1. Introduction

The purpose of this document is to provide guidance in relation to subjects that involve using equipment in order to support the safe implementation of the practical aspects of those subjects.

This advice aligns with the public health advice provided by the Health Protection Surveillance Centre (HPSC) for the safe reopening of schools and educational facilities. Details of that advice can be found at: https://www.education.ie/en/COVID-19/interim-recommendations-for-the-reopening-of-schools-and-educational-facilities.pdf

The measures suggested in this guidance are subject to change in line with further advice that may issue from the Department of Education.

One of the key challenges is that of balancing the need for a practical and sensible level of caution with the need to provide a supportive environment for teaching and learning. This guidance identifies the steps subject departments can take to avoid the introduction of COVID-19 into the school while ensuring that students can engage in the practical aspects of the subjects that they are studying.

Seating plans should be made for each class group and retained by the subject teacher. To the extent that it is possible, students from the same base class should be seated together. In addition, the cleaning of rooms and equipment, and the need for students to take personal responsibility, will be key to successfully keeping practical rooms operational.

The layout of classrooms, equipment, facilities and the day-to-day organisational procedures around practical subjects differ from school to school. Therefore, subject departments will need to reflect on their own context and plan appropriately to enable a safe working environment for students, teachers and special needs assistants.

School management will need to provide disinfectant wipes and bins for the disposal of wipes at work units and/or near equipment in practical classrooms.

Many of the recommended measures are more practical in double or one-hour lessons; it is therefore suggested that subject departments look at how they arrange the practical and theory elements of the specification. For example, it may make more sense to plan to do a theory-based lesson in the single lessons and designate the doubles for practical aspects.

- All machines and hand tools should be cleaned/sanitised after the last lesson each day.
- For each individual lesson, the cleaning (with disinfectant wipes) of machines and tools should be done by the students and built into the typical housekeeping procedures that are the norm in practical classrooms such as cleaning down work areas, sweeping floors and general clean-up. For example, if a student uses a pillar drill, disinfectant wipes should be provided beside this machine and students should clean any contact areas after each use.
- Where practical, students should only use the hand tools assigned to them and not interchange these with other students. For example, in a Wood Technology lesson, students should only use their assigned chisels, mallet and marking-out equipment. Where hand tools such as measuring tapes and vernier calipers have to be shared, these should be wiped clean between each use.
- For the preparation and handling of student material such as metal, perspex, paper and timber, teachers should wear gloves to avoid direct contact, where it is safe to do so. A similar approach should be used when handing out this material to students. Where practical, designated storage space within the classroom should be made available for each individual class group to store their materials between lessons in order to reduce the risk of other students coming into contact with the materials.
- All students studying the Technology subjects should have their own safety goggles for using equipment such as the bandsaw or scroll saw. These should be kept and stored safely by each student and cleaned at home each evening. If a student is studying more than one of the practical subjects (including Science), one set of goggles is adequate.
- For practical demonstrations, digital technology such as the visualiser could be used to reduce the need for students to group together. Many visualisers also have the capability to record demonstrations so this will provide an additional support for students.
- It is important that face coverings are worn during lessons and unnecessary movement around the room should be avoided.
3. Art, Craft and Design

3.1 Large equipment and machinery
- All large equipment, machines, and hand tools are to be cleaned/sanitised after the last lesson each day.
- For each individual lesson, the cleaning (with disinfectant wipes) of machines and tools that are used should be undertaken by the students and built into the typical housekeeping procedures that are the norm in practical classrooms such as cleaning down work areas and drawing boards, sweeping floors and general clean-up. For example, if a student uses a printing press, disinfectant wipes should be provided beside the press and students should clean any contact areas after each use.
- Students should use disinfectant wipes to clean desks and drawing boards (where they are used) at the end of each lesson.

3.2 Individual equipment, materials and hand tools
- Where possible, students should have individual art-packs with everyday tools and materials such as pencils, paint brushes, paints, coloured pencils, pastels, charcoal, measuring equipment, mixing tray, sketchpad/notebook, eraser, sharpener, scissors. Each art department should adapt the contents of art packs to meet the needs of their school/class groups. This could be included on the students’ booklist or supplied by the school as part of the overall art department equipment/materials.
- Where practical, students should only use the tools/equipment assigned to them and should not interchange these with other students. For example, in a lino printing lesson, students should only use their assigned cutting tool, baren and bench hook equipment. Where possible, a class group should be assigned individual tools for the duration of the project/unit of learning and these should be stored in named ziplock bags (or similar) between lessons. Where equipment such as ink tubes and rollers have to be shared, these should be wiped clean between each use.
- Students should wash their own pallet and brush at the end of a lesson. Teachers should stagger students’ use of sinks to ensure social distancing. Students should wash their hands thoroughly after using the sink. Taps and sinks should be wiped down with disinfectant wipes at the end of the lesson.
- For the preparation and handling of student materials such as clay, drawing boards, paper and paint, teachers should wear gloves to avoid direct contact, where it is safe to do so. Gloves should be disposed of after each use. A similar approach should be taken when handing out materials to students and collecting materials or work from them.
• To avoid crowding around storage areas, students should leave wet work on their desks at the end of a lesson for teachers to place on drying racks. Teachers should distribute students’ work-in-progress at the beginning of lessons, taking appropriate steps to avoid direct contact.

• Where possible, each student should store their workpieces in their lockers to avoid others coming into contact with them. It may not be practical to store A2 folders and larger pieces of work in lockers. Where possible, drawings/paintings that can be stored in sketchbooks should be prioritised. Art room storage should be reserved for larger scale works as necessary.

3.3 Planning for social distancing

• When planning units of learning, teachers should consider how equipment will be assigned to class groups for the duration of a project/unit, in order to avoid cross contamination. All members of the art department should plan collaboratively to minimise overlap of use of equipment by rotating areas of learning where possible. For example, where ‘class group A’ is using ceramic equipment, other classes could, where practical, avoid using the same equipment until ‘class group A’ has finished their project and all equipment has been sanitised. This is particularly important where teachers share classrooms and/or tools and equipment.

• Layout of practical art rooms should follow the general social distancing health and safety advice provided. It is important that face coverings are worn during lessons.

For practical demonstrations, digital technology such as the visualiser could be used to reduce the need for students to group together. Many visualisers also have the capability to record demonstrations so this will provide an additional support for students.
4. Music

- For the moment, singing and the playing of wind and brass instruments should be minimised due to the additional risk of infection.

- Where such activities need to occur, a risk assessment on the size of the space, the ventilation levels within the space, and the positioning of singers/players with extended social distancing should be conducted.

- Any classroom performing should take place in a well-ventilated space with social distancing observed. Such activity should be for a maximum of 10 minutes with the space being aired appropriately afterwards. Student positioning should be back to back or side to side. Avoid singing and playing face to face.

- In terms of developing performing skills, it may be necessary in the interim for teachers to demonstrate and model the skill. Students can practise at the skill at home, record their efforts and then submit this to the teacher online.

- The sharing of classroom instruments such as smaller percussion instruments should be avoided as much as possible. It may be necessary to allocate instruments to specific students; these instruments should be sanitised before and after use. If students have their own instruments, they should bring those, ensuring they are appropriately sanitised and not shared with others.

- Before playing keyboards, pianos and other classroom instruments, all players should wash or sanitise their hands. Piano keys should be disinfected with cleaning cloths before and after being played.

- Social distancing between the pianist and other performers and between all performers should be observed.

- Audio equipment, music stands and other devices in use should all be regularly wiped down.

- It will be important to follow the manufacturer’s instructions in relation to the cleaning and disinfecting of electronic keyboards and other electronic devices.

- Larger extra-curricular school groups such as choirs, and wind and brass ensembles should be avoided at present.
5. Science

5.1 Introduction
Teachers have flexibility to consider how best to safely manage laboratory equipment and PPE within the parameters of current public health guidelines and taking account of the context of their own school. The following guidelines provide an example of what may be considered when making decisions about implementing the curriculum, including affording students the opportunity to engage in scientific investigations.

5.2 Specific arrangements
- Where Science is an elective subject consisting of a mix of students from different base classes, students should be seated with members of their class cohort.
- It is important that face coverings are worn during lessons. If practical, all available space should be utilised and reconfigured to ensure physical distancing.
- Group sizes for practical work should be kept as small as resources and space allow and students should work in discrete groups where possible.
- The application of enhanced cleaning regimes within laboratories and the need for students to take personal responsibility will be key to successfully keeping the laboratories operational.
- If practicable, non-alcohol based hand sanitiser or skin friendly disinfectant wipes should be used in the laboratories. If alcohol gels are used, care should be taken to avoid exposure to any source of ignition.
- Students should use disinfectant wipes to clean their bench area and chair/stool on entering the room and before leaving.
- The ideal arrangement for the use of safety glasses is for each student to have his/her own labelled set of eye protection which they store safely and clean each evening. Safety glasses should not be shared between students. Each member of staff should have his/her own personal eye protection.
- Shared lab coats should not be used unless they can be laundered between each use. If necessary, students could wear an old shirt as protection over their clothes.
- Sharing laboratory resources between groups should be avoided/minimised where possible.
- Where the sharing of laboratory equipment between students cannot be avoided, each piece of shared equipment should be cleaned/wiped between each use.
- Glassware should be cleaned after use by washing by hand in hot, soapy water using a bactericidal detergent and dried with a paper towel. Other equipment such as mains-
powered electrical equipment, gas taps and sockets should be wiped thoroughly, paying particular attention to touch surfaces such as switches.

- Priority should be given to senior cycle students in relation to the use of microscopes. In doing so, students should use their safety glasses and the lens and focus wheels should be cleaned between each use.

- Science departments should revise risk assessments of investigations in line with current public health guidelines. Activities involving saliva, such as cheek cell sampling, the use of saliva as a source of amylase or the use of straws (for example, blowing into limewater or collecting small organisms using a pooter) should be avoided at present. If students are investigating the effect of exercise on breathing or pulse rate this could be carried out at home and results discussed in class.

- Visits to a farm or fields in Agricultural Science should comply with the health requirements in place at the time of the visit. If the visit is not possible, plan for school provision of alternative equivalent learning, for example a virtual tour of a farm.

- Where an activity requires the use of equipment that is difficult to clean, the activity may instead need to be carried out as a teacher demonstration or virtual demonstration. In order to reduce the need for students grouping together during a teacher demonstration, a visualiser or mobile phone camera could be connected to a data projector. Recording the demonstration would allow students to access it at home for revision.

- Due to the extra cleaning of equipment required, time must be allocated for this at the start and end of lessons; the measures here are more suitable to double or one-hour lessons rather than to single lessons.
6. Physical Education (PE)

- Physical activity (PE) is important and students should be encouraged to participate in PE provided they are well and asymptomatic. It is always advised that students do not train/ exercise when ill.

- It is suggested that, where practical, PE lessons should take place outdoors. If this is not possible, the external PE hall doors should be opened.

- Where group work is being undertaken, students should stay in the same group for the duration of the lesson. As with all physical group activities, it is important to be mindful that with more vigorous exercise the area of spread of respiratory droplets is greater and so a larger area should be allowed between participants where possible and in keeping with public health advice.

- Avoid sharing of water bottles. Each student should bring his/her own water bottle and towel clearly labelled with this/her name. The sharing of items that are difficult to clean or disinfect should be discouraged. The sharing of towels, clothing, or other items used to wipe faces or hands should not be allowed. Students should bring in their own training gear. School sets of jerseys or bibs should not be used unless completely necessary. In such cases, they should be washed at the highest temperature after every use.

- Spitting should be strictly forbidden (COVID-19 Interim recommendations for the return to sports activities for children and adolescents).

- Whistles should not be used indoors; alternative mechanisms can be used to attract students’ attention.

- Physical guides, such as signs or markings on floors or pitches, should be displayed to make sure that teachers and students are aware of social distancing requirements. Distance between students should be created when explaining drills or the rules of a game.

- Where practical demonstrations are required, the teacher may have to repeat the demonstration to a number of smaller groups. This will help to prevent all students grouping together. Unnecessary physical contact, such as high fives, handshakes, or hugs should be discouraged. Alternative ways of celebration or greetings that do not involve contact should be used.

- In relation to contact sports, it is advised to avoid as much as possible the contact aspect of sport and instead focus on fitness and skills, which can allow maintenance of social distancing.
• Clean and disinfect shared equipment between uses by different people. For each individual lesson, the cleaning (with antibacterial wipes) of equipment should be done by the students after they use them.
• For items that may be difficult to decontaminate such as helmets, students must, where possible, provide their own.
• The toilet areas will need regular disinfecting to maintain appropriate hygiene standards.
• A whole-school approach to facilitate students wearing their PE uniform/gear to school on the day that they have PE should be agreed to avoid the use of communal changing rooms.
• Subject department planning is key to ensuring the activities/curricular areas that are being taught are selected carefully to reduce the need for close contact. When planning for teaching, learning and assessment, the PE department should review the subject specifications and identify learning outcomes that are non-contact and could be done individually and remotely (for students who are unable to attend school). This will be particularly relevant for schools offering LCPE where restrictions related to COVID-19 may impact the practical activities selected.
• Communicate all new measures and rules which will need to be implemented related to COVID-19 with parents in advance of the resumption of PE. Ensure that parents and students understand what measures are obligatory.
• Extra-curricular physical activities both at lunchtime and after school will need to be discussed and a decision made if they are viable. Schools should refer to the HPSC guidance on Return to Sport COVID-19 Interim recommendations for the return to sports activities for children and adolescents for further guidance.
• If schools are renting out their sporting facilities, for example, in the evening or at weekends, they should carry out a risk assessment to ensure they can guarantee that all public health guidance is being adhered to. Similarly, if schools are using external facilities, a similar risk assessment should be conducted and measures put in place to ensure that the guidance is observed.
• Ensure the availability of hand sanitisers adjacent to the PE hall and/or changing area.
• Where possible, one-way circulation should be provided for entering/leaving the PE area.
• While activities up to Grade 3 of COVID-19 Interim recommendations for the return to sports activities for children and adolescents (page 5) would be possible, individual activities should be prioritised as these present less risk. A list of activities that present a relatively low/moderate risk might include:
• Athletics – jumping, running activities (except relay); throwing activities such as shot-put, discus, javelin, and hammer could be considered but would require the equipment to be cleaned/wiped after each use so may not be practicable

• Adventure activities – orienteering, kayaking

• Aesthetic activities – individual dance and gymnastics performances

• Divided court games – badminton, tennis, table tennis. Volleyball, squash and handball could be considered but as these activities involve players sharing the same court space they may be considered slightly higher risk

• Field games – skills sessions where skills are developed outside a game context

• Health-related activity / personal exercise and fitness – circuit training or other activities performed individually; weight training could be considered if equipment is cleaned by each participant after use

• Theoretical aspects of learning – for example, promoting physical activity, ethics and fair play elements of LCPE. Additionally, any of the other elements that are prescribed for LCPE (physical activity and inclusion, technology, media and sport, gender and physical activity, business and enterprise in physical activity and sport) could be studied.

Additional time at the start and/or end of PE lessons may be necessary to facilitate cleaning of equipment that has been used. Where possible, students should wipe down/clean equipment at the end of a lesson. A more thorough cleaning/sanitising of all equipment that has been used should be carried out at the end of the school day.
7. Home Economics

7.1 Student working arrangements in practical lessons.

7.1.1 Food studies
To ensure that a safe and practicable working environment can be provided, it is advised that a maximum of one student per work station completes practical work in a lesson; this will possibly result in students completing practical work on alternating weeks. Students not completing practical work could complete tasks linked to the practical work being undertaken.

7.1.2 Textiles
When completing practical textiles work, students should use their own equipment or be provided with equipment for their sole use for the duration of a project. Where possible, when planning for units of learning, the focus of practical textiles work should be on crafts that do not necessitate use of the sewing machine. When the sewing machine is used, students should operate the machine individually, be adequately skilled to work independently, and wipe down contact areas on the machine using antiseptic wipes after use.

7.2 Planning
- Teachers should plan to educate students about the additional procedures to be followed in practical lessons to ensure a safe working environment for all at this time; for example, guidance should be provided on the safe use of disinfectant wipes on electrical appliances.
- As always, the focus of practical classes should be on the development of practical, procedural and cognitive skills. When planning units of learning, teachers should consider how these skills can be developed in their school in a COVID-19 context.

For example, a teacher is planning a practical lesson for students who have previously used the cooker hob and the oven. The food studies classroom contains fewer cookers than work stations. The teacher designs the following learning intentions: students will be able to dice an onion into even-sized pieces, apply their knowledge and understanding of food safety and hygiene guidelines to prevent cross-contamination, and be able to use and explain how an egg functions as a binding ingredient. If the teacher decides to use a beef burger recipe as the means of achieving these learning intentions it does not matter if students fry or bake the beef burgers as the method of cooking is not a learning intention in the lesson.

Dishes which require more than one student to use the same hob for a considerable length of class time should be avoided. In situations where using the hob is central to the intended learning in the lesson and students are sharing hobs, teachers could consider
if it is possible to alter the work sequence to allow students rotating access to hobs. *For example, when making an apple crumble, half of the students could prepare the apples and stew them on the hob whilst the other students prepare the crumble topping and then vice versa.*

- If teachers plan for students to bring perishable ingredients into school, arrangements should be made at a local level to facilitate the safe storage of food and to minimise student movement in the school building.

### 7.3 Other arrangements in practical lessons

- Mechanical ventilation and windows should be used to ensure good ventilation in classrooms.
- It is important that face coverings are worn during lessons.
- Wherever possible, resources that are not easily washable or wipe-able should be removed from work stations. Teachers should consider the equipment provided in work stations and remove unnecessary items which can be distributed as they are needed.
- Systems that reduce students' movement from their work stations around the room should be considered and explored; for example, storing equipment at work stations rather than centrally, and teachers distributing specialised equipment and ingredients (if appropriate). Where student movement in the classroom is necessary, such as when emptying waste bins, staggered access to the areas in the classroom should be facilitated.
- In some schools, ingredients are provided to students. When teachers are handling and distributing ingredients, gloves should be worn to avoid direct contact with ingredients. Gloves should be disposed of between tasks. A similar approach could be taken when distributing and collecting specialised equipment which is not available in work stations.
- In many schools, some frequently used ingredients are provided by the school. Teachers may request that students bring all ingredients needed or a school may continue to provide some ingredients; for example, an individual salt and pepper cellar and a bottle of cooking oil could be placed at each work station. Such containers, if used, should be cleaned with disinfectant wipes after use.
- For practical demonstrations, digital technologies such as the visualizer could be used to reduce the need for students to group together. Many visualisers also have the capability to record demonstrations so this will provide additional support for students.
• Contact points on equipment such as cooker knobs should be wiped using disinfectant wipes by students after use. Disinfectant wipes and bins for disposal of wipes should be provided at work units and/or near equipment including microwaves.

• All cloths, towels, oven gloves and aprons should be laundered at the end of each lesson. Where possible, students should provide their own apron, oven gloves, cloths and towels and bring them home to be washed. Where this is not possible, teachers should wear gloves when handling used items. In situations where items are laundered in schools, clear lines of demarcation should be evident between clean and dirty items. Ideally, cloths should be laundered in a washing machine on a hot wash cycle (at least 60°C) and then tumble dried.

• As students will be working independently, teachers may decide to allow students to taste their own dishes to evaluate their work. In such situations, students should use their own cutlery or disposable cutlery to taste food. As per normal, this should be undertaken hygienically. Alternatively, students could complete the evaluation of the taste and texture of dishes or products as a homework task.

• As usual, for each lesson, the cleaning of equipment/utensils that are used should be undertaken by the students and built into housekeeping procedures. In situations where sinks are not available for every work station, to maintain social distancing, teachers should stagger access to sinks or provide wash-up basins at work stations. Before washing up, students should wash their hands thoroughly, and the draining board/ workbench should be disinfected. Dishes should be washed using hot water and disinfectant washing-up liquid. Before drying equipment/utensils, students should sanitise their hands. When drying dishes, students should use a clean tea towel and place items in work stations/presses.

• At the end of each lesson, students should use disinfectant wipes/sprays to wipe down all work surfaces used and contact points such as press handles.

• Work surfaces and contact points on appliances should be cleaned/sanitised after the last lesson each day.