**IR Camera Risk Assessment (STEM01)**

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| **Activity Name** | ***Insert name of activity*** |
| **Method Statement** | *Give a step-by-step guide of what equipment is required, what prep must be done, how to carry out the activity and who will do which task at each stage.*  A handheld IR camera will be used to demonstrate to participants how IR sensing can be used to observe objects that give off IR and how this may relate to data collection used by scientists.  The presenter will collect the IR camera from storage, ensure it charged and if necessary, collect a laptop with Flir Tools software installed to connect the image to a larger screen. The camera (and laptop/any additional screens) will be set up in the designated space. All plugs and wires will be kept out of the way of participants where possible. Any loose wires will be taped down. The kit boxes will be stored away until needed.  Once the screens are set up, the IR camera will be turned on and demonstrated by the presenter. Participants will be invited to try using the camera under the supervision of DSC staff while discussing the technology and its applications. The participants may view different objects through the camera and observe the changes. The presenter will then take the camera back.  When not in use the camera will be switched off. When the presentation is finished, the camera will be returned to its case with all the associated chargers and connecting wires. The laptop will be switched off. All the equipment will be returned to its storage. The presentation area will be cleared of any materials. |
| **Location** | *Where will you be carrying this out?* Exhibition gallery, Prism, Innovate, Inspire, Auditorium, Outreach venues |

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| **Who could be harmed?** | **How could they be harmed?** | **Precautions** | **Risk Calculation**  **L x S = R** | | | **Additional Measures** | **Risk Calculation**  **L x S = R** | | |
| *List anyone who might be involved.* | *Give specific details of what they would do with the equipment that could result in harm.* | *What are we doing to make this safe? - e.g., PPE, safety procedure, safe storage etc.* |  |  |  | *What can we warn participants of while observing or participating. What action will we take if something happens?* |  |  |  |
| DSC Staff, Participants, Visitors, Public | Electric shock.  The IR Camera is an electronic device that contains a rechargeable battery. If faulty, the person operating may receive a shock.  The camera is charged using mains plug. To view on a larger screen, it may also be connected to a laptop or screen. | The IR camera uses a battery which poses low risk of shock. The camera is cased within plastic which isn’t conductive. The camera will be inspected for damage before use. The camera will not be operated while charging. The presenter will supervise participants while the camera is in use to ensure the battery, or any electrical components are not misused.  All electrical components with a mains plug will be PAT tested. The equipment will be inspected before use and any damage reported to the Facilities Manager. | 1 | 3 | 3 | Participants will be instructed on how to correctly operate the camera before handling and will be always supervised by a DSC staff member. If the camera is being handled incorrectly the staff will end the activity and put the camera away. | 1 | 3 | 3 |
| DSC Staff, Participants, Visitors, Public | Electric shock and/or water damage.  The equipment is electrical and if it comes into contact with water could be damaged or cause an electric shock. | There will not be any water handled near the electrical equipment. Staff will ensure all water bottles are stored away from the presentation area. | 1 | 5 | 5 | Participants will be asked to keep water away from the equipment while handling the camera.  Any spillages will be cleaned immediately, and a ‘Wet Floor’ sign used where appropriate.  If the equipment does get wet the activity will stop and will be reported to the Facilities Manager. | 1 | 5 | 5 |
| DSC Staff, Participants, Visitors, Public | Slips and Trips.  The wires used in the equipment may cause someone to trip. | All wires should be set up out of the way of participants. Any loose wires will be taped down where appropriate. | 2 | 2 | 4 | Equipment should not be plugged in if not necessary (e.g., nothing on charge when not needed).  Presenters will warn participants to be aware of the wires. | 2 | 2 | 4 |
| DSC Staff, Participants, Visitors, Public | Damage to equipment.  The equipment could be damaged if handled incorrectly. | Staff will be shown how to correctly operate the equipment by either the STEM Development Lead, Facilities Manager or Senior Science Communicator before use.  The equipment will only be set up and operated by trained staff who will always supervise and participants. | 2 | 2 | 4 | Staff will never leave the equipment unattended. Participants will be instructed on how to use the equipment and will always be supervised. If participants misuse the equipment the activity will stop, and any damage will be reported to the Facilities Manager. |  |  |  |
| DSC Staff, Participants, Visitors, Public | Injury.  Participants may misuse the equipment and cause injury to themselves or others (e.g., by hitting with the IR camera). | The IR camera doesn’t have any sharp corners. The camera is a lightweight handheld device so cannot cause excessive damage.  The equipment will only be set up and operated by trained staff who will always supervise and participants. | 2 | 2 | 4 | Staff will never leave the equipment unattended. Participants will be instructed on how to use the equipment and will always be supervised. If participants misuse the equipment the activity will stop, and any damage will be reported to the Facilities Manager.  If a participant does have/cause an injury, a first aider will be called for support. | 2 | 2 | 4 |
| DSC Staff, Participants, Visitors, Public | Injury.  The IR camera has a small laser pointer which could be shone into someone’s eye causing damage. | The laser pointer is of very low strength. Participants will not be shown how to switch this on.  They will never be instructed to point the IR camera directly into someone’s eye.  The equipment will only be set up and operated by trained staff who will always supervise and participants. | 1 | 3 | 3 | Staff will never leave the equipment unattended. Participants will be instructed on how to use the equipment and will always be supervised. If participants misuse the equipment the activity will stop, and any damage will be reported to the Facilities Manager.  If a participant does have/cause an injury, a first aider will be called for support. | 1 | 3 | 3 |

