Technology: Risk Assessment Title: **Portable Orbital Sander**  JULY2015

**This is a generic Risk Assessment that must be modified to suit your place of work**. The Risk Assessment modifications should take into consideration the activity, age/stage/pupil ability, department/working environment and the experience of the teacher in charge. If Control Measures Required as described are implemented the risk is reduced to an acceptable level for mainstream students.

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| **Identify the Hazards** | **Who is at Risk?** | **What is the Harm?** | **Activity Taking Place** | **Control Measures Required** | **Additional Information** |
| Employees and learners should be made aware of the following hazards.  1. Hand, Hair or Clothing Entanglement  2. Trip Hazard  3. Electric Shock  4. Finger Trap  5. Inhalation of Dust  6. Excessive Noise  7. Hand Arm  Vibration Syndrome  (HAVS)  8. Insecure Workpiece | Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technician  Technology teachers, technicians and students | **Moving parts, into which long hair, loose clothing, etc, can become entangled.**  **Leads and hoses, which could be tripped over.**  **Faulty plugs can lead to electric shock from the mains.**  **Fitting or removing batteries or abrasive paper can lead to a finger trap within the casing.**  **Dust, which can be inhaled can serious damage to the respiratory system.**  **Noise, which can be excessive with this type of machine.**  **HAVS is caused by operating hand help power tools for prolonged periods of time.**  **Using hand held power tools for more than an hour per day.**  **Insecure workpieces can break or be ejected causing injury to the user other others nearby.** | Sanding wood  Sanding wood  Sanding wood  Sanding wood  Sanding wood  Sanding wood  Sanding wood  Preparing work for students  Sanding wood | Long hair and loose clothing should be tied back or otherwise secured away from moving parts. Instruction should be given to ensure that users do not touch moving parts of the portable sanding machine and that the abrasive medium is firmly attached to the machine.  Trailing leads and hoses should not become entangled with the operator, others in the vicinity or the sanding machine.  The risk of electric shock is reduced by good maintenance, the use of double insulated machines or battery powered machines.  Batteries should be charged, fitted and disposed of in accordance with the manufacturer’s instructions.  Correct fitting of the abrasive paper should be checked by the supervising Technology teacher or technician.  LEV must be provided if required. RPE should also be worn if appropriate.  Eye protection PPE should be worn to keep dust out of users eyes.  An assessment of the noise produced by the machine should be carried out. Ear protectors, conforming to BS EN 352-1 should be worn if the level of noise exceeds the specified action value.  A risk assessment of the likelihood of harm from HAVS should be carried out and appropriate control measures used. It is not expected that craft room use of hand held power tools will be for a sustained period of time (currently quoted as more than about an hour per day.)  Exposure times can be exceeded where a technician uses equipment when preparing work for students but this should be controlled by limiting the period of exposure.  Any workpiece should be securely held on a flat work surface using a G-clamp or bench vice. | Reference BS 4163:2014  Manufacturer’s instruction guide should be followed and kept within the department for future reference.  Best practice is to use a ceiling mounted drop down socket which also removes the tripping hazard.  Other workers nearby might also need to wear respiratory equipment.  Suitable eye protection conforming to BS EN 166:2002 should be used.  Other workers nearby might also need to wear ear protectors.  See Control of Vibrations at Work Regulations 2005 for more information.  The HSE have published a HAVS exposure calculator on their website to assist in calculating exposures for hand-arm vibration.  <http://www.hse.gov.uk/vibration/hav/vibrationcalc.htm> |
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