

**RISK ASSESSMENT FORM**

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| **School/Department:** Physics | **Building:** Home study |
| **Task:** An investigation into Boyle’s and Charles’ Law home-based practical experiment designed by Claire Partridge | |
| **Persons who can be adversely affected by the activity:** Anyone performing the experiment | |

**Section 1: Is there potential for one or more of the issues below to lead to injury/ill health (tick relevant boxes)**

**People and animals/Behaviour hazards**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Allergies |  | Too few people |  | Horseplay |  | Repetitive action | X | Farm animals |  |
| Disabilities |  | Too many people |  | Violence/aggression |  | Standing for long periods |  | Small animals |  |
| Poor training |  | Non-employees |  | Stress |  | Fatigue |  | Physical size, strength, shape |  |
| Poor supervision |  | Illness/disease | X | Pregnancy/expectant mothers |  | Awkward body postures | X | Potential for human error | X |
| Lack of experience |  | Lack of insurance |  | Static body postures | X | Lack of or poor communication |  | Taking short cuts |  |
| Children |  | Rushing |  | Lack of mental ability |  | Language difficulties |  | Vulnerable adult group |  |

**What controls measures are in place or need to be introduced to address the issues identified?**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Identified hazards** | **What controls are currently planned or in place to ensure that the hazard identified does not lead to injury or ill-health?** | **RISK**  **SCORE** | | | **Is there anything more that you can do to reduce the risk score in addition to what is already planned or in place?** | **RESIDUAL**  **RISK SCORE** | | |
| **L** | **C** | **R** | **L** | **C** | **R** |
| **Illness/ Disease**  **Static Body Postures**  **Repetitive Action**  **Awkward Body Postures**  **Potential for human error** | * **Strictly following WHO/Government Guidelines to reduce the chances of personally getting seriously ill (coronavirus/ flu jab)** * **In case of being ill the school will bring into operation their standard extenuating circumstance procedure to protect the impact on completion of work and grading.** * **School needs to ensure students are taking regular breaks and are not exposed to excessive screen time while performing school work.** * **Same as above- the school should have procedures in place for students to take regular breaks while working from home.** * **School will advise students on their Display Screen Equipment (DSP) position.** * **Students should not be working from home in an uncomfortable position** * **Activity has detailed step-by-step instructions on how to complete the experiment along with warnings against using extreme temperatures around certain pieces of equipment** | **3**  **2**  **2**  **2**  **3** | **1**  **1**  **1**  **1**  **2** | **3**  **2**  **2**  **2**  **6** | * **Experiment itself has mobile aspects to it so the student will not be static for the entire duration of the activity.** * **Experiment doesn’t require masses of repetitive elements** * **Could explicitly state the danger of using extreme temperatures around equipment such as a smartphone.** |  |  |  |

L = likelihood; C = consequence; R = overall risk rating

**Section 2: Common Workplace hazards. Is there potential for one or more of the issues below to lead to injury/ill health (tick relevant boxes)**

|  |  |  |  |  |  |  |  |  |  |  |  |
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| Fall from height |  | Poor lighting |  | Portable tools |  | Fire hazards | X | Chemicals |  | Asbestos |  |
| Falling objects |  | Poor heating or ventilation |  | Powered/moving machinery |  | Vehicles |  | Biological agents |  | Explosives |  |
| Slips, trips, falls | X | Poor space design |  | Lifting equipment |  | Radiation sources |  | Waste materials |  | Genetic modification work |  |
| Manual handling | X | Poor welfare facilities |  | Pressure vessels |  | Lasers |  | Nanotechnology |  | Magnetic devices |  |
| Display screen equipment | X | Electrical equipment | X | Noise or vibration |  | Confined spaces |  | Gases |  | Extraction systems |  |
| Temperature extremes | X | Sharps |  | Drones |  | Cryogenics |  | Legionella |  | Robotics |  |
| Home working | X | Poor signage |  | Overseas work |  | Overnight experiments |  | Unusual events |  | Community visits |  |
| Late/lone working |  | Lack of/poor selection of PPE |  | Night work |  | Long hours |  | Weather extremes |  | Diving |  |

**What controls measures are in place or need to be introduced to address the issues identified?**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Identified hazards** | **What controls are currently planned or in place to ensure that the hazard identified does not lead to injury or ill-health?** | **RISK**  **SCORE** | | | **Is there anything more that you can do to reduce the risk score in addition to what is already planned or in place?** | **RESIDUAL**  **RISK SCORE** | | |
| **L** | **C** | **R** | **L** | **C** | **R** |
| **Slips, trips, falls**  **Manual Handling**  **Display screen equipment**  **Home working**  **Electrical Equipment**  **Fire Hazards** | * **School should have procedures in place for students working at home.** * **Same as above- the experiment doesn’t require much heavy lifting, but if a student chooses a heavy book to lift then the school’s procedure will suffice.** * **Same as above – this experiment doesn’t require specialised equipment, all equipment is found around the home therefore, school’s procedure is satisfactory.** * **Again, school should have a procedure in place for students to work and perform school activities from home.** * **As above, schools should have a procedure in place to ensure students are making the correct decisions with regards to how they handle and take care of electrical equipment around the home** * **Some common sense is required from the student to not decide to put their phone in the microwave. However, if they follow the instructions of the activity, it is made clear that changing the temperature of the bag must not be so extreme as to damage the phone within.** | **2**  **2**  **2**  **2**  **2**  **2** | **2**  **2**  **1**  **1**  **2**  **3** | **4**  **4**  **2**  **2**  **4**  **6** | * **The activity as a whole has both screen-based aspects and physical aspects which will allow students time away from their screens** |  |  |  |

L = likelihood; C = consequence; R = overall risk rating

**Section 3: Additional hazards: are there further hazards NOT IDENTIFIED ABOVE that need to be considered and what controls are in place or needed? (list below)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Identified hazards** | **What controls are currently planned or in place to ensure that the hazard identified does not lead to injury or ill-health?** | **RISK**  **SCORE** | | | | **Is there anything more that you can do to reduce the risk score in addition to what is already planned or in place?** | **RESIDUAL**  **RISK SCORE** | | |
| **L** | | **C** | **R** | **L** | **C** | **R** |
|  |  |  |  | |  |  |  |  |  |

**Section 4: Emergency arrangements (List any additional controls that are required to deal with the potential emergency situation)**

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| **Emergency situation** | **Additional control required** |
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Risk assessor (signature): Claire Partridge Date: 04/05/2021 Authorised by (signature)...................................................Date..............

**COMPLETING THE RISK ASSESSMENT FORM**

* School/Department – note down the School and/or Department where the task is being carried out
* Building – note the specific building(s) where the task is being carried out
* Task – specific clearly the task being carried out
* People would could be adversely affected – think of all the people who could be affected by what you are doing
* Hazards – tick all the relevant hazards in sections 1 and 2. If ticked you will need to log what controls are already in place to protect people from the hazard and what extra controls are required (if any) in the relevant control boxes. As part of the control measures you will need to make a decision of the level of risk based on the tables below. NB – it is likely that other hazards may exist that are not captured in sections 1 and 2. Section 3 should be used to capture any additional hazards and controls not listed in Sections 1 and 2.
* Emergency procedures – list the basic procedures that need to be taken if a critical incident occurs
* Signature – the people completing and approving the assessment must sign the relevant boxes at the end of the document

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| **Likelihood** | |  | **Consequence** | |  | **Consequences** | **5** | 5 | 10 | 15 | 20 | 25 |
| 1 | Very unlikely |  | 1 | Insignificant – no injury |  | **4** | 4 | 8 | 12 | 16 | 20 |
| 2 | Unlikely |  | 2 | Minor – minor injuries needing first aid |  | **3** | 3 | 6 | 9 | 12 | 15 |
| 3 | Fairly likely |  | 3 | Moderate – up to seven days absence |  | **2** | 2 | 4 | 6 | 8 | 10 |
| 4 | Likely |  | 4 | Major – more than seven days absence; major injury |  | **1** | 1 | 2 | 3 | 4 | 5 |
| 5 | Very likely |  | 5 | Catastrophic – death; multiple serious injury |  |  | **1** | **2** | **3** | **4** | **5** |
|  |  |  |  |  |  | **Likelihood** | | | | | |

* Additional control required - list any additional control required that will reduce the risk rating score. Ensure responsibilities for tasks and timescales are added
* Residual risk score – re-calculate the risk score after the introduction of the additional controls. Compare residual risk score with table below. Take further action if necessary.

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| **ACTION TO BE TAKEN** | |
| 1-4 Acceptable | No further action but ensure controls are maintained |
| 5-9 Adequate | Look to improve at next review. |
| 10-16 Tolerable | Look to improve within specified timescale |
| 17-25 Unacceptable | Stop activity and make immediate improvements |