Objectives:

1. Meet to decide type of room and delegation of roles for project.
2. Measurement of room’s internal and external dimensions.
3. Meeting with the building surveyor who designed the house to review plans and find out composition of walls ceiling and floor.
4. Drawing up of the room’s floor plan and section views of the building showing composition of the room’s walls and floor and ceiling.
5. Pictures taken of room and building showing both internal and external walls.
6. Discovery of thermal resistance values and u-values for each material.
7. Calculation of:
8. Total resistance and u-values for walls and ceiling and floor.
9. Ambient air temperature in the room.
10. Surface area of the walls, floor and ceiling.
11. Internal surface temperatures of the walls, ceiling and floors.
12. External surface temperatures of the walls, ceiling and floors.
13. Heat losses to ventilation.
14. Heat lost to external wall.
15. Heat lost to internal wall.
16. Heat lost to window.
17. Heat lost to ceiling.
18. Heat lost to floor.
19. Total amount of heat energy lost to surroundings.
20. Heat gained from electrical devices in room.
21. Heat gained from radiator.
22. Total heat gained.
23. Interpretation of results
24. Graphing of results
25. New calculations including extra insulation:
    1. Total resistance and u-values for walls and ceiling and floor.
    2. Ambient air temperature in the room.
    3. Surface area of the walls, floor and ceiling.
    4. Internal surface temperatures of the walls, ceiling and floors.
    5. External surface temperatures of the walls, ceiling and floors.
    6. Heat losses to ventilation.
    7. Heat lost to external wall.
    8. Heat lost to internal wall.
    9. Heat lost to window.
    10. Heat lost to ceiling.
    11. Heat lost to floor.
    12. Total amount of heat energy lost to surroundings.
    13. Heat gained from electrical devices in room.
    14. Heat gained from radiator.
    15. Total heat gained.
26. Interpretation of new results
27. Graphing of new results
28. Writing of the report
29. Submit report for 17:00, Monday the 24th of February.