



Suggested Distance Teaching Project Plan for an 8 Week Session on Air Quality

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Assumptions prior skill requirements

- Target audience: Post 16 science students (or bright Year 11s)
- IT skills: Students know how to use the web, PowerPoint (or similar), spreadsheet manipulation and can organise web conferencing.
- Additional IT skills, the students can make speech or video inserts into presentation

Web resource location

<https://pstt.org.uk/resources/curriculum-materials/post-16-citizen-science-air-pollution>

Time schedule – we suggest 1 hour weekly teacher contact session with the students and 3/4 hours min per week the students should be working independently/coming together as a working party to discuss their findings.

Week 1:

Teacher session: Introductory lesson, by web link, guiding students through the resource and the task to be set. Assign working groups of 3/4 students per group. Use the model investigation in the resource as an example for students to see how to use/approach data.

Students: spend time learning how to use the Air Quality Website and come up with a question that they (small groups) want to research.

Week 2:

Teacher session: students present back to the teacher on what they propose to research. Students issued with detailed task sheet explaining project requirements – see Criteria for Presentation

Students: present findings on research & question they propose to investigate. Students identify & confirm roles within the working group and start to carry out research

Week 3:

Teacher session: students present back to the teacher findings from first week of research. Inform groups to have first draft of findings ready for week 5.

Students: students present back on initial findings & continue research/preparing report.

Week 4:

Teacher session: students present back to the teacher findings from second week of research. Check groups are working in line with the detailed task sheet project requirements, provide guidance.

Students: Continue research and preparing first draft of project report/findings.

Week 5:

Teacher session: Using detailed task sheet for guidance go through/listen to first draft report/presentations of research. Provide feedback for groups to act on to further support findings and/or meet the requirements of a project using the guidance given.

Students: Present initial draft of project report to the teacher. Use feedback from teacher session to finish off research and amend initial draft.

Week 6 & 7:

Teacher session: Students give time-limited presentation to the class and groups give back constructive criticism to be considered in final submission.

Student: Prepare time-limited presentation & act on feedback given to produce final draft of the project report.

Week 7/8:

Teacher session: Students deliver final project presentation. Complete questionnaire.

Students: Prepare final project presentation and submit project report to the teacher.

Possible Additional Task

In addition to the PowerPoint (or other) presentation, the students also give the main information points in an A3 poster format. Blank format to be created by school just as a research poster would be for a research poster presentation.

Criteria for Presentation

[The detailed task sheet explaining project requirements]

These are suggestions that can be adapted.

- Using the school's presentation format (if there is one), include a title of the research presentation
- The names of the authors' First name, initials, family name.
- Date of submission of presentation.
- Reason why the pollutant(s) and area(s) were chosen.
- Compulsory research. How does the concentration of (named pollutant) vary during Feb-May 2020 for (a named area) compared with Jan-Mar 2019.
- How data needed to answer the scientific research question was gained. Fully referenced.
- Information as to the challenge posed by the named pollutant(s). Referenced (authors (surname, initials), 'Title' (Year). Journal, **volume**, (pages).
- Research (outside of resource) to find regional, national or world limit levels for named pollutants.
- Graphs to be drawn to include title, axis titles, units (where relevant), key (where relevant), caption for the graph/chart.
- How data needed to answer the scientific research question was gained. Fully referenced.
- Conclusions
Acknowledgements
- Final Page to include email of corresponding author(s).