**Homework Menu Grid**

Complete some of the tasks from the grid below to reach a total of points over this unit of work. Try and cover a variety of tasks over the unit so that you’re practising different skills. Once you’ve completed a task, colour that box on the grid to keep a record of your points. Can you get the highest point score this unit?

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| **Topic** | **1 Point** | **2 Points** | **4 Points** | **6 Points** | **10 Points** |
| **Photosynthesis** | Write out both the word and balanced symbol equation for photosynthesis | Describe the ideal conditions that are needed for photosynthesis | Draw and label and algae cell | Explain why tree leaves turn orange / yellow in the autumn and drop off | Research an organism called phytoplankton. Explain how they make their food and where they are found on flashcards |
| **The leaf** | Draw and label a plant cell | Draw and label the structure of the leaf organ | Describe the function of each layer of the leaf | Explain why the stomata will close of a night on a plant in the desert | Make and label a model of a cross section of a leaf |
| **Plant minerals** | Name the minerals that plants need and why plants need them | A plant has dead patches on it’s leaves and they are yellow. What might be the issue? | Describe what DNA synthesis is and what mineral is needed for this and why | Write a letter to a farmer explaining what they need to put on their crops and why | Research the components of fertilizer. Explain why they are suitable for growing plants |
| **Aerobic and Anaerobic respiration** | Draw and label an animal cell | Write out the word and symbol equation for aerobic and anaerobic respiration in animal cells and yeast | Write a tweet (150 characters) explaining why your muscles hurt when you push yourself too hard during exercise | Write a 50 word summary between photosynthesis and aerobic respiration | Research the origin of a mitochondria. Write out your findings in a 500 word essay. |
| **Chemosynthesis** | Define the term chemosynthesis | Draw and label a bacteria cell | Explain how chemosynthesis takes place at hydrothermal vents | Write a Facebook post explaining the difference between photosynthesis, chemosynthesis and aerobic respiration | Research and organism that performs chemosynthesis. Create a key facts sheet for this organism with everything you need to know about it on the sheet |
| **Circulatory system** | Define the term organ system and name 5 organ systems | Create a flow chart for the order that the blood flows through the heart | Draw and label the heart including which way the blood flows through the heart | Research and make a model heart including labels of each section | Research and explain why someone who is overweight may have issues relating to their heart. |
| **Respiratory system** | Explain the uses of glucose in plant and animal cells | Create a step by step flow map, explaining how the lungs inhale and exhale | Draw and label the respiratory system | Create a first aid poster for the NHS that will help people respond to asthma attacks | Create a labelled model alveolus that clearly demonstrates the adaptions for gas exchange |
| **Exercise and respiratory system complications** | Name and explain the effects that cigarettes can have on smoking. | Create a list of 10 exercises that will elevate the heart rate and how to perform them | Write a letter to your favorite sportsperson explaining the effect their exercise is having on their body | Design an exercise plan for someone who wants to lose weight. Explain why you have chosen the exercises and how this will help them lose weight | Research two conditions emphysema and cystic fibrosis. Create some posters explaining the symptoms, causes and possible treatments |

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