

Keep it clean!

It is likely that enhanced hygiene measures will be with us for some time to come. Your employer will have risk-assessed your school situation and put in place a policy. Health and safety law says that you must follow your employer's guidance and nothing in the following article should lead you to think, "I don't need to do that because it's not part of SSERC's guidance." Rather, what we're saying is that if your employer tells you to do X, this is how you might comply in a practical setting.

We will discuss at the following topics:

- Hand hygiene
- Equipment
- Work surfaces
- PPE

Hand hygiene

This is first on our list for a reason as it is the most important of all the likely control measures in a school, and will probably be 'last person standing' as restrictions are gradually removed. Soap and warm water is best for hand washing but could be difficult to implement in a classroom that has anything approaching normal occupancy. Even if a lab or workshop has a number of sinks, it is likely that only one of them has warm water. There are ways round this, and we elaborate in our online document [1] but it is likely that hand sanitiser will be seen as a more practical solution if the class is full. The school may decide to issue each pupil with their own sanitiser, or sanitising stations may be set up in individual classrooms or at work stations. Note that students with dirty or greasy hands should still use soap and water. There is no problem with students sharing a sanitiser dispenser - they will be cleaning their hands immediately after using it.

Alcohol-based or alcohol-free? If you use a sanitiser with at least 60% alcohol it will be effective. Some alcohol-free sanitisers are also effective but buyers will have to check whether or not a particular alcohol-free product is suitable.

If alcohol-based hand sanitisers are used, the bottles should be kept well away from any sources of ignition and no naked flames should be used for several minutes to avoid possible ignition and burns.

Equipment

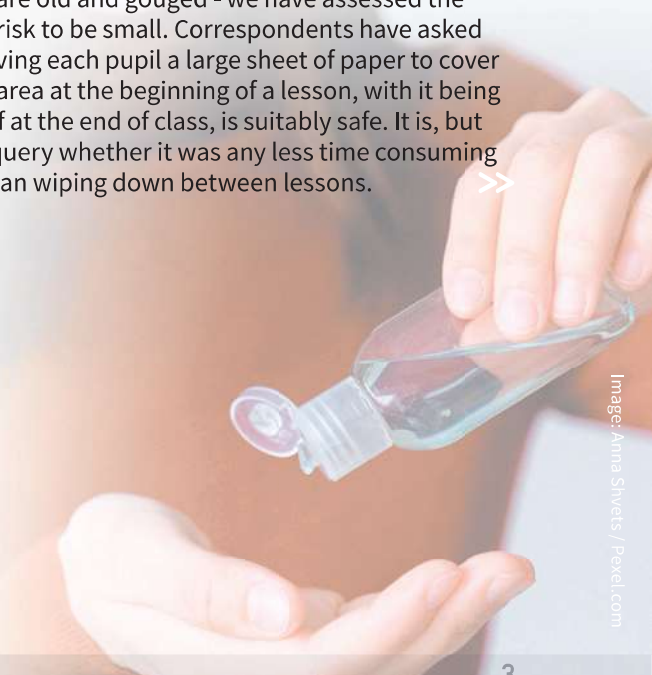
It is possible that infection levels will be low enough that only good hand hygiene will be required in the lab or workshop. If this is not the case and your employer requires you to minimise the risk of transmission that might occur through sharing equipment, there are two approaches to consider. Equipment can be cleaned with a suitable wipe after each use. This is likely to be relatively straightforward for items such as power supplies, hand tools and so forth, but less so for fiddly items such as crocodile clips and connecting leads. Flammable sprays should, of course, never be used where there is any chance of ignition. Glassware used for chemistry experiments should be cleaned between uses anyway so no additional measures are required. Normal dishwashing either manually or in a dishwasher will be sufficient.

Rather than being wiped down, equipment could be quarantined. 72 hours is the recommended period. It would be a rare practical department that could operate with anything approaching normality if swathes of equipment were unavailable for three days at a time, but this might be a suitable approach for the aforementioned 'fiddly' items.

Note that computer keyboards and even touch screens have been shown to operate effectively even when covered by a layer of cling film.

Work surfaces

Your school will have a policy on cleaning of desks and lab and workshop benches will be covered by this. It may be that a daily clean will be seen as sufficient if case numbers are low and good hand hygiene is observed. Do not worry if benches are old and gouged - we have assessed the additional risk to be small. Correspondents have asked whether giving each pupil a large sheet of paper to cover their work area at the beginning of a lesson, with it being disposed of at the end of class, is suitably safe. It is, but we would query whether it was any less time consuming or costly than wiping down between lessons.



PPE

Our online guidance document [1] discusses all relevant PPE and suggests suitable sterilising solutions. Here we will focus on eye protection. Sharing an item of eye protection between learners, be it a pair of safety glasses, indirect vent goggles or a face shield, should not happen unless the equipment is sanitised between wearers. As with hand-washing, this is a control measure that is likely to outlast most others. In an ideal world, every learner would have their own eye protection, labelled and kept in school. This is not a scenario that is likely to be commonplace. Indirect vent goggles with elasticated straps are the most problematic. The only really effective way is to fully immerse them in sterilising solution for 15 minutes, rinse them and allow to dry.

The real problem here is with the straps taking time to dry. A solution that will work for some designs at least is to make a strap for each learner using elastic and two bulldog clips. The straps are kept (separately) for each learner and the facepieces can be cleaned and dried more rapidly (or with an antiviral wipe). Details can be found here [2].

Having said that, indirect vent goggles are only required for activities involving corrosives and toxic chemicals. Safety glasses are fine for many activities and whilst the procedure for sterilising goggles is also appropriate for safety glasses, the latter could also be cleaned with an antiviral wipe and left to dry. If eye protection is used only infrequently, a 72 hour quarantine regime could be employed.



The above issues can be mitigated to an extent in some cases by changing the experiments, reducing concentrations for instance, such that eye protection is no longer needed.

Teachers should have their own set of PPE. This can be sterilised at the end of the day and left to dry overnight. <<

References

- [1] **More guidance:** The coronavirus situation is fluid - for the most up to date SSERC guidance, please go to <https://www.sserc.org.uk/health-safety/covid-19-back-to-school/>. The guidance there is also more comprehensive. Please do not hesitate to get in touch (enquiries@sserc.scot) if you have any questions about issues raised in this article.
- [2] <https://www.sserc.org.uk/wp-content/uploads/2020/09/Eye-Protection-and-Practical-Work.docx>.

Storage of hand sanitisers

Understandably, hand sanitiser fluid is much in evidence these days. Equally understandable, employers are keen to buy in bulk to reduce the costs.

There is, however, a problem with this strategy that seems to have been overlooked, that of storage.



The law is clear. Under DSEAR (the Dangerous Substances and Explosive Atmospheres Regulations) flammable substances in the workplace (including sanitiser) must be stored suitably. This means either in a flammable cabinet or (preferably) in a suitably constructed flammable store. Most chemical stores (if constructed according to our guidance) do meet these requirements even though they usually have cabinets in as well.

Containers placed around the school are exempt from this as they are classed as 'out for use'. But larger quantities can pose a problem - we recently heard from a school that had a delivery of 1750 litres!

This is a matter that employers will need to consider, ideally before the purchase of large quantities of sanitiser. <<