2 Week Independent Learning plan **Week 13 and 14**

**Support contact details:**

Email general queries to: nbaker@waseleyhills.worcs.sch.uk

**Teachers email addresses in this subject area:**

Subject Leader ( Mrs L Eades ) email: LEades@waseleyhills.worcs.sch.uk

Subject teacher emails:

Teacher Name email: AReilly@waseleyhills.worcs.sch.uk

Teacher Name email: TJackson@waseleyhills.worcs.sch.uk

Teacher Name email: JShepherd@waseleyhills.worcs.sch.uk

Teacher Name email: AInesonThomas@waseleyhills.worcs.sch.uk

Teacher Name email: NRyde@waseleyhills.worcs.sch.uk

Monday 6th July – 17th July 2020

Subject: Science

Year: 8

Topic/theme: Planning and completing an Investigation



Three stages to online learning

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| **Stage One – Reading Task** | **Stage Two – Completing Tasks** | **Stage Three – Assessing your learning and feedback** |
| Read the lessons in the table below. Think about what you need to learn from the task. It may help to look at the other lessons too as this will show you where your learning is heading.  | Find the resources you need. In some instances you may need to log into HomeAccess+ and find the file on the coursework drive (S). Login with your normal school username and password. Use the resource as described to complete the suggested task. Reflect on the teacher’s question.[Click here for HomeAccess+ drive](https://facility.waseley.networcs.net/HAP/login.aspx?ReturnUrl=%2Fhap)[Click here for help with accessing HomeAccess+](https://www.waseleyhills.worcs.sch.uk/coronavirus-independent-learning/help-for-parents-and-pupils) | **In these 2 weeks we would like you to submit some evidence of your investigation. This could be a photograph of your experiment, a write up of your experiment or a presentation outlining what you have done. Think about this as you complete the tasks so you can collect the evidence you need. This is submitted in SMHWK.** This task will assess your learning and allow us to give you feedback.These assessment tasks are optional but submitting them is very helpful for you and your teacher to understand what you have learnt. |



We are here to help you within school opening hours:

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| **Email your teacher** | **Join your teacher for a support chat session** | **Ring school reception** |
| You can now email your teacher using your Office 365 email address. You can also email Mr Baker or the Subject Leader using the contact info above (top right). |  You will also receive an invite during the two week period to join an online support chat with your teacher. | Call 0121 4535211 within school hours. They will email your teacher and ask them to contact you. |

Learning tasks for this fortnight: *The tasks this week are based on planning and carrying out a scientific investigation of* ***your choice****. There are some examples in the HomeAccess+ folder or you can choose your own question to investigate. Think about what you have available at home as* ***you will need to carry out some practical work****. Read through all the tasks first, you may decide to complete research into your chosen topic first.*

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| **Lesson**  | **Aim:**What you need to take from this lesson  | **Resource(s) to use:**Hyperlinks to videos etcHomeAccess+ file location | **Suggested task:** |
| 1 | **PLANNING**In this lesson you will learn… about the different types of variables, to plan and write a method for an investigation.  | Description of resource: Doddle presentation, files on HomeAccess+Location: <https://www.doddlelearn.co.uk/app/login>HomeAccess+/Coursework drive S/Science/INDEPENDENT LEARNING 2020/YEAR 8/examplesHomeAccess+/Coursework drive S/Science/INDEPENDENT LEARNING 2020/YEAR 8/resources**File Name:** Planning method examplesPlanning Method templatePlanning VariablesScience Investigations wordsearch | Description of what you need to do (step by step):1. What are the different sections to consider when carrying out a scientific investigation? **Complete the wordsearch to identify some of them.** Can you list any others?
2. What are variables? **Work through the variables presentation assigned on doddle.**
3. **Decide on a topic for your investigation** – refer to the examples in the folder on HomeAccess+ or come up with your own.
4. **Complete the planning sheet** this will help you identify the variables for your investigation.
5. Writing a method. **Work through the presentation assigned on doddle.**
6. **Write a method for your experiment.**  You can use the template on HomeAccess+ or write out your own step by step method. There are also examples of poor and good methods
7. *Extension – write a risk assessment for your experiment.*

 A question your teacher would have asked you at the end of this lesson is: **Describe the variables in your investigation.**  |
| 2 | **PRACTICAL WORK**In this lesson you will learn to…safely complete a scientific investigation and record results in a suitable format.  | Description of resource: Doddle presentation, files on HomeAccess+Location: <https://www.doddlelearn.co.uk/app/login>Location: HomeAccess+/Coursework drive S/Science/INDEPENDENT LEARNING 2020/YEAR 8/examplesFile Name:  | Description of what you need to do (step by step):1. How do you record results? **Work through the recording results presentation on doddle.**
2. **Design a results table for your investigation.** Remember theindependent variableis in the 1st column and the dependent variable next. Refer to the presentation Science Skills tips in HomeAccess+ if you need more help. Your table could be designed on a computer spreadsheet (EXCEL) or by hand, if so use a ruler!
3. **Complete your investigation.** Remember to work safely, take care with hot liquids and glassware, clear up spillages. Work safely if standing on furniture. Tidy away all your equipment when you are finished. **Take some photos of your work.**
4. If you have more than one set of results calculate the mean and record this in your table.

A question your teacher would have asked you at the end of this lesson is: **Why should you repeat measurements more than once? What were the challenges in completing the practical work?**  |
| 3 | **ANALYSIS** In this lesson you will learn…how to present and analyse results. The rules you should follow when drawing a graph.  | Description of resource: Doddle presentation, files on HomeAccess+Location: <https://www.doddlelearn.co.uk/app/login>HomeAccess+/Coursework drive S/Science/INDEPENDENT LEARNING 2020/YEAR 8/resources**File Name:** Graph paper gridGraphs info sheet | Description of what you need to do (step by step):1. How do you draw graphs? **Work through the graphs presentation on doddle.**
2. **Write 5 top tips for drawing a good graph.** Refer to the Graphs info sheet in HomeAccess+ if you need more help.
3. **Present your data using an appropriate graph.** You could use Excel to generate your graph or draw it by hand. If you don’t have graph paper there is a grid to print on HomeAccess+. Make your graph as accurate as you can however don’t worry if you don’t have graph paper – use your resourcefulness!
4. **Work through the analysing data presentation on doddle**
5. **Write a paragraph describing your graph.** Use the sentence template ‘As the (independent variable) ………… the (dependent variable) ………..’ Describe all the different parts of the graph and refer to examples of the data to back up what you are describing.

A question your teacher would have asked you at the end of this lesson is: **How could you improve your graph?**  |
| 4 | **CONCLUSION** In this lesson you will learn…to explain the data you have collected using scientific knowledge. To research a topic and reference your sources. | Description of resource: File on HomeAccess+Location: HomeAccess+/Coursework drive S/Science/INDEPENDENT LEARNING 2020/YEAR 8/resourcesFile Name: Considering evidence | Description of what you need to do (step by step):1. Why do your results show the pattern you have described? What background information do you need to explain your results? **Research the topic you have been investigating.** Good places to start are bbc bitesize and doddle.
2. **Write an information sheet about your topic.**
3. **Write a list of all your sources of information, including website, books and people.**
4. **Write a conclusion that uses your scientific knowledge to explain the results you have collected.** You can use the worksheet , ‘Considering evidence’ or write your own paragraph.

A question your teacher would have asked you at the end of this lesson is: **How do you know your research is accurate and trustworthy?** |
| 5 | **EVALUATION**In this lesson you will learn…to discuss the strengths and weaknesses of your experiment. Plan further experiments.  | Description of resource: Doddle presentation, files on HomeAccess+Location: <https://www.doddlelearn.co.uk/app/login>HomeAccess+/Coursework drive S/Science/INDEPENDENT LEARNING 2020/YEAR 8/resourcesFile Name: Considering evidenceScience skills tips | Description of what you need to do (step by step):1. **Work through the Analysing and evaluating part 2 presentation on doddle.**
2. Use a table, the worksheet ‘Considering evidence’ or write your own paragraph that **outlines the strengths and weaknesses of your experiment.** Look at the science skills tips presentation for some more ideas of what to include.

*Ext What further experiments could you complete to extend your knowledge of this topic? Outline the extra experiments and possible conclusions they would allow you to draw.* 1. **Organise your work** into a presentation/report/photo story board and **submit a sample of it** to your class teacher.

A question your teacher would have asked you at the end of this lesson is: **Through-out this set of lessons how did you show resilience, responsibility, resourcefulness, reasoning skills and reflectiveness?** |
| **How will we assess you learning?**In these 2 weeks we would like you to submit some evidence of your investigation. This could be a photograph of your experiment, a write up of your experiment or a presentation outlining what you have done. Think about this as you complete the tasks so you can collect the evidence you need. This is submitted in SMHWK where you will find further details.  |



**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>
Doddle: <https://www.doddlelearn.co.uk/app/login> User name - MyName18 Password - waseley



**Fancy showing your best work off?**

You can email a photo of you doing something great, or an example of your best piece of work to your Head of Year for our celebrations assemblies when we return.

Yr 7 please email Mrs Williams at jewilliams@waseleyhills.worcs.sch.uk

Yr 8 please email Mrs Bridgeman at jbridgeman@waseleyhills.worcs.sch.uk

Yr 9 please email Mrs Bradley at kjbradley@waseleyhills.worcs.sch.uk

Yr 10 please email Mr Jones at djones@waseleyhills.worcs.sch.uk

Please keep your work organised in subjects as we are excited to see what you have achieved and reward you for it when we return.