***environmental SCIENTIST* journal: learning resource notes**

The purpose of these educational resource notes is to provide a format for informal, seminar-style discussions of the topics explored in the latest edition of the journal of the Institution of Environmental Sciences.

Through discussion of the ideas and issues presented within the journal, they aim to supplement and enhance students’ knowledge and understanding of a broad range of environmental science issues and provide insights into the professional concerns of practising environmental scientists.

**Articles in focus**

The following articles have been selected as particularly relevant for in-depth discussion, allowing for wider debate of the key elements of the article topic. Some specific questions/points you may wish to consider when reading and discussing these articles are outlined.

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| Learning outcomes | * Understand the main ideas discussed in the publication
* Describe the main conclusions and their relevance to the environmental science sector
* Critically reflect on the main concepts discussed
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| Format | * Articles of particular interest are to be selected and shared with the group to read ahead of the discussion. Suggestions of focus articles are attached here
* Small group discussions of articles that closely relate to programme content to supplement learning
* Discussions can be led by participants or the tutor, using the ‘articles in focus’ resource to prompt debate and aid the conversation
* The suggested discussion points and questions provided in this pack for selected articles can be used as a starting point to guide the discussion
* Students can be encouraged to choose to discuss any of the other articles within the issue
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e*nvironmental SCIENTIST* **Improving indoor air quality**Vol 30, Issue 2

<https://www.the-ies.org/resources/improving-indoor-air-quality>

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| **Topic overview**  | We spend an average of 90 per cent of our time indoors, and good indoor air is paramount for our optimum health, wellbeing and productivity. However, indoor air is often contaminated with pollutants from indoor sources, as well as those that have migrated from outdoors, and thus may potentially present a greater risk to our health than outdoor air. Articles examine topics that are important to understanding how to achieve good indoor air quality, including the importance of good indoor air, a monitoring campaign in nurseries and schools, and indoor air quality considerations for companies returning to the office following Covid-19. |
| **Articles in focus** |
| **Ventilation****Emma Gibbons (p.12)** | **Article overview:** This article explores building ventilation, indoor air quality, and their links with good building design and operation. |
| * What constitutes good ventilation and why is it important?
* There are three ventilation methods outlined in the article, what do you think are the main benefits of each method?
* The article makes recommendations for building ventilation design and operation, what do you think the challenges are to achieving good design and/or operation?
* Thinking about a building you know well; how successful do you think the building ventilation design is?
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| **The inequality of indoor air quality legislation and****assessment criteria****Oliver Puddle (p.26)** | **Article overview:** This article outlines how air quality legislation and assessmentcriteria vary depending on whether you are outside or indoors. |
| * Referring to the question raised in the article introduction, who is responsible for the air we breathe outdoors, in our place of work, in a recreational premises and in our homes?
* Why do you think workplace/occupational exposure regulatory limits are less stringent than ambient air quality regulatory limits? Why are more pollutants/substances included in COSHH EH40 than the UK Air Quality Objectives?
* Why might it be difficult to establish and enforce indoor air quality legislation in all indoor environments? Our homes, for example?
* The WHO air quality guidelines are applicable in Europe, why might these not be appropriate for developing countries? What is the wider significance of this in terms of social inequality?
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| **Collaborating on assessment, design and management****Chris Rush (p.50)** | **Article overview:** This article emphasises the need for coordinated input at all stages of a building project to achieve the best indoor air quality. |
| * Describe the roles the various stakeholders involved during both the design and operation stages of a building have in influencing indoor air quality.
* Outline how the collaboration of various disciplines around the topic of indoor air quality within a project team may vary throughout the stages of a building project.
* List and describe three potential reasons for poor indoor air quality and impacts on the users of a building as a result of a lack of or ineffective collaboration between disciplines.
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