

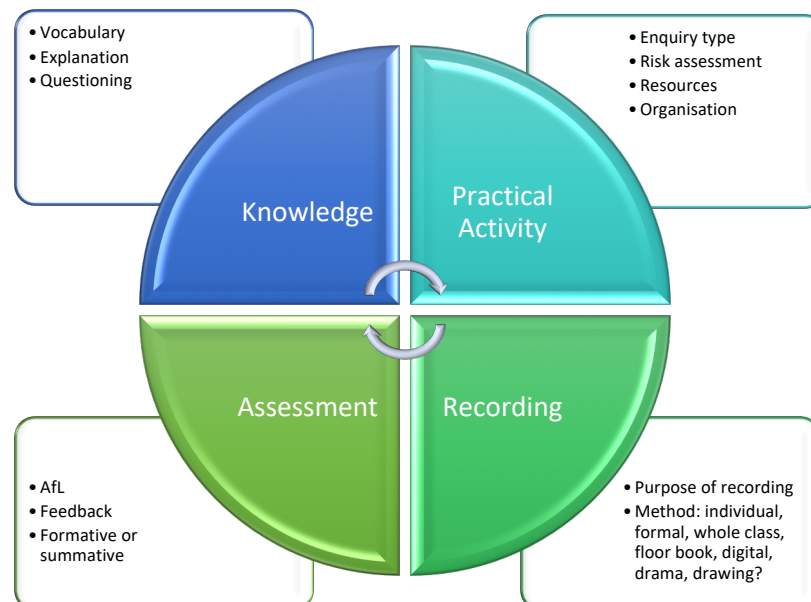
Can we teach practical science lessons during the COVID-19 pandemic?

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As Transform Trust's Science Expert, I am passionate about the teaching and learning of Science in Primary Schools. I bring 21 years of teaching, in a range of Primary Schools, both in the UK and Hong Kong, to the role of Associate Headteacher. In every class, that I have taught, from Nursery to Y6, I always sought to include high-quality practical science lessons because I believe that science is as much a practical subject as it is theoretical. I believe it is the hands-on activities that helps to embed conceptual knowledge. This blog aims to suggest realistic ways to keep practical application at the heart of our science curriculum.

Schools are returning to full opening for children this week and next. Children and teachers will be getting used to new ways of working. Most children are sitting facing the front (in rows or at spread out desks). Teachers will be adapting their style of delivery to a more didactic approach of stand at the front and talk. So what happens to science lessons in this new socially-distanced, hand-sanitising world we find ourselves in? The DfE guidance (28th August update) states that the curriculum should be broad and ambitious from the start of the year building to a full curriculum by summer term 2021.

There may be a temptation to teach science in a dry theoretical way avoiding practical activities. However, I believe that this need not be the case. Within a structured approach to teaching science, practical activities still must play a part in developing understanding of scientific concepts in order to cement depth of learning as well as engaging and exciting children. It goes without saying that there will need to be careful planning of practical activities within the lesson design process. This model sets out prompts for the planning process when crafting your science lessons. It is not a planning structure nor is it a lesson structure. It is more an aide-memoire for the lesson designer.



At this time, assessing risk as part of the planning process has never been more necessary. Unless your school requires more, this could just be an annotation on your lesson plan to indicate that you have thought through the risks involved with the activity you have chosen. CLEAPPS - as part of their remit to provide advice for schools around organising and managing science activities safely - have

produced an excellent set of guidelines for schools (<http://primary.cleapss.org.uk/Resource-File/P110-Practical-activities-in-a-bubble.pdf>).

The key points from their advice are:

- There are some fundamental safety measures that must be in place: working in your bubble and using equipment that has been cleaned or quarantined for 72 hours.
- Use disposable equipment where possible
- Work outside as much as possible
- Wash all hands before starting the practical activity
- Organise children for group working to minimise equipment being touched by multiple children by assigning individual roles
- Either set up trays with equipment for each individual, pair or group, or place equipment at different points in the classroom to be collected in an orchestrated way if this movement is allowed in your school's risk assessment.
- Avoid any activities where there is high risk of transmission of the virus e.g. blowing across bottles or through straws

Ideas for activities:

- www.primary.cleapps.org.uk range of ideas complete with ready-made risk assessments
- www.pstt.org.uk teaching ideas and resources for primary science teaching
- www.explorify.wellcome.ac.uk activities and ideas as well as resources for promoting oracy through science

So to sum up, carry on with practical activities in your science lessons. Keep yourselves, and your children, safe through careful choice and planning of the activities. And, let's not kill the joy that it is to be found in primary science!