Blog PROGRESS REPORT Weekly Total

/18

TERM 3 During the following class in Mathematics, Science and Technology you need to complete the following progress report and place on your BLOG.

1. **Group rolls and Evaluation of each students contribution (6 marks)**

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| **Student name** | **Title and description of students role.** | **Contribution to STEM project this week** | **Marks** |
| Aiden Sloots | Photographer/Recorder/Checker:  The duties of this role are to:   * Make sure all work is being recorded by at least one of the group members. * Make sure all photos and videos have been distributed to all group members. * Take photos and videos of experiments that are taking place. | This week I contributed to the team by:   * Recording the swing time of the pendulum in the ‘Pendulum Clock’ Experiment * Taking photos of all the different stations in the ‘Energy Transformations’ experiment. * Distributed photos from the ‘Energy Transformations’ Experiment to all group members. | **2** |
| Izaak Cerneaz | **Manager/Leader:** The role of the manager is to take on the responsibility of:   * getting the group organised * keeping the group on task * organising tasks into sub-tasks   making sure everyone has a chance to contribute | This week I contributes to the team by:   * I ensured that everyone was on task and completing their allocated work * Made sure that Aiden was taking lots of photos and videos of our work * That our experiments were set up properly | **2** |
| Ky Broome | **Thinker/Researcher:** The role of the sceptic is to:   * ensure the group avoids premature agreement * ask questions that will lead to understanding * push the group to explore all possibilities   re-emphasise the main points | This week I contributing to the team by:   * Helping Aiden with the set-up of the time lapse of the pendulum experiment. Sadly, we couldn’t put it in our blog because some class mates weren’t appropriate when filming it. * Helping by sending on photos and information that the other two missed from the fruit battery experiment. | **2** |

1. **Identify what you have completed in class this week on the STEM Project. (6 marks)**

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| --- | --- | --- |
| **Describe TWO :**  Problems/difficulties you encountered this week.  (In Mathematics, Science/Technology/group work/resources) | 1. Izaak and Aiden missed out on the ‘Lemon Battery’ Experiment due to the academic assembly and Science Learning Enrichment. 2. Our pendulum experiment ran overtime and we were only able to record one angle. | **Marks**  **2** |
| **Explain** for both problems:  What did you did to resolve this problem. | 1. He could take photos and videos of the experiment to give us the footage of the experiment taking place. He also gave us a basic overview of the experiment and we watched the Lemon battery experiment on Seqta to explain the chemistry behind the experiment. 2. Our first angle drop of the pendulum was 45 degrees, the maximum that we were allowed to do. When left untouched, the pendulum continued to swing for over 30 minutes. Due to this long period of time, we were unable to record any other angles. Instead of comparing the different angles to the time until they stopped swinging, I gathered information to explain how the pendulum clock works, so that I am still able to complete the focus question. | **2** |
| **SKILLS Learnt**  **Describe two** new skill you have learnt this week in working on your STEM project. | Two new skills that I learnt this week are:   1. The ability to make a light and fan run using wiring in the electrical kit. 2. The ability to measure energy using a multimeter and record it in comparison to energy currents of lower voltage. | **2** |

1. **Blog Presentation – Information and presentation of your BLOG. (6marks)**

Marks will be awarded for any of the following additions to your Blog this week.

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| --- | --- | --- |
| **Blog Information** |  | **Mark** |
| Copies of individual /group work  Images/ Videos of your work/ Attempts to answers weekly Focus question | Each answer is also found on the blog.  Focus Question: Can you make a Pendulum clock? A pendulum clock is a special type of old clock that was used before clocks were electronic. They work using a swinging pendulum that the user would wind up, and then the pendulum would swing. A pendulum continues to swing due to its continuous conversion between gravitational potential energy and kinetic energy. An object that continues to switch its energy between potential and kinetic is called a harmonic oscillator. Even though as the pendulum continues to swing energy is lost to air resistance, the bob take the exact same amount of time to complete one swing, no matter how much energy it has. This is simply because, with a higher angle comes a greater distance, but also a quicker swing time. As energy is lost and the angle becomes smaller, the pendulum also swings slower. This means that the period of the swing remains the same. The pendulum clock works around its swinging pendulum. Every time the bob completes a full swing, or returns to the point it was dropped from, it turns the second gear once, which turns the minute gear at 1/60 of the speed and therefore the hour hand at 1/60 the speed of the minute hand.  Focus Question: How Many Oranges does it take to Charge and IPhone? Approx. 2 380 orange slices, Approx. 595 oranges.  In order to calculate the amount of oranges required to charge an IPhone, we must first look at the amount of energy required to bring the IPhone battery up to 100%. The IPhone 6, to be fully charged, requires 10.5 watt hours, which is equal to 37 800J. From our experiment, we know that the amount of energy that produced by the orange was 853J. Now, if we divide 37 800 by 853, we get approx. 44.3 oranges. This number is quite odd, as the numbers above following the focus question came from a video explaining this very question, and they suggest that we would need over 13 times the amount of oranges as the amount that I calculated. | **3** |
| ICT: Hyperlinks, User friendly blog/ Videos of group work/ Links to research | <http://izaakstemblog.weebly.com/>  <http://kystemblog.weebly.com/week-2> | **3** |