

Curriculum Plan: Year 12 Chemistry - Elements of the seas (ES)

| | | W/C 10 th January | W/C 17 th January | W/C 24 th January |
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| How you will access home learning | | The PowerPoint and lesson materials will be made available on the day of each lesson either on Show My Homework, g drive or uploaded to your class group on teams (your teacher should make you aware of this). | | |
| How you be able to interact with your teacher and gain feedback on your work | | You will be able to join each lesson via Microsoft Teams. This will enable you to listen to teacher delivery, to ask questions, and to complete the same tasks live, as those who are working in the lesson. If you can't make the lesson live then a recording will be saved on teams and be available for 21 days in the files section. You can join in with questioning in the lesson using the chat function to check your understanding. For any tasks that can't be self-assessed using the lesson PowerPoints or Kerboodle (end of chapter questions), oral feedback will be given during the live teams' sessions. | | |
| Retrieval How we will help you to recall previously learnt knowledge | | Two multiple choice quizzes (covering DF1-6 and DF7-11) will be used to allow you to recall key information from the topic covered prior to Christmas. You will also need to complete your DF expert, an 85-mark homework question booklet that tests your understanding of the entire topic. | Questions to test recall knowledge of group 7 halogens from GCSE will be used to begin ES1. Recall of oxidation and reduction, as well as ionic and half equations will be done at the start of ES2. | |
| New Learning | What you will be learning about this week | DF consolidation and summative testing. This week will be used to finish off any tasks involving the DF topic, including any practicals not yet completed. This will be dependent on where you got up to prior to Christmas. An end of topic DF test will also take place. | | ES1 - The lowest point on earth ES2 - Bromine from seawater ES1 focuses on the group 7 halogens, their halides and how they react. Although this begins as a recap, a more in-depth look at group 7 reactions will take place. ES2 is a brand-new topic looking at oxidation states of atoms, ions and molecule. |
| | How we will teach you the new knowledge or ideas | Limited new knowledge will be covered this week. Any that does will take place in the form of PowerPoint presentations with formative tasks throughout. Students will be able to interact with any practicals that take place through access to the experimental procedures and model data to answer the questions that follow. | | The new content in ES1 and ES2 will be covered by a brief section of teacher led explanations and discussions introducing half and ionic equations. PowerPoint content and teacher modelling will be used to support the activities below. |
| | Activities that will help you learn and practice what you've been taught | Practice questions will be given with immediate marking and feedback given. Feedback will also be provided for the DF expert, the 85-mark homework question booklet that tests your understanding of the entire topic. Summative testing will take place in two parts, a 30-mark multiple-choice exam and a 50 mark longer-answer exam. | | As well as practice questions, an ES1 practical will be carried out in class to enhance knowledge and understanding. Students will be able to interact with this practical through access to the experimental procedures and model data to answer the questions that follow. |
| | What you can do if you are stuck | If you are accessing a live lesson through Microsoft teams, the chat function can be used to ask any questions you wish to be answered immediately and within the lessons. Any questions relating to specific homework tasks set on SMHW can be asked through the chat function on SMHW, and failing that, an email can be sent to your teacher to ask any general questions. | | |

| | | W/C 31st January | W/C 7th February | W/C 21 st February |
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| How you will access home learning | | The PowerPoint and lesson materials will be made available on the day of each lesson either on Show My Homework, g drive or uploaded to your class group on teams (your teacher should make you aware of this). | | |
| How you be able to interact with your teacher and gain feedback on your work | | You will be able to join each lesson via Microsoft Teams. This will enable you to listen to teacher delivery, to ask questions, and to complete the same tasks live, as those who are working in the lesson. If you can't make the lesson live then a recording will be saved on teams and be available for 21 days in the files section. You can join in with questioning in the lesson using the chat function to check your understanding. For any tasks that can't be self-assessed using the lesson PowerPoints or Kerboodle (end of chapter questions), oral feedback will be given during the live teams' sessions. | | |
| Retrieval How we will help you to recall previously learnt knowledge | | Questions to test recall knowledge of electrolysis from GCSE will be used. | This week's work is entirely new (no build from GCSE) so retrieval tasks this week will centre around previously covered A level topics (EL and DF). | Questions to test recall knowledge of atom economy from GCSE will be used. There is large cross over with ES1 so retrieval tasks from this topic will also be used. |
| New Learning | What you will be learning about this week | ES3 - Manufacturing chlorine In ES3 we will recap electrolysis, developing our understanding from GCSE and using half equations to provide a more in-depth explanation as to what is happening. | ES4 - From extracting bromine to making bleach ES5 - The risks and benefits of using chlorine In ES4 we will be introducing the idea of the Equilibrium constant (Kc). In ES5 we will be looking at a second type of titration, an Iodine-thiosulfate titration. | ES6 - Hydrogen chloride in industry and in the laboratory In ES6 we initially look at atom economy. If students did combined science at GCSE then this will be new, so it will be treated as such for the entire class. The second part of the topic looks at reactions of halides. |
| | How we will teach you the new knowledge or ideas | There will be a brief section of teacher led explanations and discussions introducing electrolysis. Again, PowerPoint content and teacher modelling will be used to support the activities below. | ES4 contains more detailed teacher led explanations and discussions. Again, PowerPoint content and teacher modelling will be used to support the activities below. ES5 learning takes places solely through practical work. | There will be a brief section of teacher led explanations and discussions introducing atom economy. Again, PowerPoint content and teacher modelling will be used to support the activities below. |
| | Activities that will help you learn and practice what you've been taught | As well as practice questions, an ES3 practical will be carried out in class to enhance knowledge and understanding. Students will be able to interact with this practical through access to the experimental procedures and model data to answer the questions that follow. | Practice questions will form the basis of practice in ES4, whereas an ES5 practical will be carried out in class to enhance knowledge and understanding. Students will be able to interact with this practical through access to the experimental procedures and model data to answer the questions that follow. | For atom economy, maths-based problems will be set to consolidate learning. an ES6 practical will be carried out in class to enhance knowledge and understanding of halide reactions. Students will be able to interact with this practical through access to the experimental procedures and model data to answer the questions that follow. |
| | What you can do if you are stuck | If you are accessing a live lesson through Microsoft teams, the chat function can be used to ask any questions you wish to be answered immediately and within the lessons. Any questions relating to specific homework tasks set on SMHW can be asked through the chat function on SMHW, and failing that, an email can be sent to your teacher to ask any general questions. | | |