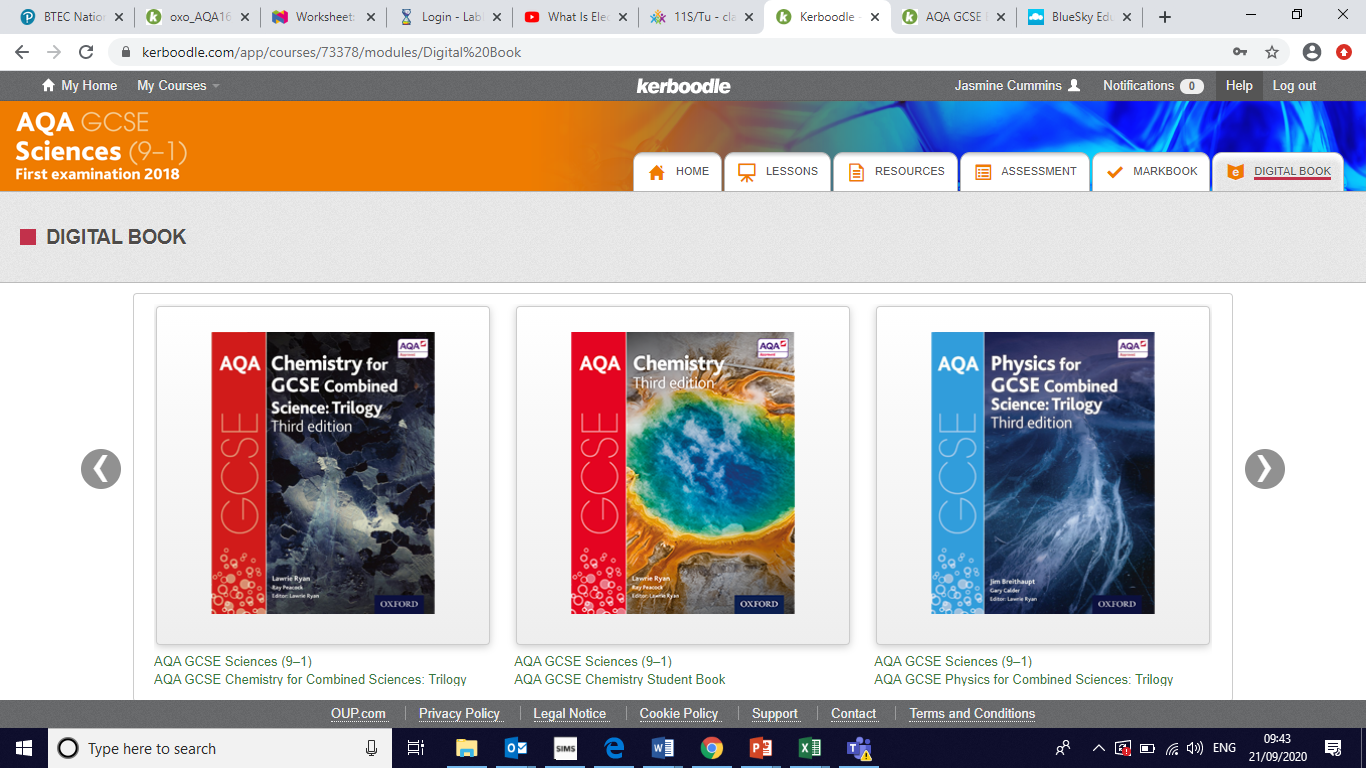


* Select the course you are doing [AQA GCSE Sciences (9-1)]
* Select digital book

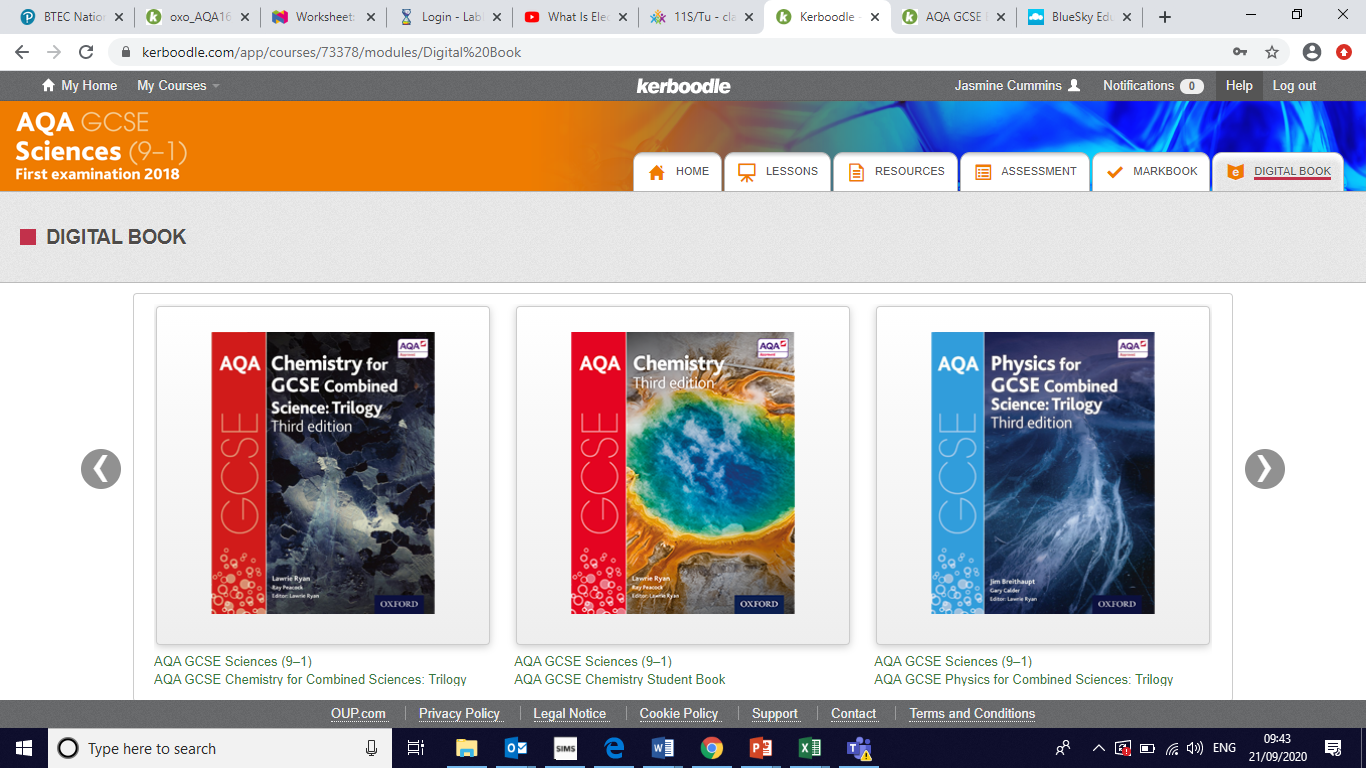


* Select the following books
* Biology Combined Sciences text book: Trilogy 

or

Physics Combined Sciences text book: Trilogy 

Or

Chemistry Combined Sciences text book: Trilogy 

BBC Bitesize for KS4 Science has been linked. Oak National Academy has also been linked, which has video lessons and assessments for reviewing student knowledge.

On the 4 lesson of each week students will be given a topic on Tassomai to complete with a minimum of 25 questions and 55% correct answers target.

**Year 10:**

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| --- | --- | --- | --- |
| **Term** | **Unit** | **Core Content** | **Links** |
| **1** | Chemistry: QUANTITATIVE CHEMISTRY | Relative formula mass, conservation of mass, thermal decomposition, the mole, balancing equations | Textbook Chemistry for combined science 56-65  <https://classroom.thenational.academy/units/quantitative-chemistry-4db7>  <https://www.bbc.co.uk/bitesize/topics/zsnyy4j> |
| Physics: PARTICLE MODEL | Density, particles, internal energy, changes of state, specific heat capacity, Brownian motion | Textbook Physics for combined science P70-95  <https://classroom.thenational.academy/units/particle-model-of-matter-a6d5>  <https://www.bbc.co.uk/bitesize/topics/z3ybb82> |
| **2** | Biology: BIOENERGETICS | Aerobic respiration, anaerobic respiration, metabolism, photosynthesis, limiting factors | Text book Biology for combined science 112-131  <https://classroom.thenational.academy/units/bioenergetics-244e>  <https://www.bbc.co.uk/bitesize/topics/zgr997h> |
| Chemistry: ENERGY CHANGES | Energy stores, exothermic reactions, endothermic reactions, reaction profiles | Textbook Chemistry for combined science 96-105  <https://classroom.thenational.academy/units/energy-changes-b607>  <https://www.bbc.co.uk/bitesize/topics/z27xxfr> |
| **3** | Physics: RADIATION | Isotopes, nucleus, types of radiation, radioactive decay, half-life, irradiation, contamination, nuclear fission | Textbook Physics for combined science P44-69  <https://classroom.thenational.academy/units/atomic-structure-d811>  <https://www.bbc.co.uk/bitesize/topics/zshssrd> |
| Physics: ELECTRICITY | Current, circuit symbols, resistance, potential difference, series, parallel, safety, power, the National Grid | Textbook Physics for combined science P44-69  <https://classroom.thenational.academy/units/electricity-f083>  <https://www.bbc.co.uk/bitesize/topics/zcg44qt> |
| **4** | Physics: FORCES | Scalar, vector, contact forces, non-contact forces, weight, mass, gravity, work done, Hooke’s Law, Newton’s Laws, speed, acceleration, distance-time graphs, velocity-time graphs, inertia, braking and stopping distances | Textbook Physics for combined science P96-133  <https://classroom.thenational.academy/units/forces-6562>  <https://www.bbc.co.uk/bitesize/topics/ztmttv4> |
| Biology: HOMEOSTASIS & RESPONSE | Homeostasis, nervous system, neurones, reflex arcs, synapses, reaction times, endocrine system, blood glucose, diabetes, menstrual cycle, controlling fertility | Text book Biology for combined science 132-159  <https://classroom.thenational.academy/units/homeostasis-and-response-1a15>  <https://www.bbc.co.uk/bitesize/topics/zyybb82> |
| **5 & 6** | Biology: INHERITANCE, VARIATION & EVOLUTION | Sexual reproduction, asexual reproduction, mitosis, meiosis, DNA, inheritance, sex determinism, variation, evolution, extinction, classification | Text book Biology for combined science 160-203  <https://classroom.thenational.academy/units/inheritance-variation-and-evolution-0224>  <https://www.bbc.co.uk/bitesize/topics/zppffcw> |
| KS4 Assessment Week | Assessment on all Units covered in year 9 & 10 so far | |
| Chemistry: ORGANIC CHEMISTRY | Hydrocarbons, alkanes, alkenes, cracking, fractional distillation | Textbook Chemistry for combined science 128-137  <https://classroom.thenational.academy/units/organic-chemistry-7c58>  <https://www.bbc.co.uk/bitesize/topics/z9488mn> |