#### National Space Centre - Risk Assessment Form

#### General Risk Assessment Reference – G404

| **Location** | National Space Centre |
| --- | --- |
| **Equipment or Activity to be assessed** | Spectroscopy Demonstration |
| **Description of Activity** | The Spectroscopy Demonstration is a box that has tubes, inside the tubes are certain gases that display the different colours in the spectrum when the box is plugged in. |
| **Date of assessment** | 02/10/2024 |
| **Last review date (if applicable)** | 22/04/2024 |
| **Next review date** | October 2025 but earlier review date required following outcomes of accidents, absences and near misses, or changes to processes, work methods, materials, technology, equipment or legislation. |
| **Risk Assessment created by [name / date]** | Sophie Allan [02/10/2024] |
| **Authorised by Line Manager [name / date]** | Sophie Allan [02/10/2024] |
| **Authorised by Health and Safety Manager [name/ date]** | Katrina May Neve [03/10/2024] |

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| **What are the hazards?**  *Something with the potential to cause harm* | **Who might be harmed and how?** | **Control Measures**  *What is already in place to reduce the risk?* | **Additional Control Measures**  *What needs to be put in place to further reduce the risk?* | **Risk Rating**  *Refer to risk matrix below* | **Authorised by Health and Safety Manager** |
| Use of spectroscope | **Who**  Staff and students  **How**  Cuts, bruises | Students to be monitored while using spectroscope.  Trip hazards removed from area and wires secured if necessary. |  | Likelihood: 1  Severity: 2  Risk Rating: 2  [Low] | Katrina May Neve  Health and Safety Officer  [03/10/2024] |
| Light bulbs and emission tubes / emission tube holder | **Who**  Staff and students  **How**  Electric shock, burns from naked bulbs, cuts | All electrical equipment is PAT tested on a rolling annual basis.  All wires and cables will be secured by tape or cable tidies.  The box is sealed, and the gases can’t escape. The gases are inert gases under very low pressure. If the box breaks there is little gas that escapes, and it would be diluted by everything else in the room.  Light bulbs and emission tubes are made out of fine glass that could shatter if dropped. Only the teacher / demonstrator cleans up wearing gloves, broken glass to go in specified broken glass container. |  | Likelihood: 1  Severity: 5  Risk Rating: 5  [Low] | Katrina May Neve  Health and Safety Officer  [03/10/2024] |

**Risk Rating Matrix**

**Risk = Likelihood of injury x Severity of injury**

**R = L x S**

**Low risk = 1 – 6, Medium risk = 8 - 12, High risk = 15 - 25**

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|  | | **S = Severity of injury** | | | | |
| **Minor injury or illness (1)** | **First aid injury or illness (2)** | **3-day injury or illness (3)** | **Major injury or illness (4)** | **Fatality, disabling injury, etc (5)** |
| **L = Likelihood of injury** | Very unlikely (1) | 1 = Low | 2 = Low | 3 – Low | 4 = Low | 5 = Low |
| Unlikely (2) | 2 = Low | 4 = Low | 6 = Low | 8 = Medium | 10 = Medium |
| Likely (3) | 3 = Low | 6 = Low | 9 = Medium | 12 = Medium | 15 = High |
| **Very likely (4)** | 4 = Low | 8 = Medium | 12 = Medium | 16 = High | 20 = High |
| **Almost certain (5)** | 5 = Low | 10 = Medium | 15 = High | 20 = High | 25 = High |

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|  | **Risk Rating Definitions and Guidelines** |
| **Low** | **Minor to no injury.**  This is an acceptable level of risk. No further controls are required as the risk rating cannot be reduced any further. However, it is advised continual monitoring occurs to ensure that no changes/deviation of control measures occur. |
| **Medium** | **An injury requiring further medical assistance or is a RIDDOR related incident.**  It is advised that further control measures are implemented to reduce the risk rating to a low a level as possible. If the risk cannot be reduced to lower than a medium, then on-site monitoring should occur to ensure that all stipulated controls are bring adhered to. |
| **High** | **Death, paralysis, long term serious ill health.**  This is an unacceptable risk rating. Urgent interim controls should be implemented to reduce the risk so far as is reasonably practicable. If the risk rating cannot be reduced to lower than high, then a documented safe system of work should be implemented to control the activity. It may be necessary to seek further professional advice. Serious consideration should be given to the validity of carrying out the activity at all. Regular Monitoring of the activity should occur. |