Subject: Science – Separation Methods

2 Week Independent Learning plan **Week 7 and 8**

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Teacher: Mrs Eades

Year: 9 Topic/theme: Separation Methods

NB: I have placed the worksheets and other documents in the following Home Access Plus area: Coursework/Chemistry/Independent Learning 2020

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| Lesson | What you need to take from this lesson | Resource to use or hyperlink | Suggested task |
| 1 | Pure & Impure Substances:   * Explain what purity means * Explain that many useful materials are mixtures * Use melting point data to distinguish pure substances from impure substances | <https://www.bbc.co.uk/bitesize/guides/z9dfxfr/revision/1> | Read through the information on the page on Bitesize in the link:   1. Make notes on the keywords like pure, impure and other bold type words. 2. Go to the coursework area on home access plus and click on Chemistry and then Independent Learning 2020: in here you will find 2 activities for this lesson to complete : Comparing elements, mixtures and compounds and a Heating and cooling task you can print them or copy and complete them into your notes. |
| 2 | Filtration and Crystallisation:   * Describe and explain how filtration and crystallisation work. | Bitesize Link  <https://www.bbc.co.uk/bitesize/guides/z9dfxfr/revision/2>  YouTube Link  <https://www.youtube.com/watch?v=vi_SJBnxmHo> | 1. Start this lesson by opening the document in the same folder described above titled “how to separate a mixture” – use this to identify the different types of separation method. 2. Work through information/activities on the page on the Bitesize link and make appropriate notes. 3. Watch the video on filtration and crystallisation. Use this and the information on Bitesize to draw a labelled diagram of filtration. |
| 3 | Distillation:   * Describe and explain how simple distillation and fractional distillation work | Bitesize link:  <https://www.bbc.co.uk/bitesize/guides/z9dfxfr/revision/3>  YouTube link:  <https://www.youtube.com/watch?v=eQlnHr9g6Io> | 1. Read through the Bitesize page and watch the YouTube clip, make appropriate notes. 2. Open the Distillation task document form the same folder in Home Access+ and complete the task. 3. In the same Home Access Plus folder open and complete the document Distillation WS. |
| 4 | Chromatography:   * Describe how paper and thin-layer chromatography work * Calculate retention factor (Rf) values from chromatograms | Bitesize link:  <https://www.bbc.co.uk/bitesize/guides/z9dfxfr/revision/4>  YouTube link:  <https://www.youtube.com/watch?v=TdJ57SQ6GAQ>  For Thin-layer chromatography:  <https://www.youtube.com/watch?v=J8r8hN05xXk>  Make your own rainbow at home: lovely lockdown task:  <https://www.youtube.com/watch?v=8iZCNnYewmk> | 1. Read through the Bitesize page and watch the YouTube clips: make appropriate notes. This should include labelled diagrams of chromatograms. 2. Open the Paper Chromatography task document form the same folder in Home Access+ and complete the task. 3. Something for fun: Make your own rainbow (uses simple chromatography) send me your pictures ☺ |
| 5 | Checking Purity:   * Suggest suitable chromatography methods for distinguishing pure from impure substances. * Suggest suitable separation methods when given information about the substances involved. | <https://www.bbc.co.uk/bitesize/guides/z9dfxfr/revision/5> | Read through the Bitesize page and then complete the activity in the Home Access Plus are titled  “ Year 9 Separating Mixtures Lesson 5”  You could have a go at the bitesize test too! Good luck ☺ |
| **How will we assess you learning?**  Year 9: Pupils will be set a written task via Show My Homework. | | | |

**Need help?**

HomeAccess+ <https://facility.waseley.networcs.net/HAP/login.aspx?ReturnUrl=%2fhap> (use your normal school username and password).

Pupil and parent help page: <https://www.waseleyhills.worcs.sch.uk/coronavirus-independent-learning/help-for-parents-and-pupils>