**Science work – Year 7**

The tasks to work through each week from your CGP guide and workbook from January 11th until February half- term are given below. You should complete the tasks given in your science exercise book. If you do not have your exercise book at home, complete the task on one side of a piece of paper and keep these together, ideally in a folder, ready to stick in your exercise book when you get back to school. When you complete the pages from the workbook you should mark them using the mark schemes at the back of the book. You will also be signposted to additional online resources to help you with the tasks.

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| **Week** | **Topic** | **CGP Guide pages** | **Workbook pages** | **Additional resources** |
| 11/01/21 | Unicellular organisms and gas exchange in cells (diffusion) | p.2-3 | p.3 - 6 | The following link will take you to an Oak academy lesson that explains unicellular organisms:  <https://classroom.thenational.academy/lessons/unicellular-organisms-6cuk0r>  The following links will take you to Oak academy lessons which explain diffusion and how diffusion results in gas exchange in cells:  <https://classroom.thenational.academy/lessons/diffusion-part-1-6hh3ac>  <https://classroom.thenational.academy/lessons/diffusion-part-2-70w62d> |
| ***Task*** *– Explain what a unicellular organism is. Draw and label a unicellular organism. Explain what diffusion is (you will find the Oak Academy lessons help you). Draw a diagram to show the process of diffusion. Complete the workbook pages. Complete at least one Oak academy lesson.* ***Extension*** *– watch one of the BBC science lessons on BBC 2 between 1 and 3pm each afternoon this week* | | |
| 18/01/21 | Gas Exchange, breathing and effect of exercise on Breathing | p.12-14 | p.25-29 | This link will explain the respiratory system, how we breathe and why we need to breathe: <https://www.bbc.co.uk/bitesize/guides/zq349j6/revision/2>  This link will explain how the lungs are adapted for gas exchange:  <https://www.bbc.co.uk/bitesize/guides/zq349j6/revision/3>  The following links will take you to two Oak Academy lessons explaining breathing and the effect of exercise on breathing  <https://classroom.thenational.academy/lessons/breathing-70v6ct>  <https://classroom.thenational.academy/lessons/the-effects-of-exercise-on-respiration-cgrk6t> |
| **Task**: *Describe 3 ways which the lungs are adapted for gas exchange. Describe the process of breathing. Count the number of breaths you take sitting down for one minute. This is your breathing rate. Design an experiment to measure the effect of exercise on your breathing rate (you should record this in your book) – carry it out and explain what you have found. Complete the workbook pages. Complete at least one Oak academy lesson.* | | |
| 25/01/21 | Solubility, solutions, and separating substances from liquids | p.39-40 | p.89-91 | This lesson from Oak National Academy will help you understand solubility:  <https://classroom.thenational.academy/lessons/solubility-chh64r>  This lesson from Oak Academy will help you understand how you can use filtration and evaporation to separate soluble and insoluble substances from mixtures:  <https://classroom.thenational.academy/lessons/separating-mixtures-6xgkge> |
| **Task:** *Explain the meaning of solute, solvent, solution, soluble and insoluble. Design an experiment to test the effect of temperature of water on solubility (record this in your book) – carry out the experiment and record what you have found out. Draw diagrams to show filtration and evaporation.* *Complete the workbook pages. Complete at least one Oak academy lesson.* | | |
| 1/02/21 | Energy Stores and Transfers | p.66-68 | p.145-148 | These lessons from Oak Academy will help you understand energy stores and transfers:  <https://classroom.thenational.academy/lessons/energy-stores-and-transfers-part-1-68tkee>  <https://classroom.thenational.academy/lessons/energy-stores-and-transfers-part-2-cgw66c> |
| **Task:** *List the 7 energy stores. Give 5 examples of systems where energy is transferred between different stores e.g. a torch transfers energy from chemical (in the battery) to electrical to light. Complete the workbook pages. Complete at least one Oak academy lesson.* | | |
| 8/02/21 | Conservation of energy, efficiency and comparing energy resources | p.69-70 | p.150 | This lesson from Oak Academy will help you understand conservation of energy and efficiency:  <https://classroom.thenational.academy/lessons/efficiency-c8vp6t>  These lessons from Oak Academy look at advantages and disadvantages of different energy resources:  <https://classroom.thenational.academy/lessons/non-renewable-energy-resources-70u68t>  <https://classroom.thenational.academy/lessons/renewable-energy-resources-chj3ar> |
| **Task:** *Explain conservation of energy and efficiency. Explain the difference between renewable and non-renewable energy resources. Draw a table comparing advantages and disadvantages of at least 5 different energy resources. Complete the workbook pages. Complete at least one Oak academy lesson.* | | |