

GL343 - Guide to doing practical work during the COVID-19 pandemic - Science - Version 2.04 - 20/08/20

This guidance is **additional** to all standard operating procedures across your school, any guidance from your employer, and CLEAPSS’ general advice. It is based on guidance from the UK Government and Public Health England, and is also aligned with guidance in Northern Ireland and Wales. It is intended for use from September 2020 onwards

This guide is likely to be updated frequently. Regularly check that the version number in the title above is the same as that in the version on the website. Details of any changes made are listed on the final page of this document in the revisions list.

In July 2020 the government signalled its intention that all pupils would return to school full time from September 2020. It further signalled that all pupils should be able to access a broad, balanced and ambitious curriculum. To support schools the DfE and PHE have created a system of controls which are central to the return in September guidance.

The DFE/PHE ‘System of controls’

Prevention	
Minimise contact with individuals who are unwell	All schools all of the time
Cleaning hands more thoroughly and more often than usual	
Good respiratory hygiene (catch it - bin it - kill it”)	
Enhanced cleaning, including cleaning of frequently touched surfaces	
Minimise contact between individuals and maintain social distancing. How contacts are reduced will depend on the school’s circumstances and will (as much as possible) include: grouping children together avoiding contact between groups arranging classrooms with forward facing desks staff maintaining distance from pupils and other staff as much as possible	Must be properly considered and schools must put in place measures that suit their circumstances. These measures should also not be seen as ‘all or nothing’ options as partial implementation will bring benefits
Where necessary, wear appropriate PPE. The majority of staff in education settings will not require PPE beyond what they would normally need for their work.	Specific circumstances as required by the risk assessment
Response to infection	
Engage with NHS Test and Trace	Must be followed in every case where they are relevant
Manage confirmed cases of corona virus	
Contain any outbreak by following local health protection team advice	

Measures currently excluded by DfE advice (August 2020)

- Reducing the number of pupils in school at any one time through the use of rotas
- Using additional premises to provide additional teaching spaces
- Making significant modifications to existing sites – According to the DfE guidance this is not ‘considered necessary’. CLEAPSS believes that creating additional teaching spaces for example by building walls to convert halls or gyms into classrooms would be covered by this.

Implications for Practical science

CLEAPSS believes that hands on science practical work **can and, more importantly, should**, still happen. It will however require **very** careful planning as a science department team to ensure that pupils and staff stay safe.

CLEAPSS believes that working within the constraints of the DfE’s guidance (and in particular the meeting the requirements around quarantining or meticulous cleaning of science equipment) has the potential to significantly restrict the number and type of practical activities that can take place. This will in turn likely impact on a school’s ability to deliver the broad, balanced and aspirational curriculum referred to by the DfE in its guidance to schools August 2020.

Schools will need to consider how they manage pupils’, parents’ and to a certain extent, science teachers’ expectations around the availability of practical work during this period of extraordinary challenge.

Using this guide

This guide should be read alongside **all** CLEAPSS other COVID-19 guidance including:

[GL336 - Advice for schools with only key worker pupils on site](#)

[GL338 - Practical activities for pupils attending school during extended periods of closure](#)

[GL339 – Practical activities for pupils at home during extended periods of school closure](#)

[GL345 - Guidance for science departments returning to school after an extended period of closure](#)

[GL352 – Guidance for practical work in non-lab environments](#)

[GL353 – Guidance for schools where pupils spend all day in a lab](#)

Factors to be considered

The following is a list of factors that teachers, technicians and heads of department will need to consider when planning for practical work in Science.

1. Separating groups – ‘Bubbles’

School life from September will revolve around the concept of ‘bubbles’. Different schools will have found different ways to implement this idea, and these decisions will impact on how and where science practical activities can take place.

If pupil bubbles are allocated fixed locations where they stay for all of their lessons, this will raise the question of what practical science can be done safely in a classroom? See [CLEAPSS guide GL352, Guidance for practical work in non-lab environments](#) for advice on this.

If a bubble is based in a laboratory the opposite question of how other subjects can be taught safely in laboratories will arise. See [CLEAPSS guide GL353, Guidance for schools where pupils spend all day in a lab](#) for advice on this.

2. Social Distancing

This is distinct from separating groups above and DfE guidance is that these “...are not ‘all or nothing’ options’ and will still bring benefits even if implemented partially”

The expectations from the DfE are that

- a) **staff** should aim to maintain a 2m social distance from all other members of staff and from pupils.
- b) Wherever possible **pupils** should aim to maintain a social distance of at least 1m

“It is strong public health advice that staff in secondary schools maintain distance from their pupils, staying at the front of the class, and away from their colleagues where possible. Ideally, adults should maintain 2 metre distance from each other, and from children”

Recent research suggests that the greatest risk to staff is transmission from staff to staff, therefore science staff will have to carefully consider social distancing rules during break and lunch times when they are likely to congregate in the science staff office or prep room.

It is likely schools will have now created their own rules for implementing the DfE guidance, and science departments should follow these. However, the following offers some outline guidance on how to maintain appropriate social distancing in the context of science lessons

- **Entry into the lab:**

To help with distancing and access to the lab, corridors should be marked with safe waiting spaces, as in queuing systems at supermarkets. Pupils queuing into the lab will need supervision. Each queuing space should be marked with a number (starting at 1 closest to the door); the numbered space should correspond to the number of a workstation in the lab furthest from the door. (see next point). Copies of the seating plan showing the position of the workstations and the maximum number of pupils permitted in the lab should be displayed on the lab door and around the waiting area. As pupils arrive at the lab they should wait at their space until they can be admitted to the room. Under the direction of the teacher, pupils will enter the lab individually and make their way to their workplace.

- **Maximum number of pupils per lab:**

This will need to be measured and judged for each lab. In a normal sized lab (83-90m²) you can expect to fit between 17-30 pupils, and still maintain the 1m safe zone. The 1m rule is an aspiration and not all labs will allow for this, but where it is possible you should do this.

An easy way to set this out in labs is to make a cross out of 2 metre rulers joined in the middle (see appendix 1 for photos and example layouts of 1m & 2m social distancing). Then, by marking on benches and the floor (‘duct’ tape is useful for this), you can assign workstations within the lab. Take care to ensure you align the crosses to meet the 1m distance. Once this is done you can soon see how many pupils the lab will safely accommodate with the pupils staying in their allocated seat. Clearly label each workstation with a number with 1 being furthest from the entry point, 2 the next furthest, and so on, ending with the workstation closest to the entry point. Remember to assign a teacher workstation as well, this should allow at least 2m distance from the pupils.

3. Measures within the laboratory/classroom

- **Sitting side by side and facing forwards**

If your lab has moveable tables you can experiment with different configurations to ensure the best layout. DfE advice only requires that **'where possible'** pupils should sit side by side and face forwards. In labs with fixed furniture this may well not be possible.

- **Working in pairs or groups**

The DfE guidance for September 2020 does not prevent pupils from working together on an activity, provided they are in the same bubble and maintain an appropriate social distance. This differs from the original summer term 2020 advice where pupils were expected to work individually. See management of equipment section below.

- **Movement around the lab**

This will need planning in advance. Things to consider include access to the door and/or fire exits, sinks & access to emergency equipment such as fire extinguisher.

You will need to consider how the pupils will access the equipment they need for the activity. The equipment needed by each pair/small group could be placed in a tray. Alternatively, items of equipment could be spaced out on side benches, provided that this area is still accessible to all pupils. The normal practice of getting each pair/small group to allocate one person the task of collecting apparatus should be rigorously enforced and pupils reminded of the need to stay 1m apart at all times.

- **Ventilation**

There is increasing evidence that good ventilation can reduce the transmission risk for COVID-19.

All working spaces should have as much ventilation as is reasonably practical to ensure the maximum natural air supply. Opening windows and running mechanical ventilation systems is helpful.

Air condition systems that re-circulate the air should be turned off or switched to a non-re-circulatory mode. Running fume cupboards is not likely to make a big difference (they only move a small amount of air), and, as these are often noisy, this is not recommended.

- **Emergencies**

You will need to consider how the teacher will respond and get to a pupil in the event of an emergency involving a pupil (see notes about immediate remedial measures and PPE)

4. Managing practical activities

Once in the lab a practical lesson will appear to be much more like a science lesson from the pre COVID-19 era.

The teacher leading the lesson will need to assess the non COVID-19 related risks of any activity that is carried out as they always would have done.

The head of department and lead/senior technician will need to work together to ensure that staffing levels are appropriate, and that staff are suitably qualified/trained/experienced to lead practical lessons. This will be particularly important if the availability of staff has changed and/or new/different/non-science staff are to be involved in teaching science.

Pupils and staff **must** wash their hands before **and** after handling any equipment, this should ideally be using soap, water and paper towels as this is the most effective method. If this is not manageable, then hand gels should be used, and these **must** be non-alcohol based (due to the flammability of alcohol based gels). When purchasing non-alcohol-based hand gels ensure they claim to kill 99.99% of viruses and bacteria (this is a regulated term in the UK, meaning the product must have passed a BSI test).

Pupils should use their own equipment like pens and pencils, and not share these. If teachers need to provide any of this equipment it should be given and not loaned.

- **Supervising pupils engaged in practical tasks**

Teachers must aim to maintain a 2m distance when observing pupils as they work through practical activities. This may present an issue if the teacher has concerns about the ability of the pupils to carry out the task safely without direct intervention from the teacher. If this is the case then the teacher should factor this into their risk assessment for the activity prior to the lesson and if necessary, consider a different approach to the activity, an alternative activity or doing a demonstration rather than a hands-on practical.

- **Management of science equipment**

Equipment can be shared by pupils within the same bubble. Departments will know how the bubbles are arranged in their school and can plan practical work accordingly.

Example 1. All of Yr7 are in a single bubble, and Yr7 lessons are happening in a maths rooms. The equipment for one activity can move from maths room to maths room as long as it is only used by Yr7 pupils. Teachers and technicians should be reminded to thoroughly wash their hands before **AND** after handling equipment.

Example 2. A Yr9 class in a single class bubble and pupils start a practical in one lesson, but they don't finish it. If the equipment is then removed **and not used by anyone else** then the equipment can come back out to be used again the following lesson by the same Yr9 class.

Example 3. All of Yr11 are a single bubble, and all Yr11 are based in general teaching rooms for most of their lessons, but will go to specialist rooms for practical work. The equipment used by the first group can be stored and brought back into use for a second Yr11 group, or it will need to be cleaned (or stored for 72 hours) if it is to be used by other bubbles.

- **Demonstrations**

Teachers will need their own set of equipment for demonstrations and to show pupils how to carry out activities themselves. This equipment will need to be quarantined or, where possible, meticulously cleaned before it is used by another teacher, or forms part of a set for pupils.

Equipment used by teachers to show pupils how to do an activity or part of an activity must not be 'borrowed' from one of the sets intended for pupils or given to pupils to use immediately after the teacher has handled it.

Both of these are common practice during class practical work. In practice, an additional set of apparatus will be needed for use exclusively by the teacher.

5. Transferring specialist equipment between bubbles – cleaning and/or quarantine

Once a practical activity is over, the equipment will need to be collected in. It is most likely that it will next be used by pupils from a different ‘bubble’.

Current DfE guidance (below) requires that any equipment being transferred between bubbles is either cleaned (‘meticulously’) or quarantined for up to 72 hours. (see note on the meaning of ‘*meticulous cleaning*’ below)

“Resources that are shared between classes or bubbles, such as sports, art and science equipment should be cleaned frequently and meticulously and always between bubbles, or rotated to allow them to be left unused and out of reach for a period of 48 hours (72 hours for plastics) between use by different bubbles”

CLEAPSS believes that it is not practicable to ‘meticulously’ clean science equipment in this way. There are a number of reasons for this belief:

- Cleaning may damage the equipment - mechanical damage or the effect of the cleaning product used (e.g. electronic balances & prepared slides)
- The equipment is so intricate that meticulous cleaning is either impossible or will take so long to do that it is impracticable (e.g. microscopes)
- There are too many items to make cleaning feasible in the time available (e.g. 4mm leads and associated crocodile clips)
- Meticulous cleaning is practically possible but there is insufficient technical support to make this process possible

As a consequence, CLEAPSS advises that quarantining the equipment for 72 hours will be the only realistic approach for most departments. This approach has the additional advantage that it is arguably more reliable than meticulous cleaning, particularly for intricate items where inaccessible parts may be missed during cleaning. Note: most science equipment will use some plastics in its construction, therefore, it is easiest to apply a blanket 72hr quarantine rule to all equipment.

Departments will need to set aside sufficient, secure storage space to allow the quarantining of equipment between bubbles.

It may be possible to re-arrange the preparation room(s) to set aside existing racking for this purpose. Alternatively, it may be necessary to re-purpose a teaching space (perhaps one that is too small to allow safe social distancing for normal sized groups). If the latter approach is to be used the additional space should be easily accessible from the science labs and must be secure.

Additional trays will likely be required

Resources placed in quarantine storage must indicate clearly when they are next ‘safe to use’. This can be done by placing labels onto the tray containing the equipment and by organising the storage to create clear zones that themselves indicate when the equipment placed in them, can next be used safely.

Day used	Next day available for use
Monday	Friday
Tuesday	Monday
Wednesday	Monday
Thursday	Monday
Friday	Tuesday

It should be noted that the quarantine space for equipment next available for use on Monday will need to be much larger than for the other days of the week because of the impact of the weekend.

Normal rules around the storage of hazardous chemicals will still apply. For example, flammables **must** be returned to the flammables store after use. If these have been used by pupils in a lesson, they will need to be subject to the same quarantine approach as the rest of the equipment, but this time located in the appropriate store. One way to make this easier would be for pupils to return items requiring specialist storage to a separate tray at the end of the lesson. This tray can then be labelled with the date for next staff use and placed in the appropriate store. (See Appendix 2 for example labels.)

If key equipment is needed before the 72-hour period has elapsed, perhaps because the total number of items is limited (e.g. low voltage power supplies), then cleaning could be considered to bring the item(s) back into use. Ensure the equipment is suitable for cleaning and sufficient time is available to allow that cleaning to be 'meticulous'

A department may be able to increase the availability of equipment that is suitable for cleaning by setting aside time, a day or an afternoon, when no new practical activity takes place and when meticulous cleaning of can take place. If this approach is to be considered, sufficient space will be needed to be provided. This may require a lab or classroom to be set aside, and sufficient staffing will be needed.

Furniture, including benches and stools will need to be cleaned as per the guidelines for all classrooms in the rest of the school.

'Meticulous cleaning'

CLEAPSS believes that the following advice is sensible when trying to achieve meticulous cleaning

'Meticulous cleaning' does not mean sterilise. CLEAPSS believes that careful and thorough cleaning which includes the use of an appropriate disinfectant is the intended meaning. This can be achieved in a number of ways

- Immersion in a solution of disinfectant
- Spraying with a disinfectant
- Wiping surfaces with wipes impregnated with disinfectant

In all cases in order for the disinfectant to work it needs to be in contact with the surface for the time specified on the product used. Typically, this is between 10 and 20 minutes, a requirement which is often overlooked.

Equipment that has become dirty during use will need to be cleaned **before** it can be disinfected as surface dirt and grease will prevent the disinfectant from working. Note: a dishwasher is very useful for this, although it does not disinfect.

The process is helpfully summarised in the flow chart taken from CLEAPSS Primary publication, *Explore*, in Appendix 3. Further details on cleaning specific items of equipment is given in Appendix 4.

6. Dealing with an emergency

If there is a small spill then this will need clearing up, possibly by the pupil (though they will need some guidance in this). Therefore, a small amount of paper towel or kitchen roll should be provided for this purpose. Larger spills will need to be cleared up by staff. In such cases, pupils should be evacuated from the room in an orderly fashion as you would at the end of a lesson, and then the spill can be dealt with. Chemicals spilt on the skin/hands should be washed off with lots of water as normal and not with hand sanitizer. Refer to [E-cards](#) for more information on this.

It is essential that you do not delay responding to any casualty. In some cases, the casualty may be able to deal with her/himself under your instruction. However, when close contact is needed, staff may 'break' the 2m exclusion zone to provide IRM (immediate remedial measures). See <https://blog.redcrossfirstaidtraining.co.uk/what-can-i-do-as-a-first-aider-at-work-or-in-public-during-the-coronavirus-outbreak?>

Staff who are designated, and currently trained, as first aiders should consult their training provider for the latest guidance on what PPE / changes to first aid practice are now in place. Note: CLEAPSS does not provide first aid training, therefore we are not able answer these questions.

Every room used for practical work, will need the following items, kept in a sealed clear plastic bag, marked 'For emergency use only' and stored near the eye wash station. These items are to be worn by the teacher or technician if they need to administer IRM.

- disposable gloves
- a fluid-resistant face mask (FRSM Type IIR),
- disposable plastic apron
- eye protection (face shield, safety specs or goggles),
- paper towels,
- plastic bags for the disposal of used equipment and for any contaminated clothing.

All PPE should be worn properly, and care taken when taking them off.

Wash hands **immediately and thoroughly** after removing any of this PPE.

Used PPE should be removed and stored in a bag, labelled as 'potentially contaminated' and then this should be disposed of appropriately (store for 72hrs and then place in normal non-recycling waste)..

7. Getting the most from demonstrations

Demonstrations are likely to be more common than ever. Clearly pupils cannot crowd around the front bench, however, if they stay in their work space they are unlikely to gain much from a traditional demonstration. A digital camera or visualizer coupled to a data projector can be used to project what is being demonstrated for all to see. Teachers will need to practice beforehand if they are not already experienced in using this equipment.

8. Prep rooms, science staff rooms and store rooms

Staff working in prep and science staff rooms will need to adhere to the 2m social distancing rules, this may reduce the working capacity of some smaller areas. Most chemical stores or other equipment store rooms are likely to be of a size that can accommodate only one person at a time.

9. Fume cupboards

Practicals which require the use of a fume cupboard will require careful planning. Demonstrations in fume cupboards will have to follow the same rules as per normal demonstrations already covered elsewhere in this guide. Where pupils need to use a fume cupboard, the 1m social distancing rule should still apply, and the lab spacing layout may need to be adjusted to take account of this

10. Technical support

The following will need to be considered as part of the planning by technicians, teachers, and the head of department

- Technicians working in prep rooms will need to adhere to the 2m social distancing rule which may reduce the working capacity of some smaller prep rooms, and, therefore, how much technical work can be carried out. The prep room could overflow into an empty lab if there is one available.
- Consideration should also be given to the division of tasks between technician team members working in the same prep room e.g. team members could be allocated specific subjects to support to reduce the need for technicians to be using/handling the same equipment.
- Prep rooms should have as much ventilation as is reasonably practical to ensure the maximum available natural air supply (see previous section on ventilation).
- Technicians will need access to their own PPE. They cannot share re-useable gloves or eye protection. They should be provided with non-alcohol-based antiseptic wipes for cleaning eye protection through the day. At the end of the day the eye protection will need to be sanitised. (See section on PPE below).
- Technicians should be routinely washing their hands, but, in particular, this should be done before handling equipment being prepared for practical lessons and after handling equipment which has been used in practical lessons.
- There must be sufficient technician time to allow prompt delivery and collection of practical resources as they cannot be left unattended in a lab/room which is occupied by pupils throughout the day. Give some thought to how the available technicians can manage this.
- Consider any manual handling issues arising from the transporting of resources.
- A system for managing the quarantine of equipment will need to be devised. This should include the allocation of sufficient storage space, which may mean using an additional secure storage area if space is limited in the prep room.
- If schools decide equipment must be meticulously cleaned between use by different bubbles then again thought must be given to how the available technicians can manage this. (See previous section on meticulous cleaning.)

11. Inadvisable practical activities

CLEAPSS believes that by following the advice in this guide the overwhelming majority of science practical activities can be carried out safely, albeit with very strict controls in place.

However, given the continued uncertainty around the rate of infection in the general population and the rapidly developing understanding of COVID-19 and its pathology it would be prudent, as a precautionary measure, **not** to attempt the following activities:

- Cheek cell sampling
- Lung volume / capacity & other breathing based activities
- Activities which make use of saliva
- Activities which make use of straws or other equipment for blowing through e.g. blowing through lime water or using a musical instrument which you blow into to create a sound

Once the rate of infection has reduced and/or when more is known about the virus it is likely that these activities will once again be able to be carried out safely.

CLEAPSS will of course be regularly reviewing this advice in line with changes to government guidance, so please do check for updates.

PPE (Personal Protective Equipment)

We know many schools donated all of their PPE to the NHS. You can expect national demand for PPE to be very high, so it may take time to restock supplies.

- Eye protection - teachers must **not** attempt practicals where eye protection is required but is not available in school. This may initially limit the practical work that some schools can do.
- Where schools have stocks of suitable safety specs and goggles, these will need sanitising or quarantining for 72hr between **every** use.

- To sanitise eye protection, CLEAPSS recommends that it should be fully immersed in freshly made Milton (or similar 'own brand' equivalent) sterilising solution designed for sterilising babies bottles. For those using Milton, follow [this guidance](#) for how to use either the tablets or fluid. Please note Milton disinfectant liquid is **NOT** suitable and should not be used as it is designed for floors and other hard surfaces and not babies bottles. For other brands of baby bottle sterilising solutions use the guidance from that manufacturer. When leaving the lab, pupils should place their used eye protection in a washing up bowl of sterilising solution (have enough of the solution to cover all the eye protection). This then starts the sanitising process. The eye protection should then be allowed to air dry. Avoid drying with tissues/paper towels as this can lead to scratching of the lenses. Once dry check for any damage and then return to use. Please note this should be done **every** time the eye protection is used, even with pupils in the same bubble. This is because eye protection sits on the face and is very close to the eyes, which is a known route of infection.
- We know of some new UV based sanitising units, and 'fogging machines' but we do not recommend the use of these, as their effectiveness has yet to be fully proven.
- Quarantine the used eye protection, like you would equipment for 72hrs. Refer to guidance above about how best to manage quarantining of equipment. This will only be a likely possibility where either very little practical work is taking place, or the school has large stocks of eye protection.
- The routine use of gloves by pupils doing practical work is not necessary, in fact it is rare that they are actually required. However, where we advise the use of gloves then the correct type should be worn, and they must NOT be shared. Refer to CLEAPSS [Guide GL349 Gloves for chemical protection: Buying guide](#) for more information on gloves.
- Staff will also need access to their own PPE, each member of staff should have personal eye protection and should be provided with non-alcohol-based antiseptic wipes for cleaning through the day. At the end of the day the eye protection used should be sanitised, see above guidance on how to do this.

Note: since lab coats are not PPE they are not required for practical work, although we wouldn't advise against teachers and technicians wearing their own lab coat if they wish to do so. Shared or department-based lab coats should be removed from use.

Face Masks / Face Coverings

You will need to follow any school and/or government advice on the wearing of face masks / face coverings, this should include guidance on the disposal of masks after use. Please note that homemade masks and most commonly bought masks won't be of the correct specification to be used as PPE in science, CLEAPSS has further guidance on the use of face masks as PPE in Guide [GL310 A guide to the use of Respiratory Protective Equipment \(RPE\) in school D&T and science](#)

Hand sanitiser

Remember, the thorough use of soap, water and drying with disposable paper towels remains the preferred method for cleaning hands. In some circumstances this will not be possible and this is where hand sanitisers have a role to play

Please take the below into account when choosing your hand sanitiser. :-

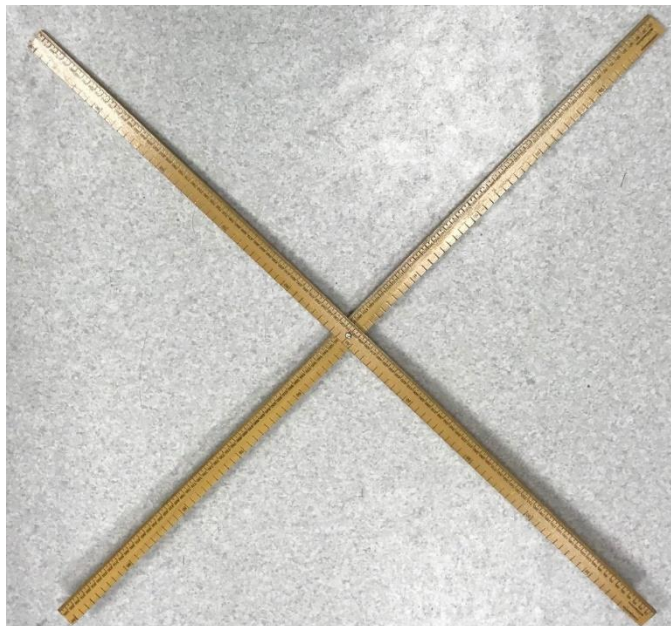
- Alcohol based hand gels are a real fire risk in labs and thus must **not** be used in science labs / lessons.
- Schools must **not** make their own gels, as the chemicals schools have or are able to buy are not safe for use on the skin, nor are school labs designed or clean enough to produce cleaning products for the skin.
- Schools which are dispensing hand sanitiser from large bulk containers to smaller ones, must label the small containers with similar labelling as the bulk container, to ensure the user is aware of any hazards it may present. This should also include any instructions on how to use the hand sanitiser.
- Schools could consider using skin friendly cleaning wipes, these should be low (<5%) alcohol or zero alcohol-based wipes which claim to kill 99.99% of bacteria and viruses.

If schools and colleges which are members of CLEAPSS have further questions about this please make use of our *Helpline* - <https://science.cleapss.org.uk/helpline/>

Appendix 1

1 m measuring device

Each 'arm' of the structure is 0.5m long measured from the centre of the cross.



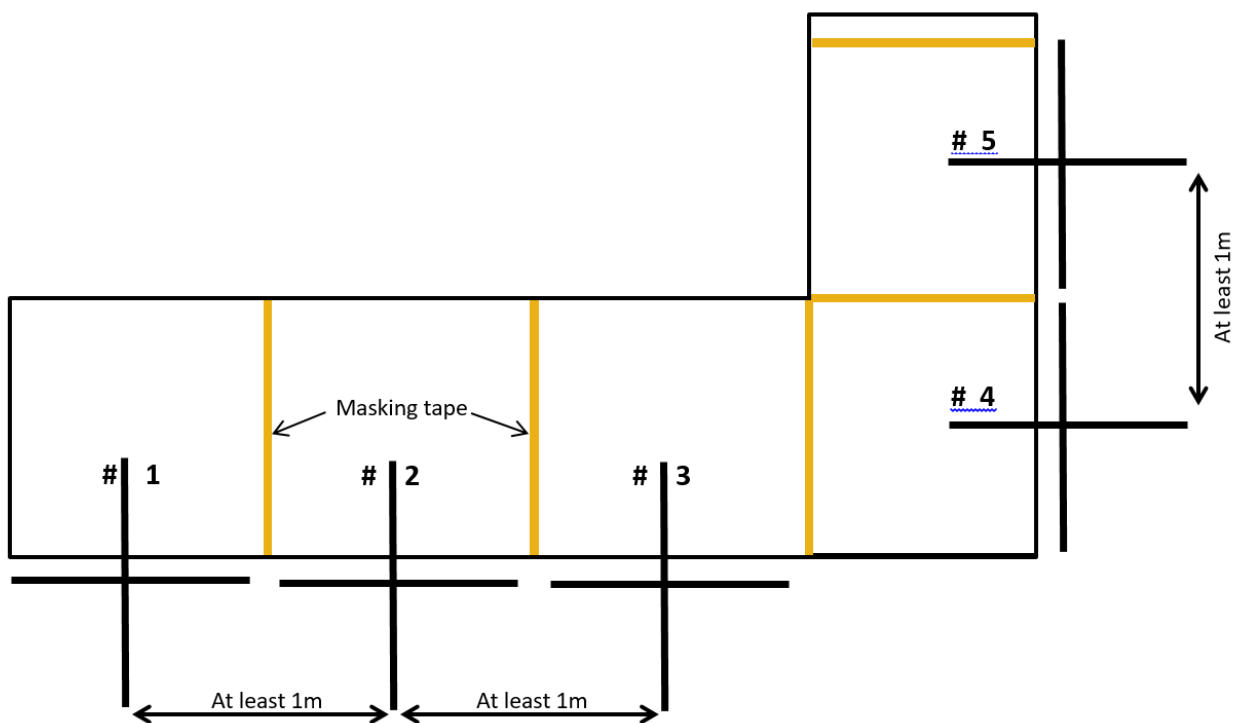
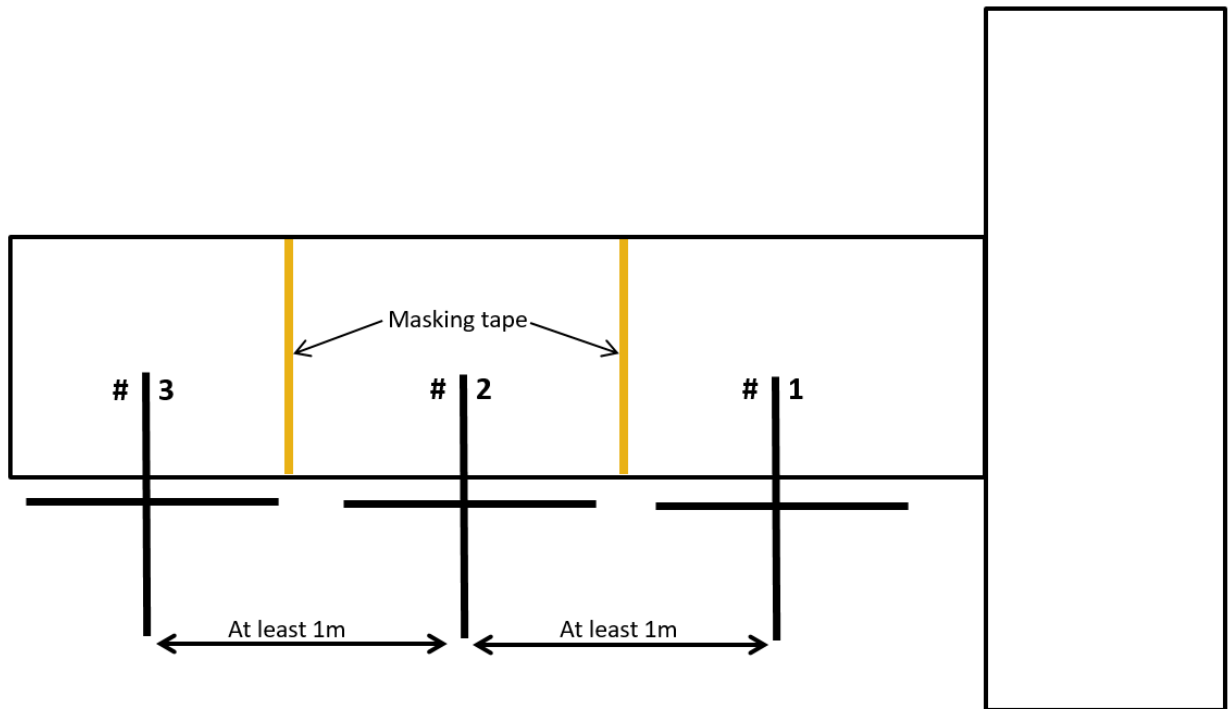
2 m measuring device

(Included for schools where 2m social distancing is required)

Each 'arm' of the structure is 1 m long measured from the centre of the cross.



Two examples of how a layout could work in labs using 1m social distancing



Appendix 2

Example labels for quarantined equipment, you may want to colour code and/or laminate your labels.

This equipment was last used by:

They finished using this on (Date):

This equipment **MUST NOT** be used before (Date):

@CLEAPSS www.cleapss.org.uk science@cleapss.org.uk Tel. 01895 251496 Emergency Phone 07565 114059



This equipment was last used by:

They finished using this on (Date):

This equipment **MUST NOT** be used before (Date):.....

@CLEAPSS www.cleapss.org.uk science@cleapss.org.uk Tel. 01895 251496 Emergency Phone 07565 114059



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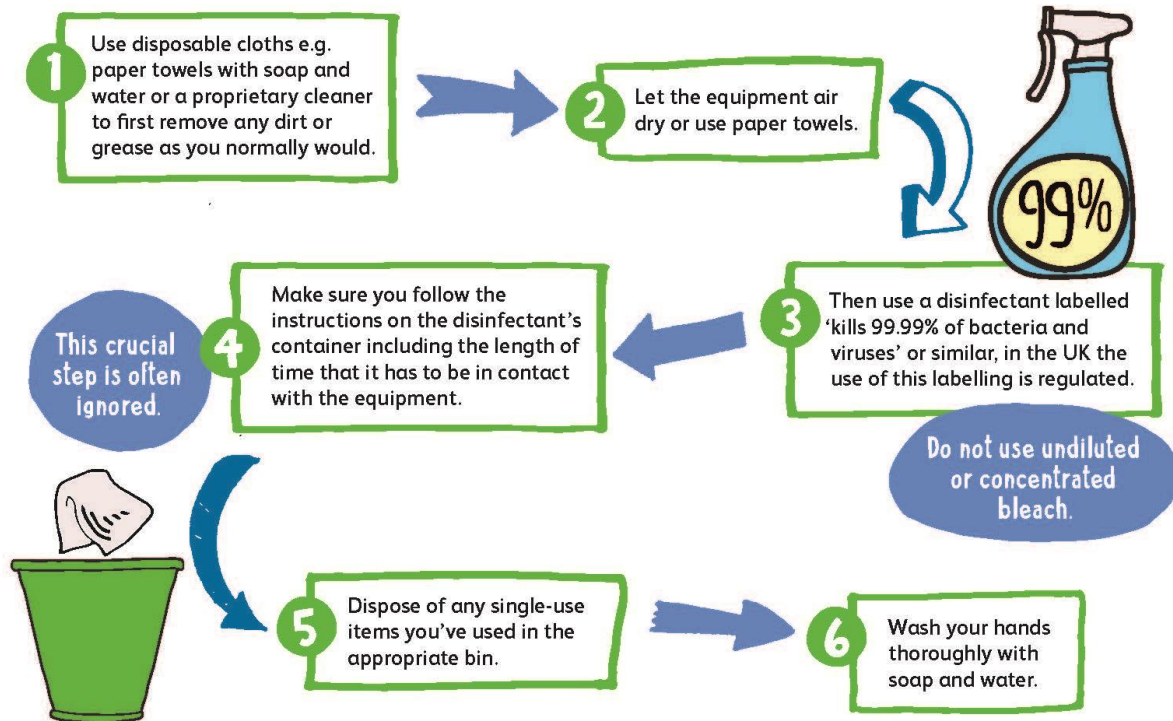
DOING THINGS SAFELY

CLEANING equipment

There's lots of confusing information about COVID-19 at the moment including topics like cleaning. All equipment given to children must be clean. Some are now wondering if they need to clean equipment after children do a 'hands on' activity and if so how.

The simplest strategy is to set aside, for 3 days, any equipment that your children have used, this will avoid anyone having to clean it.

We realise that in some circumstances this may not be possible. If someone is going to clean any science, D&T or art equipment the most effective way of doing this is to:



It's very important you follow any cleaning protocols that your employer has introduced. Remember you can't disinfect everything and even if you did it won't stay that way. Not touching your face and washing your hands are the most effective measures that you and your children can take to reduce the risk of catching the virus by contact with surfaces.

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For more information search **COVID**

Read the full version [here](#)

Appendix 4

Cleaning advice for common items of equipment

CLEAPSS believes that quarantining equipment for 72 hours is likely to be the most practicable option in most cases, however if equipment is needed before the 72 hours is up meticulous cleaning may be an option. See the table below.

Note: CLEAPSS has asked PHE for clarification as to what intended meaning of the expression ‘meticulous cleaning. Our guidance may change as and when we receive further advice.

Equipment type	Comments
Glassware	<p>Whilst awaiting clarification from PHE, Government guidance* for the restaurant sector advises that “<i>glasses, dishes and cutlery used by customers</i>” should be “<i>cleaned either by using a suitable detergent in a dishwasher rated for disinfection, or washing by hand in hot soapy water using bactericidal detergent</i>”.</p> <p>Domestic dishwashers of the type commonly used in school science departments are unlikely to meet the former requirement. Hand washing (...<i>using bactericidal detergent</i>) is an obvious alternative as would be using the dishwasher first, followed by immersion in a suitable disinfection solution.</p> <p>*www.food.gov.uk https://www.food.gov.uk/business-guidance/adapting-restaurants-and-food-delivery-during-covid-19</p>
Mains-powered electrical equipment (e.g. low voltage power supplies)	Wipe thoroughly with sanitising wipes, paying particular attention to touch surfaces such as switches. Allow items to dry before using. Always follow the instruction for the wipes you are using. Do not spray with sanitising spray
Items of equipment (not mains powered) e.g. Bunsen burners, 100g masses	Clean thoroughly using a suitable sanitiser either as a spray or wipe. Always follow the manufactures instructions.
Materials used in connection with microbiology activities	Sterilise as normal using a pressure cooker or autoclave
Very intricate pieces of equipment, e.g. oscilloscopes	Quarantine for 72 hours. Cleaning with sanitising wipes is unlikely to reach all areas and sanitising sprays may damage sensitive parts.
Small items e.g. 4mm plug leads and crocodile clips	Quarantine for 72 hours. Cleaning large numbers of these is likely to take too long to be practicable. Cleaning smaller numbers (for example for use by a teacher in a demonstration) may be appropriate, in which case wipes should be used. Avoid immersing items with metal parts into sanitising solutions.
Fabric items, e.g. cloths for static electricity activities	Quarantine for 72 hours. If possible, use disposable alternatives (recyclable if available) or wash in a washing machine set on a high temperature.
Reagent bottles used by pupils	Quarantine for 72 hours. Not practicable or safe to attempt to wipe over with sanitising wipes. (note stock bottles used by technicians are not shared between pupil bubbles and so do not need to be meticulously cleaned). Technicians should follow thorough hand hygiene measures at all times.
Books	Quarantine for 72 hours. Meticulous cleaning is not possible.

Eye protection	<p>See instructions elsewhere in this guide.</p> <p>Notes on disinfecting solutions:</p> <p>Milton follow this guidance on how to use either the tablets or the fluid. For other brands use the guidance from that manufacturer.</p> <p>Virkon & Biocleanse. Experienced staff such as the technicians who prepare equipment for microbiology will be familiar with these disinfectants. Used correctly these will sanitise eye protection however, for the following reasons, CLEAPSS recommends only the use of Milton sterilising solution or tablets:</p> <ul style="list-style-type: none"> • They are known to leave a solid residue on the surface of the equipment. In the case of eye protection this will transfer to pupils' skin and could cause irritation. • Pupils and parents may be anxious over the use of 'industrial' sanitisers on items placed close to the eyes. Using Milton will help schools manage these anxieties. • The long-term effects of these on eye protection are unknown at this stage. Milton sterilising solution or tablets are known not to affect the plastics typically used to make eye protection.
Lab-coats/Aprons	<p>CLEAPSS' standard advice is for pupils not to use these in science. They are not necessary as PPE, and using them creates a number of additional safety issues. Technicians/teachers may continue to wear their own lab coat, which must be laundered regularly and not shared.</p>
Fixed equipment, e.g. gas taps and sockets	<p>Having first turned off the supply at the isolating switch/valve, wipe thoroughly with sanitising wipes, paying particular attention to touch surfaces such as switches and valve handles. Always follow the instruction for the wipes you are using. Do not spray electrical sockets with sanitising spray.</p>
IT equipment (laptops, data projectors etc)	<p>Follow school guidance on the use of IT equipment</p>
Microscopes	<p><i>Use by pupils in different bubbles:</i> Quarantine for 72 hours. Cleaning with sanitising wipes is unlikely to reach all areas and sanitising sprays may damage sensitive parts.</p> <p><i>Use by different pupils within the same bubble:</i> Eye pieces must be wiped with a non-alcohol based sanitiser wipe, before AND after use ideally by the user. Eye pieces must NOT be immersed in sanitising solutions as this could damage the eye piece.</p>

Revisions list

Version 2.01 changes (10th August) :

- Fully revised version for use September 2020 onwards.

Version 2.02 changes (17th August) :

- Minor corrections and changes
- Labels added as additional file in Word format as [Guide GL343a](#) to enable schools to customise and adapt them.

Version 2.03 changes (19th August) :

- Added details about cleaning microscopes to appendix 4
- Added details about not using Milton disinfecting liquid
- Added extra detail about cleaning eye protection
- Added note that 1m pupil separation is an aspiration not a stringent requirement

Version 2.04 changes (20th August) :

- Minor re-wording of examples given in management of science equipment section
- Various other minor changes to wording, and layout changes