

JOB TITLE	Laboratory / Science Technician including classroom support	JOB REF NO	AAAE5173
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BASIC JOB PURPOSE

To provide a practical, daily technician service to members of the teaching staff in the Science Department through the preparation and provision of equipment, apparatus and chemicals to enable pupils to carry out laboratory experiments, projects and examination work.

NO	MAIN RESPONSIBILITIES	
1	Check and provide in the appropriate laboratories, science apparatus, equipment, materials and chemical solutions to ensure their availability in support of laboratory teaching activities, practical work, experiments, demonstrations, and project coursework as part of GCSE and A-level projects and examination work.	
2	Maintain laboratories, preparation rooms and chemical stores (including security and accident/hazard spotting) to ensure all Health and Safety Regulations are met.	
3	Identify faults on equipment and apparatus and repair where possible (including annual testing of portable electrical appliances) to minimise disruption to science experiments.	
4	Demonstrate and provide hands-on practical pupil instruction in correct usage and application of laboratory and science apparatus, equipment, materials and solutions and work with pupils on project work in a supporting role.	
5	Receive, maintain a security system and distribute all science external examination papers to ensure strict confidentiality is kept whilst these are stored both before and after examinations take place.	
6	Assemble stock apparatus, carry out simple glass manipulations or construct new models from basic materials necessary to enable pupils to carry out practical science experiments in the laboratory.	
7	Maintain stock control systems and order replacement goods to ensure that all necessary stock is readily available. Carry out price checks and ordering, as well as keeping records for the science department. Assisting Head of Science by keeping record of spending and budget.	
8	Store correctly, and monitor the condition of labels on chemical products and electrical apparatus taking account of safety procedures and COSHH regulations to ensure safety of the pupils and staff.	
9	Clean and reclaim all re-usable science apparatus after use to enable it to be used again in science experiments and minimise cost replacements.	
Notwithstanding the detail in this job description, in accordance with the School's/Council's Flexibility Policy the job holder will undertake such work as may be determined by the Headteacher/Governing Body from time to time, up to or at a level consistent with the Main Responsibilities of the job.		

1 RESPONSIBILITY FOR SUPERVISION / DIRECTION / COORDINATION OF EMPLOYEES

Employees directly supervised by

Not Applicable

Other Employees supervised by jobholder (not in a direct line relationship)

<u>No and FTE</u>	<u>Levels / grades</u>	<u>Types of work</u>	<u>Where based</u>
Various	Professional teaching staff	Engaged in Science teaching.	Same school
	Newly appointed and/or other school Science Technicians	Equipment, apparatus and chemical preparation	Same school

What does the supervision of these employees involve?

Provide practical support and guidance in the use of materials, practices and processes and recommend solutions to technical problems encountered

Does the job involve supervision, direction or management of people who are not employees? *eg contractors, students on secondment* No

<u>No and FTE</u>	<u>Level / grade</u>	<u>Types of work</u>	<u>Where based</u>
Occasional	Work experience students. Post Holder will assess student ability and experience and allocate duties/tasks accordingly.	Work Experience	Same school

Does the jobholder develop policy or provide advice and information which impacts on the supervision / direction / coordination of employees? No

2 RESPONSIBILITY FOR FINANCIAL RESOURCES

Financial responsibility	Value of the financial resource (p.a.)	How often is the duty performed?
Post holder has authority to authorise invoices and ensure that all purchases are in accordance with requisition. These are then approved by the school SMT and sent to county for payment.		

Does the jobholder develop policy or provide advice and information which impacts on financial resources?

No

3 RESPONSIBILITY FOR PHYSICAL RESOURCES

Physical resource	Nature of responsibility of jobholder	How often is the responsibility exercised?
Key holder	Post holder has key to all science rooms and main science building for school holidays.	Daily
Record Systems	Required to keep meticulous records on the levels, usage of hazardous substances materials and chemicals. Must comply with health and safety regulations. Required to keep accurate records for County Fire Brigade detailing hazardous and dangerous materials.	Daily
Stock and Materials	Delegated responsibility to order and purchase consumables including hazardous materials in accordance with school procedures and maintain sufficient stock to ensure that all experiments can be undertaken. Required to ensure that all hazardous materials are locked away securely in accordance with health and safety legislation and organise appropriate storage	Weekly Daily
Equipment and Tools	Required to build apparatus for cross curriculum project and examination work.	As required
	Ensure that equipment and tools are fully operational in accordance with health and safety regulations. Undertake repairs and maintenance of a range of equipment.	Daily Daily

Does the jobholder develop policy or provide advice and information which impacts on physical resources?

Yes

If yes, give details

Post holder required to provide advice and guidance on the best materials to be used in Schemes of Work and experiments. This includes sourcing the market to find cost effective alternatives and where appropriate constructing local apparatus.

4 RESPONSIBILITY FOR IMPACT ON PEOPLE

<u>Task/Duty</u>	<u>Who benefits?</u>	<u>How they benefit?</u>
<ul style="list-style-type: none"> Prepare materials and equipment in advance of practical coursework, examinations and pupil projects in accordance with teaching staff requirements 	Pupils and school staff	Support and assist the provision of effective learning activities and ensure that the highest standard of care is

<ul style="list-style-type: none"> • Ensure that textbook experiments work in advance of a predetermined lesson activity and make the appropriate adjustments. • Demonstrate correct usage and application of laboratory and science apparatus, equipment, materials and solutions and provide hands-on practical pupil instruction in safe usage, application, point out all associated dangers and work with pupils on project work in a supporting role 		<p>maintained at all times for the safety and well being of pupils</p>
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Does the Jobholder develop policy or provide advice and information which impacts on people?

NO

5 KNOWLEDGE

Type of knowledge	What knowledge is essential?	Why are these needed?	How is it normally acquired?
Specialist Knowledge	Understanding of laboratory methodologies and practices, quantities and reactions of mixing chemicals and hazardous materials. Outline understanding of Curriculum for Science based subjects.	Preparation, storage, handling, treatment, disposal of equipment and materials used in practical science activities. Prepare and adapt materials for practical coursework, examinations and provide direct support for pupil projects in accordance with teaching staff requirements and demonstrate correct usage and application of laboratory and science apparatus, equipment, materials and solutions. Trial practical activities and carry out demonstrations. Assemble, construct and modify apparatus. Ensure appropriate procedures are implemented. Keep stock records	NVQ Level 3 or equivalent, on the job training and experience.
Legislation and National Standards	COSHH Health and safety legislation, policies and procedures	Carry out health and safety checks on laboratories, prep rooms and stores. Provide health and safety advice to teaching staff and students.	On the job training and experience
Policies and procedures	School policies which cover behaviour management, safety, fire evacuation and first aid procedures	Policies and procedures which inform the jobholder's response to situations arising in school and ensure pupil compliance	Experience and in-house training
Equipment and Tools	Lab equipment e.g. electrical equipment, fume cupboards, pressure vessels etc	Assemble, maintain and arrange repair of equipment.	Experience and equipment manuals.
Organisational	School teaching staff structures and responsibilities across various faculties including peripatetic staff. Knowledge of external suppliers and contractors	Prioritisation of workload to meet school requirements. Identify sources for materials, equipment and supplies	Experience and in-house training

How long would it take for a jobholder to become fully operational?

NVQ Level 3 = 2 years + 2 years post qualification relevant experience including 12 months to become conversant with the requirements of the school academic calendar = 4 years

6 MENTAL SKILLS

- a) What sort of problems does the jobholder typically have to deal with?
Give two examples of typical problems solved on a regular basis.

Example Provide technical expertise in order to assist a pupil's practical coursework project.

Sensitively and tactfully question the pupil(s) in order to establish and understand the thinking behind an intended project and advise on its feasibility. Translate the concept into a practical exercise and provide appropriate materials and technical specifications solutions. Provide instruction and guidance to pupils and/or teaching staff in a suggested methodology for tackling the project; where approved, plan, order and prepare materials including the construction and modification of apparatus as necessary.

Example Legislation frequently changes which results in some materials being withdrawn. The Post holder is required has to come up with cost effective alternatives which meet academic standards.

- b) Give an example of the most difficult or demanding problem the jobholder has to solve.

Example: Due to shortage of labs/ equipment several teachers may require science labs and equipment at the same time. Post holder has to prioritise against curriculum and re-schedule where necessary to ensure that all pupils have an equal opportunity.

- c) Approximately how often would the example in (b) occur?

At least weekly

Give details below of the mental skills required in the job and reasons why they are needed.

Mental Skill	Why Needed?
Planning	Prepare materials and resources to meet lesson deadlines, and organise planned maintenance work around teaching programmes and pupil project activities
Judgment/analytical	To determine precise specifications of teaching staff and pupils requirements and recommend appropriate materials, technical options and/or solutions
Creative	Adapt existing school materials stock to meet the requirements of an intended project or teaching activity

7 INTERPERSONAL AND COMMUNICATION SKILLS ESSENTIAL FOR THE JOB

Skill	Used for?	With whom?
Instruction	Provide practical guidance and hands-on instruction in the correct and safe usage of materials and equipment	Pupils and cross faculty professional teaching staff

	including alternative approaches and materials for experiments etc.	
Negotiation	Agree appropriate standards of pupil behaviour in laboratory and science environments. Negotiate and agree the prioritisation of work to meet the varying demands of teaching staff and individual pupils. Liaison and negotiation with external suppliers.	Pupils and cross faculty professional teaching staff Companies and suppliers
Persuasive and advisory	Assist teaching staff in keeping pupils on task and ensure pupil adherence to health and safety requirements	Pupils
Written	Apparatus and experiment cards detailing equipment and tools required for schemes of work	Teaching staff

8 PHYSICAL SKILLS ESSENTIAL FOR THE JOB

Physical skill	Used for?	Any precision/speed requirements?
Manual dexterity and hand eye co-ordination	Microscopes, setting up balances, taking measurements, chemical solutions and building of apparatus.	High degree of precision and accuracy very important

9 INITIATIVE AND INDEPENDENCE

Allocation of work

a) How is work allocated to the jobholder?

The jobholder is required to respond to the individual needs of teaching staff in the preparation of materials and equipment as required for practical work, demonstrations and lesson activities in conjunction with the school timetable, examinations, project work and the demands of the national curriculum, and to prepare for and assist pupils with project coursework. The jobholder must also ensure that planned maintenance schedules, stock replenishment and long-term projects are carried out.

b) What is a typical cycle for allocating work to the jobholder eg hourly, daily, weekly?

Daily - practical work, teachers' lesson activities and pupils' needs.

Weekly - planned maintenance schedules and preparation for project work.

There is an annual timetable in addition to weekly timetables which detail exam dates which the post holder has to plan for in addition to usual duties.

Scope for initiative

c) How much freedom/discretion does the jobholder have:

to change the way work is done?

(e.g. recommending changes in policy, procedures, resources)

Provide advice and make recommendations on the specification and purchase of school science and laboratory materials and equipment to be used in Schemes of Work and experiments. This includes sourcing the market to find cost effective alternatives and where appropriate constructing local apparatus.

to allocate their time to duties?

To plan and prioritise own time to meet teaching staff and lesson deadlines. The nature of allocated tasks determines priority level – the jobholder determines priority in consultation with line manager as necessary.

d) What is the level of guidance/instructions available?

School policies and procedures, staff and departmental handbooks, course syllabi, manufactures equipment instructions and manuals, Health and Safety legislation, COSHH etc and briefing from own line manager

e) What sort of direction, management or supervision is given to the jobholder?

Type of Direction	From Whom	How Often
Updates of Health and Safety	Head of Science	Several times a year
Extra experiments, changes to schemes of work	Head of Science plus other teaching staff	Several times a month

f) Give two examples of problems or decisions the jobholder would be expected to deal with themselves without reference to a supervisor/manager. How often do these occur?

Typical Frequency

Example: A pupil provides the post holder with a rough specification for an apparatus to undertake an experiment for their A level subject. Working to short timescales, often from scratch to ensure that the experiment works, to design apparatus and provide solutions to meet teachers and pupils requirements

Example: Respond to pupil behavioural problems in accordance with school policies and procedures - daily

Example: Legislation frequently changes which results in some materials being withdrawn. The Post holder is required has to come up with cost effective alternatives which meet academic standards.

g) Give two examples of problems or decisions the jobholder would be expected to refer to their supervisor/manager. How often do these occur?

Typical Frequency

Example: Post Holder is faced with number competing priorities for rooms and equipment, including requesting from senior members of staff. Post holder would refer these to the Head of Science to make decision.

Example: Post holder is required to dispose of Oxidized Calcium. Post Holder would refer the problem to Head of Science to agree appropriate course of action.

Example: Extreme pupil behaviour or disregard for laboratory safety – refer to Line Manager once or twice per term.

10 PHYSICAL DEMANDS

Physical Demand	Typical Duration	How often?	Other details (eg how heavy?)
Standing and Walking – required to deliver materials and equipment throughout school.	Most of the working day	Daily	
Lifting and carrying	Few minutes	Many times per day.	Lifting of sandbags and apparatus – up to 15kilograms

11 MENTAL DEMANDS OF THE JOB

Nature of task	Mental Demand	Duration	Frequency
<ul style="list-style-type: none"> Check and provide in the appropriate laboratories, science apparatus, equipment, materials and chemical solutions to ensure their availability in support of laboratory teaching activities. Maintain laboratories, preparation rooms and chemical stores (including security and accident/hazard spotting) to ensure all Health and Safety Regulations are met Identify faults on equipment and apparatus and repair where possible (including annual testing of portable electrical appliances) to minimise disruption to science experiments Control stocks of materials and equipment Maintaining constant vigilance whilst pupils are using dangerous chemicals and equipment or when working with pupils on project work in a supporting role. Demonstrate safe usage to pupils of high-value laboratory and science equipment. 	Concentration and attention to detail	c.50% of the working day	Daily
		Several minutes	Several times daily
		Several minutes	Several times daily
		Several minutes	Weekly
		For the duration of the lesson	Few times daily

To what extent is the job subject to work-related pressures e.g. regular deadlines, frequent interruptions, conflicting demands?

Nature of pressures / interruptions	Source	For how long?	How often?
Interruptions	Teaching staff, pupils, suppliers and deliveries	Few minutes	Throughout the working day
Deadlines	To prepare materials and equipment for lessons, course and project work, examinations etc. Carry out urgent rectification work or 'get something in place' following breakdown of equipment		
Conflicting demands	Balance and juggle the priorities of teaching staff, pupils project and course work and various faculty agendas		

12 EMOTIONAL DEMANDS

Nature of the task being performed by jobholder.	Behaviour / source of the emotional demand	Frequency (per day/wk/ month)
Undertaking demonstrations of practical exercises	Sensitively respond to academic and less able pupils together with inappropriate pupil behaviour	Daily

13 WORKING CONDITIONS

- a) In what kind of places does the jobholder normally work (egg office, library, gardens, and clients' homes)?**

If more than one, give approximate proportion of time in each.

Location of work	Proportion of time
In preparation room and science laboratories Movement around school	90% 10%

b) If the jobholder works outside, are they expected to work regardless of the weather or are alternative arrangements made eg work on other duties?

c) What unpleasant environmental working conditions or behaviour from other people are met in performing the job? (See guidance notes for examples)

Post holder required to handle and mix hazardous chemicals. This is undertaken in accordance with health and safety procedures.

d) What protection is offered (if any) e.g. against adverse weather (clothing, shelter), against infection, security measures etc.

Post holder has protective overall, goggles, facemask and gloves to handle dangerous and hazardous materials.

Working Condition or Behaviour from other people	How long does it last at any one time?	How often does it typically occur?
Chemicals Biohazards Radioactive Electrical Equipment		Ongoing
Abrasive, uncooperative and disrespectful pupils, inappropriate behaviour etc	Short bursts	Daily