



**HEALTH & SAFETY**  
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**Young People in Scientific Laboratories, Workshops and  
Related Activities Policy Arrangements**

**HSA-10130**

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## Document Control

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## Amendment Record

Revision	Date	Amendment(s)
<b>0</b>		Draft
<b>1</b>	1.0	New Policy Arrangements
<b>2</b>		
<b>3</b>		
<b>4</b>		
<b>5</b>		

## 1. Introduction

The University recognises the need to ensure the health, safety and welfare of young persons (defined as anyone under 18 years of age) and children (someone below the minimum compulsory school leaving age of 16) engaging in activities organised by the University such as outreach activities, work placements or as foundation or undergraduate students.

This interim policy arrangement document outlines the additional consideration that needs to be given when young people are participating in activities within scientific (wet) laboratories, workshops or events held in other premises involving the use of chemical, biological, radiological or other hazards.

Young people engaging in these activities may be at increased risk due to:

- Psychological factors - inexperience, maturity and lack of awareness of existing or potential risks.
- Physiological factors - physical capabilities and physiological development, greater risk from certain hazards as well as the suitability of uniform / personal protective equipment fit.

## 2. Risk assessment

All work activities involving hazards which have the potential to present significant risks must have a documented risk assessment. This assessment must detail control measures that will reduce the risk to acceptable (low or negligible) levels.

Where the person is a child the parents or guardians should be aware of the key findings of the risk assessment **before** commencement of the activity. Any information must be comprehensible to a person unfamiliar with the work we do.

The conclusion from this risk assessment will always be that low or negligible risks only remain for young persons; medium to high level risks having been eliminated.

### 3. Restrictions

The following restrictions apply to activities involving young persons:

Exposure to chemicals and other harmful substances classified as:		
<ul style="list-style-type: none"> <li>• skin or respiratory sensitisers and substances on the asthmagen list</li> </ul>	H317 H344	Should be limited to observation only for children (under 16s) or those on outreach or work experience with no direct handling of materials.
<ul style="list-style-type: none"> <li>• toxic (acute toxicity categories 1-3)</li> </ul>	H300 H301 H303 H305 H310 H311 H330 H331	It may be permissible for 16-18 yr. olds who are enrolled on UG courses or as part of A-level curriculum or are members of staff (e.g. trainees), subject to: <ul style="list-style-type: none"> <li>• their use meets an identified training need</li> <li>• safer alternatives not being available</li> <li>• control of exposure as low as reasonably practicable (e.g. using pre-made solutions, reduction in volume, use of fume cupboards etc.)</li> </ul>
<ul style="list-style-type: none"> <li>• carcinogen, mutagen or teratogen</li> </ul>	H340 H350	<ul style="list-style-type: none"> <li>• supervision by a competent person.</li> </ul>
<ul style="list-style-type: none"> <li>• able to damage or harm an unborn child</li> </ul>	H360 H361	
<ul style="list-style-type: none"> <li>• or can chronically affect human health in any other way.</li> </ul>	e.g. H370, H372	
<ul style="list-style-type: none"> <li>• Lead</li> </ul>		<ul style="list-style-type: none"> <li>• In general young persons under 18 yrs old should not be exposed to significant levels of lead exposure (e.g. no work with absorbable leads/fumes/vapours).</li> <li>• If member of staff, may work with lead – subject to blood levels being below threshold specified in Control of Lead at Work ACOP.</li> </ul>
<ul style="list-style-type: none"> <li>• Flammables</li> </ul>	H224 H225 H226	<ul style="list-style-type: none"> <li>• Children (under 16yrs old) – limited to small volumes (&lt;100ml) of category 2 or 3 flammables, away from sources of ignition.</li> <li>• 16-18 yr. olds – may use cat 1-3 flammables – volumes of category 1 flammables restricted.</li> </ul>
<ul style="list-style-type: none"> <li>• Pyrophoric</li> </ul>	H250 H260 H261	<ul style="list-style-type: none"> <li>• Young persons (under 18 yrs old) – should be limited to observation only.</li> </ul>
<ul style="list-style-type: none"> <li>• Corrosives</li> </ul>	H290 H314 H318	Children (under 16 yrs olds) - Small volumes (<100ml) of dilute corrosives only (<1M)

	<p>It may be permissible for 16-18 yr. olds who are enrolled on UG courses or as part of A-level curriculum or are members of staff (e.g. trainees), to use concentrated corrosives subject to:</p> <ul style="list-style-type: none"> <li>• their use meets an identified training need</li> <li>• safer alternatives not being available</li> <li>• control of exposure as low as reasonably practicable</li> <li>• supervision by a competent person</li> <li>• volumes monitored (security)</li> </ul>
<b>Biological hazards</b>	
Biological organisms	<p>In general, young persons (under 18 yrs old) may work with hazard group 1 microorganisms and are limited to observation of cultures of hazard group 2 microorganism only (e.g. sealed petri-dishes). Where possible a less hazardous alternative should be used to meet the training need.</p> <p>Work with materials which may inadvertently contain biological organisms e.g. soils, food is permissible in under 18s but they should not handle grown cultures.</p> <p>It may be permissible for 16-18 yr. olds who are enrolled on UG courses or are members of staff (e.g. trainees) to work with hazard group 2 organisms subject to no safer alternatives being available and under supervision by a competent person.</p>
Other biological material	<p>Children (under 16 yrs old) may work with their own (fresh) blood or saliva sample e.g. capillary tubes of blood. They should not be exposed to unscreened biological samples/clinical samples or tissues taken from others.</p> <p>It may be permissible for 16-18 yr. olds who are enrolled on UG courses or are members of staff (e.g. trainees) to work with these material, subject to no safer alternatives being and under supervision by a competent person.</p>
GMOs	<p>Young persons (under 18hrs old) are only permitted to work with Class 1 GMOs under direct supervision.</p>
<b>Ionising Radiation</b>	
Sealed sources	<p>Children (under 16 yrs old) should be limited to observation of activities only.</p> <p>16-18 yr. olds on outreach activities may work under direct supervision with low-risk sealed sources.</p> <p>Work with high-risk sources where there is a likelihood of a measurable dose to the hands is prohibited unless the 16-18 yr. old is a member of staff and exposure is restricted as low as reasonably practicable and does not exceed the dose limit of 1 mSv in any calendar year.</p>

X-rays	<p>Young persons (under 18 yrs old) should be limited to observation of activities, or pressing activation buttons under direct supervision of a competent person.</p> <p>Work with open-X-ray beams is limited to 16-18 yrs. olds who are members of staff (trainees). Exposure must be kept as low as reasonably practicable and must not exceed the dose limit of 1 mSv in any calendar year.</p>
Open sources	<p>Young persons (under 18s) should not work with unsealed radioactive sources.</p>
<b>Other hazards</b>	
Heat or cold	<p>Children (under 16s) – should not be involved with activities where there is exposure to extreme heat or cold which could be detrimental to health. This does not include brief visits to cold stores or hot glasshouses.</p> <p>It may be permissible for 16-18 yr. olds to carry out work in extreme temperatures subject to risk assessment and appropriate control measures in implemented, e.g. limiting time/level of exposure, sufficient breaks, access to cold water/warm beverages, providing information training and supervision, provision of protective equipment and health surveillance .</p>
Noise	<p>Noise can cause hearing damage that is permanent and disabling. This can be hearing loss that is gradual because of exposure to noise over time, but also damage caused by sudden, extremely loud noises. People may develop tinnitus (ringing, whistling, buzzing or humming in the ears), a distressing condition which can lead to disturbed sleep.</p> <p>Children and 16-18yr olds on work experience/outreach should not work in noise action areas (&gt;80dBA).</p> <p>It may be permissible for 16-18 yr. olds who are enrolled on UG courses or who are members of staff (e.g. trainees) to work in these areas subject to control of exposure as low as reasonably practicable, limiting time/level of exposure.</p>
Dangerous equipment	<p>Dangerous machines e.g. lathes, angle grinders etc. and hand-fed wood working machinery, in particular band saws, sawing machines fitted with circular blade, planning machines, vertical spindle moulding machines etc., and vehicles such as tractors, ATV's, lift trucks etc.</p> <p>It may be permissible for 16-18 yr. olds who are enrolled on UG courses or if members of staff (e.g. trainees) to work in these areas subject to control of exposure as low as reasonably practicable, limiting time/level of exposure.</p>

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#### **4. Training and Information**

Young people must be informed of risks of the activities they are undertaking, the purpose of the control measures in place and actions to take in the event of an incident.

#### **5. Supervision**

Young persons should never be left unsupervised within laboratories and should be directly supervised by a competent person when carrying out activities.