

At St Cenydd...

- We believe homework is a key part of school life. It allows students to develop their skills and knowledge independently and can be the difference between good and excellent progress.
- We strive for all of the homework we set to be engaging and challenging, but above all worthwhile.
- We expect students to complete all their homework and contact their teachers if they have a problem with their homework.

**You must complete either the core homework OR the challenge homework.**

	Core Gwaith Cartref	Challenge Gwaith Cartref
Homework 1	Title: <b>Hypothesis</b>	Title: <b>Retrieval homework 1</b>
	Details: Research what a Scientific Hypothesis is and write a definition	Details: see your Google classroom for your retrieval homework
Homework 2	Title: <b>Hypothesis</b>	Title: <b>Retrieval homework 2</b>
	Details: Read the following and make a hypothesis: <b>Which object falls more quickly?</b>  You have a spoon, a hairbrush and a shoe. You drop them out of the window at your house. You time how long they take to hit the ground.	Details: see your Google classroom for your retrieval homework
Homework 3	Title: <b>Fair testing</b>	Title: <b>Retrieval homework 3</b>
	Details: Write the definitions of the following: Independent variable; Dependent variable; Control variables	Details: see your Google classroom for your retrieval homework
Homework 4	Title: <b>Fair testing</b>	Title: <b>Retrieval homework 4</b>
	Details: Read the following and decide what the Independent, dependent and control variables would be: <b>Which is the best biscuit for dunking?</b>	Details: see your Google classroom for your retrieval homework

	You have 3 types of biscuit; Rich Tea, Custard Creams and Chocolate digestives. You dunk each biscuit into a cup of tea. You time how long it takes for each biscuit to break in half. The biscuit that takes the longest to break is the best for dunking.	
Homework 5	Title: <b>Risk Assessment</b>	Title: <b>Retrieval homework 5</b>
	Details: Write the definition of the following: Hazard; Risk; Control measure/Precaution.	Details: see your Google classroom for your retrieval homework
Homework 6	Title: <b>Results table</b>	Title: <b>Retrieval homework 6</b>
	Details: List at least 5 things you MUST remember to do when completing a Results table.	Details: see your Google classroom for your retrieval homework
Homework 7	Title: <b>Results table</b>	Title: <b>Retrieval homework 7</b>
	Details: Put these results into a suitable table (remembering the success criteria from Homework 6): Rebecca did an experiment to find how the weight hanging on a spring affects the stretch of the spring. There was no stretch with 0 N weight, 0.4 cm with 1 N weight, 1.0 cm with 2 N, 1.5 cm with 3 N and 1.9 cm with 4 N.	Details: see your Google classroom for your retrieval homework
Homework 8	Title: <b>Resolution</b>	Title: <b>Retrieval homework 8</b>
	Details: Resolution is described as the value of the divisions on an instrument. Apparatus that we use in school are all used for different purposes. It is useful to know the resolution of some of this apparatus as you are quite often asked for this in an exam. Therefore, find out the	Details: see your Google classroom for your retrieval homework

	resolution of the following: A Thermometer; A Burette; A Pipette; A 25cm Measuring cylinder.						
Homework 9	Title: <b>Errors/Uncertainty</b>	Title: <b>Retrieval homework 9</b>					
	Details: Every time you make a measurement with a piece of apparatus, there is a small uncertainty in that measurement due to the apparatus itself. These are known as apparatus uncertainties and cannot be avoided, although they can be reduced by using the highest resolution equipment available. For each measurement, the apparatus uncertainty = (margin of error/quantity measured) x100. <i>Calculate the apparatus uncertainty for the following: measuring 25.0 cm<sup>3</sup> of solution in a pipette (uncertainty <math>\pm 0.1</math> cm<sup>3</sup> ).</i>	Details: see your Google classroom for your retrieval homework					
Homework 10	Title: <b>Graphs</b>	Title: <b>Retrieval homework 10</b>					
	Details: List at least 5 things you need to remember to do when drawing a graph.	Details: see your Google classroom for your retrieval homework					
Homework 11	Title: <b>Graphs</b>	Title: <b>Retrieval homework 11</b>					
	Details: Draw a graph of the following (remember your success criteria from Homework 10):	Details: see your Google classroom for your retrieval homework					
	<table><tr><td>Mass of Magnesium (g)</td><td>Volume of Hydrogen (cm<sup>3</sup>)</td></tr><tr><td>0.0</td><td>0</td></tr><tr><td>0.1</td><td>100</td></tr></table>	Mass of Magnesium (g)	Volume of Hydrogen (cm <sup>3</sup> )	0.0	0	0.1	100
Mass of Magnesium (g)	Volume of Hydrogen (cm <sup>3</sup> )						
0.0	0						
0.1	100						

	<table><tr><td>0.2</td><td>185</td></tr><tr><td>0.3</td><td>295</td></tr><tr><td>0.4</td><td>410</td></tr><tr><td>0.55</td><td>490</td></tr><tr><td>0.5</td><td>545</td></tr><tr><td>0.6</td><td>595</td></tr><tr><td>0.7</td><td>590</td></tr><tr><td>0.8</td><td>605</td></tr><tr><td>0.9</td><td>595</td></tr><tr><td>1.0</td><td>600</td></tr></table>	0.2	185	0.3	295	0.4	410	0.55	490	0.5	545	0.6	595	0.7	590	0.8	605	0.9	595	1.0	600	
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Homework 12	Title: <b>Tangent/Intercept</b>	Title: <b>Retrieval homework 12</b>																				
	Details: Work out the tangent and the intercept of the following graphs: <a href="https://docs.google.com/document/d/1lP-CII2jnivaHs8pMIIUSRnXui6quWQN/edit#heading=h.gjdgxs">https://docs.google.com/document/d/1lP-CII2jnivaHs8pMIIUSRnXui6quWQN/edit#heading=h.gjdgxs</a>	Details: see your Google classroom for your retrieval homework																				
Homework 13	Title: <b>Graphs - curve or line of best fit?</b>	Title: <b>Retrieval homework 13</b>																				
	Details: Decide whether the following graphs need a line or curve of best fit <a href="https://drive.google.com/drive/folders/11KMxmrS8nChe2sdXEvoje6e8oBKXcMWs">https://drive.google.com/drive/folders/11KMxmrS8nChe2sdXEvoje6e8oBKXcMWs</a>	Details: see your Google classroom for your retrieval homework																				
Homework 14	Title: <b>Describing graphs</b>	Title: <b>Retrieval homework 14</b>																				
	Details: Complete the questions on the worksheets <a href="https://docs.google.com/document/d/1cwsXNv5YT9vdp1k8Xh89HVyR8VmTmFc9/edit#heading=h.gjdgxs">https://docs.google.com/document/d/1cwsXNv5YT9vdp1k8Xh89HVyR8VmTmFc9/edit#heading=h.gjdgxs</a>	Details: see your Google classroom for your retrieval homework																				
Homework 15	Title: <b>Graphs - line or bar?</b>	Title: <b>Retrieval homework 15</b>																				
	Details: In each of the following examples, say whether you would	Details: see your Google classroom for																				

	<p>present your results as a line graph or bar chart.</p> <ol style="list-style-type: none"> <li>1. The effect of temperature on the volume of gas produced by yeast cells;</li> <li>2. The effect of different types of exercise on heart rate;</li> <li>3. The numbers of people of different age groups in a population;</li> <li>4. The effect of the level of Carbon dioxide in the air on breathing rate.</li> </ol>	your retrieval homework					
Homework 16	<p>Title: <b>Analysing Results</b></p> <p>Details: Write the definitions of the following: Repeatable; Reproducible; Valid; Accurate; Precision</p>	<p>Title: <b>Retrieval homework 16</b></p> <p>Details: see your Google classroom for your retrieval homework</p>					
	<p>Title: <b>Repeatable results and Mean</b></p> <p>Details: Identify which of the following results are repeatable and calculate the mean</p> <table border="1"> <thead> <tr> <th>Concentration/M</th><th>Time/s</th><th>Mean/s</th></tr> </thead> <tbody> <tr> <td>1.0</td><td>52 51</td><td></td></tr> </tbody> </table>	Concentration/M	Time/s	Mean/s	1.0	52 51	
Concentration/M	Time/s	Mean/s					
1.0	52 51						

		52		
	0.8	59 58 65		
	0.6	65 65 65		
	0.4	81 82 82		
	0.2	90 92 110		
Homework 18	Title: <b>Reproducible</b>			Title: <b>Retrieval homework 18</b>
	Details: Identify which of the following results are reproducible			Details: see your Google classroom for your retrieval homework
	Water sample	Group 1 volume of Soap needed/c m	Group 2 Volume of Soap needed/c m	
	A	6	6.0	
	B	1.05	1.10	
	C	3.0	1.2	
	D	5.1	6.1	
Homework 19	Title: <b>Bias</b>			Title: <b>Retrieval homework 19</b>

	<p>Details:</p> <p>Bias can be described as favouring a certain side and presenting an unfair view. Carefully read the study and report an aspect of the experimental design that might bias the results. Following this, determine if the bias you have identified is sampling bias (testing unrepresentative sample, not taking a random sample, or taking too small a sample).</p> <p><i>Dr. Jackson is making observations at Davisville High School to investigate the rate of smoking among American teenagers. Dr. Jackson decides she will observe students having their lunch in the parking lot where smoking is permitted. Dr. Jackson observes 25 out of 30 students smoking in the parking lot. Based on her observations she records that 83.3% of American teenagers smoke.</i></p>	<p>Details:</p> <p>see your Google classroom for your retrieval homework</p>
Homework 20	<p>Title: <b>Strength of Evidence</b></p>	<p>Title: <b>Retrieval homework 20</b></p>
	<p>Details:</p> <p>Complete the questions 1-6  <a href="https://docs.google.com/document/d/14FR9zoAKeAdEAia7SrK9WpVdcES2C2E8/edit">https://docs.google.com/document/d/14FR9zoAKeAdEAia7SrK9WpVdcES2C2E8/edit</a></p>	<p>Details:</p> <p>see your Google classroom for your retrieval homework</p>