

UNIT: Thermal Comfort

Activity 2: Assessment of thermal comfort in the classroom¹



| Factor | Description | Yes | No | Comment: |
|----------------------------|--|----------------|----|----------|
| | | mark with an X | | |
| Air temperature | Does the temperature in the classroom feel warm or hot? | | | |
| | Does the temperature in the classroom fluctuate throughout the school day? | | | |
| | Does the temperature in the classroom change a lot during hot or cold seasonal variations? | | | |
| | Are there heat sources in the classroom? How many can you identify? | | | |
| Radiant temperature | Is the temperature inside the classroom affected by the weather outside? | | | |
| Humidity | Does the air in the classroom feel too dry? | | | |

¹ This audit utilised in this activity has been adapted from the following original source material:
<https://www.hse.gov.uk/temperature/thermal/index.htm>



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|-----------------------|--|--|--|--|
| | | | | |
| | Does the air in the classroom feel too humid? | | | |
| | Does the humidity in the classroom fluctuate throughout the school day? | | | |
| | Would you say that there is a seasonal fluctuation in classroom humidity? | | | |
| Air movement | Is cold air or warm air blowing directly into the classroom? | | | |
| | Is there a draught in the classroom? | | | |
| | Do you find that the classroom becomes stuffy throughout the school day? | | | |
| Activity Level | Would you say that you are more aware of your thermal comfort when you are seated for a long period of time? | | | |
| | Would you say that you are less aware of your thermal comfort when you are more active and engaged? | | | |



| | | | | |
|--------------------------------|--|--|--|--|
| | Does poor thermal comfort affect your ability to concentrate? | | | |
| Clothing and insulation | Can you as a student make individual alterations to your clothing in response to the thermal environment? (i.e. adding or removing layers) | | | |

Discussion Questions

1. Do you think your school or classroom has a thermal comfort problem?
2. Based on your knowledge of concepts related to thermal comfort, what do you think are ideal conditions of temperature, humidity, and air flow to maintain thermal comfort and productivity in the classroom?
3. What improvements do you think could be made to your classroom or school to improve thermal comfort for everybody in the classroom?
4. Do you feel that you have a lot of control over your thermal comfort? Would you like more control over your thermal comfort throughout the school day?
5. How much control or responsibility over thermal comfort do you think students should be given?

Part 3: Explore options for action

STEP 1: Generate ideas and exploring options for action

Once you have identified a change that needs to be made, there can be a number of different ideas and options for actions that might produce the change.

- What have other schools done to improve thermal comfort and indoor air quality in way that does not increase energy consumption?
- What types of action do we want to take?
- How will we know if the changes we make have been successful in using less energy?

STEP 2: Identify resources and constraints

It is important to know what resources are available. It is also important to identify 'constraints' that might limit the ability to implement an idea or may reduce its potential success.

- Who might be available to help us?
- What might limit our actions?

STEP 3: Communicate your ideas as a proposal

You have generated an idea for an action that will change an aspect of thermal comfort management in your school. To gain support for your idea it is important to communicate this to stakeholders. Different methods can be used to do this including video, PowerPoint presentation, Google Slides, graphics, photographs and data from your energy audit.

- With whom do we need to share our plan?
- What will the changes cost or involve?
- Who will undertake the actions?
- How will we use feedback to improve our proposal?

STEP 4: Gain agreement for the proposal

Before you finalise your proposal, it will be important to consult with the principal and others and respond to any suggestions that are made.

- Has our class and have others in the school agreed to our ideas?
- Has our principal agreed?
- What modifications are needed to gain the endorsement of the principal and school executive?

STEP 5: Put the proposal into action

As we implement our proposal we need to follow our project plan. We may also identify issues with the project and discuss solutions. Record them below.

Are we following the steps set out in the proposal?

Are we keeping our focus on the purpose for the action clearly in mind?

How will we know we are implementing the plan as it was agreed or intended?

Monitor and record the implementation

The progress of the project needs to be monitored and documented. The collection and

