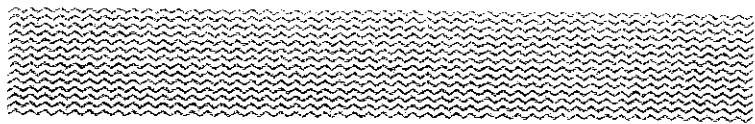


Worksheet



Basic energy audit – lighting

Name (s): STELLA + SIENNA P. Date: 28/7/2021

Name of room being audited CLASSROOM 1 + 2 (PREP MAIN BUILDING)

Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:

Incandescent light

No. of globes: ~~1~~



Compact fluorescent light

No. of globes:



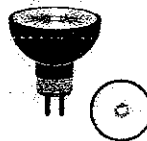
LED light

No. of globes:



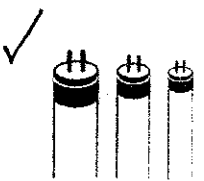
Halogen light

No. of globes:



Fluorescent light tubes ✓

No. of globes: 16 x T8



T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

The thinner they are the more energy efficient they are.

✓ Other globe types ~~1~~

No. of globes: 3

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.

3 x 250 W MERCURY-VAPOUR
PENDANT LIGHTS

2

Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

STUDENT MADE SIGNS.

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? Room (1) = 360 Room (2) 230

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

Room (2) LOW LIGHT - SOME DISPLAYS WERE BLOCKING LIGHT.

Worksheet Basic energy audit – heating and cooling

Name (s): STELLA + SIENNA P. Date: 28/7/21

Name of room being audited CLASSROOM 1 + 2 MAIN BUILDING (PRIP)

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? R1
18 °C R2
19°C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

Wurundjeri



Spring

What Aboriginal season is it?

April - July = Waring, Wombat
August = Guling, Orchid



Summer



Autumn

64

Heating and cooling appliances in the room

Does this room have air conditioners (AC)?

Yes No

How many (Tally) 1 each

Does this room have heaters?

Yes No

How many (Tally) 1 each

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
--------------------------------	---------------------------	----------	---------------

Unit 1	<input type="checkbox"/> AC <input type="checkbox"/> heater	Heater & Cooler no temperature reading.	
--------	---	---	--

Unit 2	<input type="checkbox"/> AC <input type="checkbox"/> heater		
--------	---	--	--

Unit 3	<input type="checkbox"/> AC <input type="checkbox"/> heater		
--------	---	--	--

Unit 4	<input type="checkbox"/> AC <input type="checkbox"/> heater		
--------	---	--	--

Unit 5	<input type="checkbox"/> AC <input type="checkbox"/> heater		
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Unit 6	<input type="checkbox"/> AC <input type="checkbox"/> heater		
--------	---	--	--

Unit 7	<input type="checkbox"/> AC <input type="checkbox"/> heater		
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Unit 8	<input type="checkbox"/> AC <input type="checkbox"/> heater		
--------	---	--	--

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters?

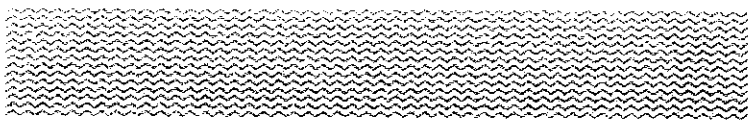
Yes No

Do you have signs showing correct temperatures for air conditioners and heaters?

Yes No

What other observations did you make?

Worksheet



Basic energy audit – windows and doors

Name (s): STELLA + SIENNA P. Date: 28/7/21

Name of room being audited CLASSROOM 1 + 2 MAIN BUILDING (PEEP)

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
(Note: Most north and west-facing windows need shading or shelter)

North
 West
 East Rm1
 South Rm2

Are there any curtains or blinds on the windows?

Yes Rm1
 No

Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light?

Yes
 No

Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?)

Yes
 No

Are there trees or an awning outside the window?

Yes
 No

Can windows be opened to allow natural airflow or cross-ventilation?

Yes
 No

Is there any draughtproofing on the doors?

Yes
 No

Rm2
 N
 Y some
 N/A
 some
 Y
 Y

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

NIL

List three actions in this room that will save energy at your school:

- 1 REMOVE ARTWORK FROM WINDOWS / BLINDS - ROOM 1
- 2 UPGRADE HEATER + COOLER TO DUAL UNIT SHOWING TEMPERATURE
- 3 INSTALL BLINDS IN ROOM 2

Basic energy audit – discussion with relevant stakeholders

Organise to meet with (or invite to your class) your principal, business manager, IT person and maintenance team to gather more information. Use these questions as a guide to understand more about energy in your school. This information will be useful when completing the RSS energy module checklist.

What insulation does our school have? For example, ceiling, walls, double-glazed windows. Which rooms have insulation?

How do we know the lights, air conditioners and heaters are working properly and that the reflectors (lights) and air filters (air conditioners) are clean?

Do our tea/coffee and hot water systems boil water 24 hours a day or do they have timers? If we have timers, what times are they programmed for?

Worksheet

Basic energy audit – lighting

Name (s): MAXWELL Date: 28/7/21

Name of room being audited CLASSROOMS Rm 7 + 9 MAIN BLD (Y2K S16)

Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

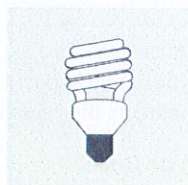
What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:



Incandescent light

No. of globes: ~~2~~



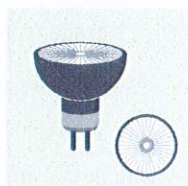
Compact fluorescent light

No. of globes:



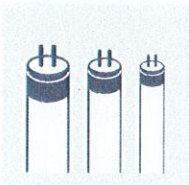
LED light

No. of globes:



Halogen light

No. of globes:



Fluorescent light tubes

No. of globes: 16 x T8

T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

The thinner they are the more energy efficient they are.

✓

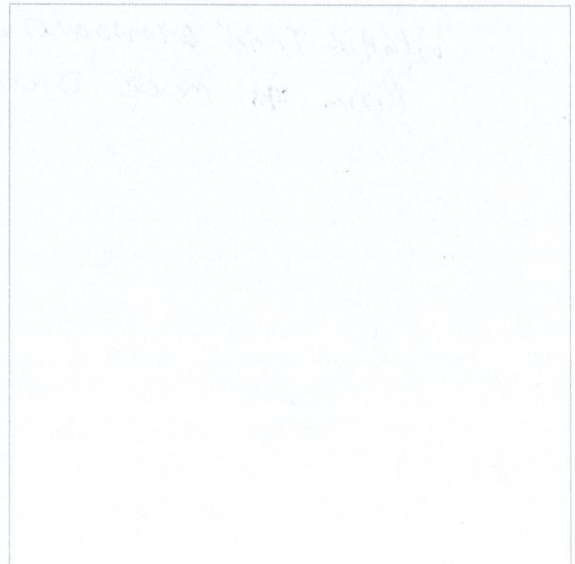
Other globe types ~~LED~~

No. of globes: 3

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.

3 x 250 W MERCURY VAPOR PENDANT LIGHTS



Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

[Redacted comment area]

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? 450=Rm 7 330=Rm 9.

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

HIGHER THAN STANDARD.
 Room 7 more DIRECT SUNLIGHT?

Worksheet Basic energy audit – heating and cooling

Name (s): MAXWELL Date: 28/7/21

Name of room being audited Crossrooms 7 + 9 main Bld (7R S16)

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? R7 R9
21 °C 18 °C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

Wurundjeri



Spring

What Aboriginal season is it?

April - July = Waring, Wombat
August = Guling, Orchid



Summer



Autumn

9

Heating and cooling appliances in the room

Does this room have air conditioners (AC)?

Yes No How many (Tally)

Room 9

1

Room

7 = DUNE UNIT

Does this room have heaters?

Yes No How many (Tally)

1

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input type="checkbox"/> AC <input checked="" type="checkbox"/> heater	22°C Rm 7.	22°C
Unit 2	<input type="checkbox"/> AC <input checked="" type="checkbox"/> heater	20°C Rm 9.	20°C
Unit 3	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 4	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 5	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 6	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 7	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 8	<input type="checkbox"/> AC <input type="checkbox"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters?

Yes No

Do you have signs showing correct temperatures for air conditioners and heaters?

Yes No

What other observations did you make?

Basic energy audit – windows and doors

Name (s): MAXWELL Date: 28/7/21
 Name of room being audited CURSSROOM 7+9 MAIN BLD (YEAR 5/6)

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
 (Note: Most north and west-facing windows need shading or shelter)

R7 West
 R9 North
 East
 South

Are there any curtains or blinds on the windows?	<input type="radio"/> Yes <input checked="" type="radio"/> No	R7	R9
Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light?	<input checked="" type="radio"/> Yes <input type="radio"/> No		Y
Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?)	N/A <input type="radio"/> Yes <input type="radio"/> No		Y
Are there trees or an awning outside the window?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Some	Y
Can windows be opened to allow natural airflow or cross-ventilation?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Some	Y
Is there any draughtproofing on the doors?	<input checked="" type="radio"/> Yes <input type="radio"/> No		Y

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

NIL

List three actions in this room that will save energy at your school:

- 1 INSTALL BLINDS IN ROOM 7
- 2 DELAMP SOME LIGHTS IN ROOM 7
- 3 REMINO ROOM 7 - TEMP MAX 20°C (HATED)

Basic energy audit – discussion with relevant stakeholders

Organise to meet with (or invite to your class) your principal, business manager, IT person and maintenance team to gather more information. Use these questions as a guide to understand more about energy in your school. This information will be useful when completing the RSS energy module checklist.

What insulation does our school have? For example, ceiling, walls, double-glazed windows. Which rooms have insulation?

Blank area for handwritten notes.

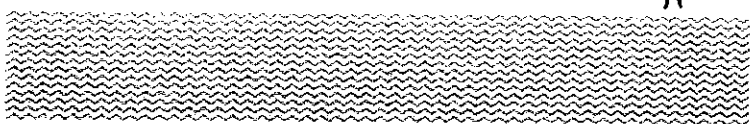
How do we know the lights, air conditioners and heaters are working properly and that the reflectors (lights) and air filters (air conditioners) are clean?

Blank area for handwritten notes.

Do our tea/coffee and hot water systems boil water 24 hours a day or do they have timers? If we have timers, what times are they programmed for?

Blank area for handwritten notes.

Worksheet



Basic energy audit – lighting

Name (s): ABBI M + SIENNA T. Date: 28/7/21
 Name of room being audited Room 13 + 14 CLASSROOMS BUILDING 2 (4R3/4)

Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:

Incandescent light



No. of globes:

Compact fluorescent light



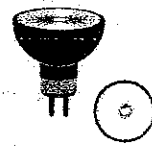
No. of globes:

LED light



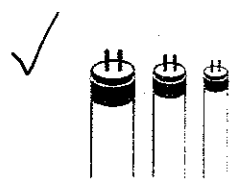
No. of globes:

Halogen light



No. of globes:

Fluorescent light tubes ✓



No. of globes: 16 x T8

T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

The thinner they are the more energy efficient they are.

Other globe types Nil

No. of globes:

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.

Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? Room 13 = 320 Room 14 = 420

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

Room 14 - 420 - HIGHER - MORE DIRECT SUNLIGHT?

Worksheet Basic energy audit – heating and cooling

Name (s): Abbey M + Sienna T Date: 28/7/21
 Name of room being audited Room 13 + 14 Classrooms Building 2 (Yr 3/4)

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? R13 20 °C R14 19°C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

Wurundjeri



Spring

What Aboriginal season is it?

April - July = Waring, Wombat
August = Guling, Orchid



Summer



Autumn

Heating and cooling appliances in the room

Does this room have air conditioners (AC)? Yes No How many (Tally) 1 ea

Does this room have heaters? Yes No How many (Tally) 1 ea

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input type="checkbox"/> AC <input checked="" type="checkbox"/> heater	18°C Rm 13	20°C Room 14
Unit 2	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 3	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 4	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 5	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 6	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 7	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 8	<input type="checkbox"/> AC <input type="checkbox"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters? Yes No

Do you have signs showing correct temperatures for air conditioners and heaters? Yes No

What other observations did you make?

Basic energy audit – windows and doors

Name (s): ABBIE M + SIENNA T. Date: 28/7/21
 Name of room being audited Room 13 + 14 CLASSROOMS BUILDING 2 (YR 3/4)
 Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
 (Note: Most north and west-facing windows need shading or shelter)

North
 West South East

- Are there any curtains or blinds on the windows? Yes No
- Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? Yes No
- Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No
- Are there trees or an awning outside the window? Yes No
- Can windows be opened to allow natural airflow or cross-ventilation? Yes No
- Is there any draughtproofing on the doors? (AN INTERNAL) Yes No

N/A. internal.

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

NIL

List three actions in this room that will save energy at your school:

- 1 DE-LAMP SOME LIGHTS IN ROOM 14 - LUX HIGHER THAN STANDARD
- 2 _____
- 3 _____

Basic energy audit – discussion with relevant stakeholders

Organise to meet with (or invite to your class) your principal, business manager, IT person and maintenance team to gather more information. Use these questions as a guide to understand more about energy in your school. This information will be useful when completing the RSS energy module checklist.

What insulation does our school have? For example, ceiling, walls, double-glazed windows. Which rooms have insulation?

How do we know the lights, air conditioners and heaters are working properly and that the reflectors (lights) and air filters (air conditioners) are clean?

Do our tea/coffee and hot water systems boil water 24 hours a day or do they have timers? If we have timers, what times are they programmed for?

Basic energy audit – lighting

Name (s): CLARE + COROIE Date: 28/7/21

Name of room being audited CLASSROOM 21 + 22 PORTABLES YEAR 1/2

Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:

Incandescent light

No. of globes:



Compact fluorescent light

No. of globes:



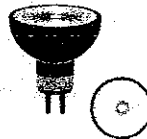
LED light

No. of globes:



Halogen light

No. of globes:

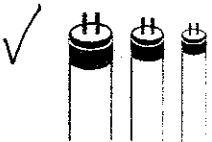


Fluorescent light tubes ✓

No. of globes: 12 x T8

T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

The thinner they are the more energy efficient they are.



Other globe types NIL

No. of globes:

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.

Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? Room (21) = 230 Room (22) 130

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

LIGHT IS LOWER - POSTER DISPLAYS BLOCK LIGHT.

Worksheet Basic energy audit – heating and cooling

Name (s): CLARE + LORIE Date: 28/7/21

Name of room being audited ROOM 21 + 22 PORTABLE CLASSROOMS

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? RM 21 19 °C RM 22 20 °C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

WURUNDJEEI



Spring

What Aboriginal season is it?

APRIL - JULY = WARING, WOMBAT

AUGUST = GULING, ORCHARD



Summer



Autumn

Heating and cooling appliances in the room

Does this room have air conditioners (AC)?

Yes

No

How many (Tally) 1 each

Does this room have heaters?

Yes

No

How many (Tally) 1 each

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input checked="" type="checkbox"/> AC <input checked="" type="checkbox"/> heater	Rm 21 20°C Dual Unit	20°C (H)
Unit 2	<input checked="" type="checkbox"/> AC <input checked="" type="checkbox"/> heater	Rm 22 20°C Dual Unit	20°C (H)
Unit 3	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 4	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 5	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 6	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 7	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 8	<input type="checkbox"/> AC <input type="checkbox"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters?

Yes

No

Do you have signs showing correct temperatures for air conditioners and heaters?

Yes

No

What other observations did you make?

Basic energy audit – windows and doors

Name (s): CLARE + LORIE Date: 28/7/21

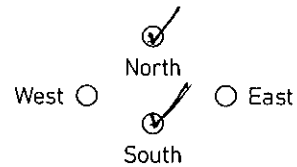
Name of room being audited ROOM 21 + 22 PORTABLE CLASSROOMS

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
(Note: Most north and west-facing windows need shading or shelter)



Are there any curtains or blinds on the windows? Yes No

Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? Yes No *Some art*

Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No

Are there trees or an awning outside the window? Yes No

Can windows be opened to allow natural airflow or cross-ventilation? Yes No

Is there any draughtproofing on the doors? Yes No

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

External door

List three actions in this room that will save energy at your school:

- 1 REMOVE ART WORK FROM WINDOWS - BLOCKING LIGHT
- 2 FIT DRAUGHTPROOFING TO EXTERNAL DOORS
- 3 REMOVE POSTERS BLOCKING LIGHT.

Basic energy audit – discussion with relevant stakeholders

Organise to meet with (or invite to your class) your principal, business manager, IT person and maintenance team to gather more information. Use these questions as a guide to understand more about energy in your school. This information will be useful when completing the RSS energy module checklist.

What insulation does our school have? For example, ceiling, walls, double-glazed windows. Which rooms have insulation?

How do we know the lights, air conditioners and heaters are working properly and that the reflectors (lights) and air filters (air conditioners) are clean?

Do our tea/coffee and hot water systems boil water 24 hours a day or do they have timers? If we have timers, what times are they programmed for?

Basic energy audit – lighting

Name (s): VAUGHAN + DEACON Date: 28/7/21
 Name of room being audited ROOM 23 + 24 PORTABLE CLASSROOMS (YEAR 11/2)

Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:

Incandescent light

No. of globes:



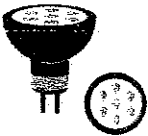
Compact fluorescent light

No. of globes:



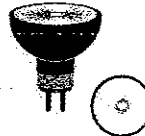
LED light

No. of globes:



Halogen light

No. of globes:

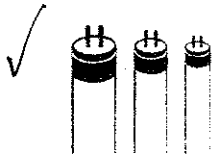


Fluorescent light tubes ✓

No. of globes: 12 x T8

T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

The thinner they are the more energy efficient they are.



Other globe types NIL

No. of globes:

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.

Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? Rm 24 = 200 Rm 23 = 210

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

LOW LIGHT - DISPLAY POSTERS IN WAY OF LIGHT

Worksheet Basic energy audit – heating and cooling

Name (s): VAUGHAN + DEACON Date: 28/7/21

Name of room being audited R 23 + 24 PORTABLE CLASSROOMS YR 1/2

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? 19 °C (BOTH)

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

Wurundjeri



Spring

What Aboriginal season is it?

April - July = Waring, Wombat
August = Guling, Orchid.



Summer



Autumn

Heating and cooling appliances in the room

Does this room have air conditioners (AC)? Yes No How many (Tally) 1 ea

Does this room have heaters? Yes No How many (Tally) 2 ea

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input checked="" type="radio"/> AC <input checked="" type="radio"/> heater	19°C Dual Unit	Rm 24 19°C
Unit 2	<input checked="" type="radio"/> AC <input checked="" type="radio"/> heater	22°C Dual Unit	Rm 23 22°C
Unit 3	<input type="radio"/> AC <input type="radio"/> heater		
Unit 4	<input type="radio"/> AC <input type="radio"/> heater		
Unit 5	<input type="radio"/> AC <input type="radio"/> heater		
Unit 6	<input type="radio"/> AC <input type="radio"/> heater		
Unit 7	<input type="radio"/> AC <input type="radio"/> heater		
Unit 8	<input type="radio"/> AC <input type="radio"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters? Yes No

Do you have signs showing correct temperatures for air conditioners and heaters? Yes No

What other observations did you make?

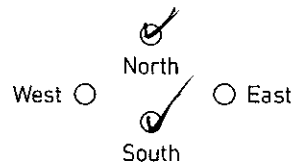
Basic energy audit – windows and doors

Name (s): VAUGHAN + DEACON Date: 28/7/21
 Name of room being audited Room 23 + 24 PORTABLE CLASSROOMS YR 1/2
 Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
 (Note: Most north and west-facing windows need shading or shelter)



- Are there any curtains or blinds on the windows? Yes No Some North
- Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? Yes No Some
- Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No
- Are there trees or an awning outside the window? Yes No Some
- Can windows be opened to allow natural airflow or cross-ventilation? Yes No
- Is there any draughtproofing on the doors? Yes No

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

External Doors

List three actions in this room that will save energy at your school:

- 1 FIT DRAUGHTPROOFING TO EXTERNAL DOORS
- 2 MOVE DISPLAY POSTERS BLOCKING LIGHT.
- 3 ROOM 23 NEEDS TO LOWER SET TEMP. ON HEATER

Basic energy audit – discussion with relevant stakeholders

Organise to meet with (or invite to your class) your principal, business manager, IT person and maintenance team to gather more information. Use these questions as a guide to understand more about energy in your school. This information will be useful when completing the RSS energy module checklist.

What insulation does our school have? For example, ceiling, walls, double-glazed windows. Which rooms have insulation?

How do we know the lights, air conditioners and heaters are working properly and that the reflectors (lights) and air filters (air conditioners) are clean?

Do our tea/coffee and hot water systems boil water 24 hours a day or do they have timers? If we have timers, what times are they programmed for?

Basic energy audit – lighting

Name (s): STELLA + SIENNA P. Date: 29/7/21

Name of room being audited MAIN ADMINISTRATION OFFICE

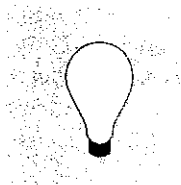
Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

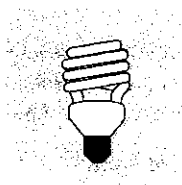
What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:



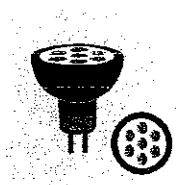
Incandescent light

No. of globes: _____



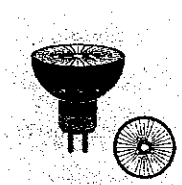
Compact fluorescent light

No. of globes: _____



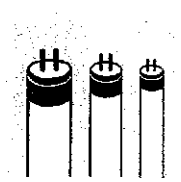
LED light

No. of globes: _____



Halogen light

No. of globes: _____



Fluorescent light tubes

No. of globes: 9 x T8

T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

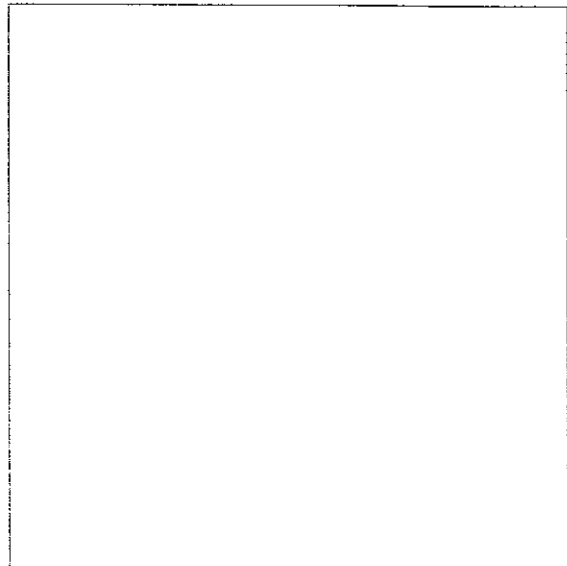
The thinner they are the more energy efficient they are.

Other globe types

No. of globes: _____

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.



Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No *NA*

Do you have any other comments?

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? 420

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
<u>320</u>	Classrooms with desks, <u>offices</u>
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

HIGHER THAN STANDARD.

Worksheet Basic energy audit – heating and cooling

Name (s): STELLA + SIENNA P. Date: 29/7/21

Name of room being audited MAIN OFFICE

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? 20 °C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

WURUNDJERI



Spring

What Aboriginal season is it?

APRIL - JULY = WARINKI, WOMBAT
AUGUST = GILINK, OLCIND



Summer



Autumn

Heating and cooling appliances in the room

Does this room have air conditioners (AC)? Yes No How many (Tally) 1

Does this room have heaters? Yes No How many (Tally) 1

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input type="radio"/> AC <input checked="" type="radio"/> heater	main office	5 (1-5 setting)
Unit 2	<input type="radio"/> AC <input type="radio"/> heater		
Unit 3	<input type="radio"/> AC <input type="radio"/> heater		
Unit 4	<input type="radio"/> AC <input type="radio"/> heater		
Unit 5	<input type="radio"/> AC <input type="radio"/> heater		
Unit 6	<input type="radio"/> AC <input type="radio"/> heater		
Unit 7	<input type="radio"/> AC <input type="radio"/> heater		
Unit 8	<input type="radio"/> AC <input type="radio"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters? Yes No

Do you have signs showing correct temperatures for air conditioners and heaters? Yes No

What other observations did you make?

HEATER ONLY HAS A 1-5 RANGE SETTING.

Basic energy audit – windows and doors

Name (s): STELLA + SIENNA P. Date: 29/7/21

Name of room being audited MAIN OFFICE

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
(Note: Most north and west-facing windows need shading or shelter)

North
 West East
 South

- Are there any curtains or blinds on the windows? INTERNAL N/A Yes No
- Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? N/A Yes No
- Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No N/A
- Are there trees or an awning outside the window? Yes No N/A
- Can windows be opened to allow natural airflow or cross-ventilation? Yes No N/A
- Is there any draughtproofing on the doors? Yes No N/A

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

(This area contains faint, illegible handwritten notes and scribbles.)

List three actions in this room that will save energy at your school:

- 1 SIGNAGE IS REQUIRED
- 2 THERMOMETER REQUIRED TO MONITOR HEATING + COOLING TEMP.
- 3 POSSIBLE DELAMPING (LUX HIGHER THAN STANDARD)

Basic energy audit – lighting

Name (s): ROBYN + KEVIN Date: 30/7/21

Name of room being audited: STAFF ROOM

Tools required: Lux meter


For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes


What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:

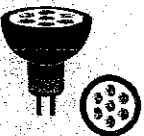
Incandescent light
No. of globes:



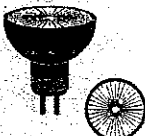
Compact fluorescent light
No. of globes:



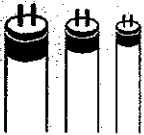
LED light
No. of globes:



Halogen light
No. of globes:



✓ **Fluorescent light tubes**
No. of globes: 24



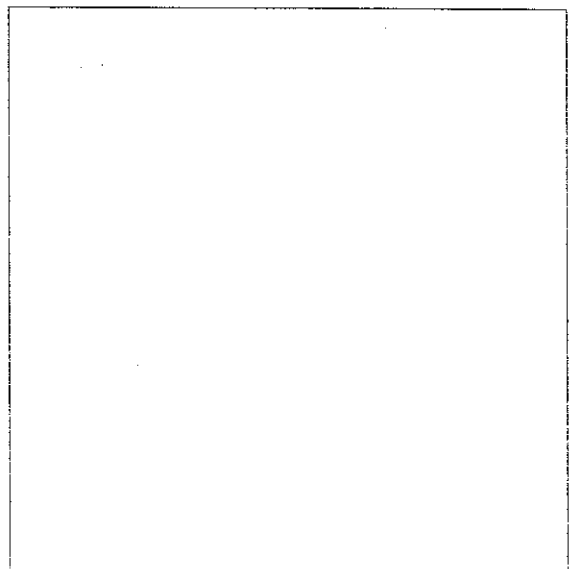
T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s. The thinner they are the more energy efficient they are.

Other globe types

No. of globes:

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.



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Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

[Large blank area for handwritten comments]

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? 320

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

- SAME AS A CLASSROOM + PLENTY OF NATURAL LIGHT.
- MUCH NATURAL LIGHT IN STAIR ROOM

Worksheet Basic energy audit – heating and cooling

Name (s): ROBYN + KEM Date: 30/1/21

Name of room being audited STAFF ROOM

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? 18 °C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

WURUNDJERI



Spring

What Aboriginal season is it?

APRIL - JULY = WARUNG, WOMSAT

AUGUST = GUNUNG, ORCHID



Summer



Autumn

Heating and cooling appliances in the room

Does this room have air conditioners (AC)? Yes No How many (Tally) 1

Does this room have heaters? Yes No How many (Tally) 1

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input checked="" type="checkbox"/> AC <input type="checkbox"/> heater	SIMR ROOM	# control = 5 (A/C way)
Unit 2	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 3	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 4	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 5	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 6	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 7	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 8	<input type="checkbox"/> AC <input type="checkbox"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters? Yes No

Do you have signs showing correct temperatures for air conditioners and heaters? Yes No

What other observations did you make?

• A/C ONLY HAS SETTING 1-5.

Basic energy audit – windows and doors

Name (s): ROBYN + KEVIN Date: 30/7/21

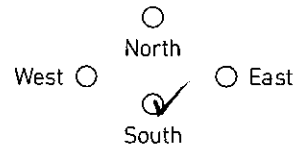
Name of room being audited STAFF ROOM

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
(Note: Most north and west-facing windows need shading or shelter)



- Are there any curtains or blinds on the windows? Yes No
- Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? Yes No
- Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No
- Are there trees or an awning outside the window? Yes No
- Can windows be opened to allow natural airflow or cross-ventilation? Yes No
- Is there any draughtproofing on the doors? Yes No

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

NIL

List three actions in this room that will save energy at your school:

- 1 THERMOMETER IN STAFF ROOM TO MONITOR AIR TEMPERATURE.
- 2 _____
- 3 _____

Basic energy audit – lighting

Name (s): CLARE + COADIE Date: 29/7/21

Name of room being audited ART : Room

Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:



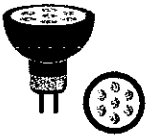
Incandescent light

No. of globes:



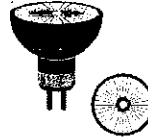
Compact fluorescent light

No. of globes:



LED light

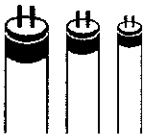
No. of globes:



Halogen light

No. of globes:

✓



Fluorescent light tubes

No. of globes: 36 x T8

T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

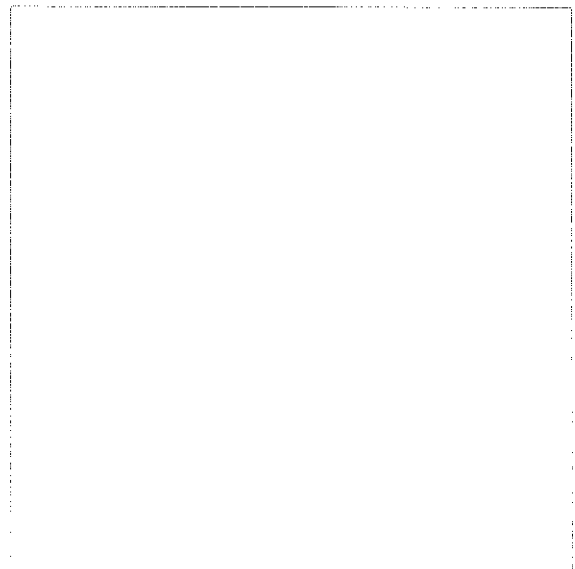
The thinner they are the more energy efficient they are.

Other globe types

No. of globes:

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.



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Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No *NA*

Do you have any other comments?

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? 360

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork <i>- ART ROOM</i>
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

LESS THAN STANDARD, BUT SEEMED OKAY.

Worksheet Basic energy audit – heating and cooling

Name (s): CLAIRE + COEDIE Date: 29/7/21

Name of room being audited ART ROOM

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? 17 °C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

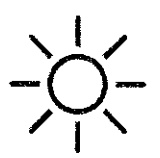


Spring

WURUNDJERI

What Aboriginal season is it?

APRIL = JULY = WARING, WOMBAT
AUGUST = GULING, ORCHID



Summer



Autumn

39

Heating and cooling appliances in the room

Does this room have air conditioners (AC)? Yes No How many (Tally) 1

Does this room have heaters? Yes No How many (Tally) 1

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input type="checkbox"/> AC <input checked="" type="checkbox"/> heater	ALTRoom wall	4 (1-5 setting)
Unit 2	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 3	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 4	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 5	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 6	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 7	<input type="checkbox"/> AC <input type="checkbox"/> heater		
Unit 8	<input type="checkbox"/> AC <input type="checkbox"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters? Yes No

Do you have signs showing correct temperatures for air conditioners and heaters? Yes No

What other observations did you make?

HEATER ONLY HAS A 1-5 SETTING RANGE.

Basic energy audit – windows and doors

Name (s): CLARE + CORDIE Date: 29/7/21

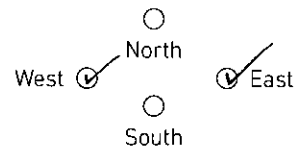
Name of room being audited ART ROOM

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
(Note: Most north and west-facing windows need shading or shelter)



- Are there any curtains or blinds on the windows? Yes No
- Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? Yes No
- Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No
- Are there trees or an awning outside the window? Yes No
- Can windows be opened to allow natural airflow or cross-ventilation? Yes No
- Is there any draughtproofing on the doors? Yes No

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

NONE

List three actions in this room that will save energy at your school:

- 1 SIGNAGE REQUIRED
- 2 THERMOMETER REQUIRED TO MONITOR HEATING + COOLING TEMP.
- 3 _____

Basic energy audit – lighting

Name (s): VAUGHAN + DEAKON Date: 29/7/21

Name of room being audited LIBRARY

Tools required: Lux meter


For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes


What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:

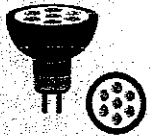
Incandescent light
No. of globes:



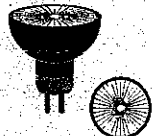
Compact fluorescent light
No. of globes:



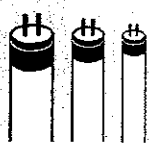
LED light
No. of globes:



Halogen light
No. of globes:



Fluorescent light tubes
No. of globes: 18 T8s
T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.
The thinner they are the more energy efficient they are.

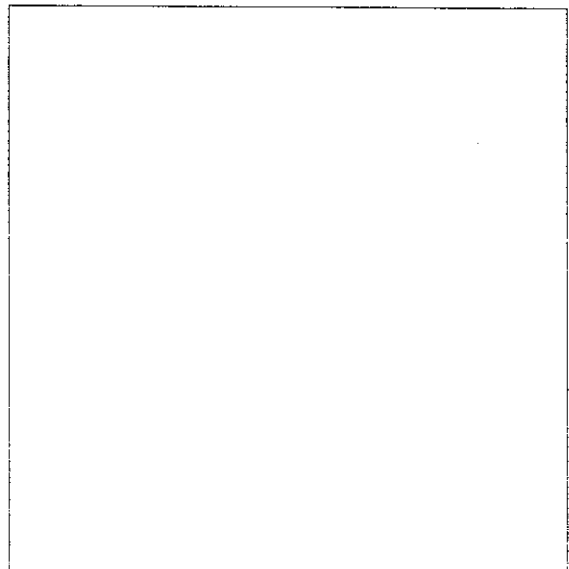


Other globe types
No. of globes: 5

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.

250 W MERCURY VAPOR
PENDANT LIGHTS



Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? 480

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making

How does the light level in your room compare to the Australian Standard?

LOWER THAN THE STANDARD, BUT SEEMS OKAY.

Worksheet Basic energy audit – heating and cooling

Name (s): VAUGHAN + DEACON Date: 29/7/21

Name of room being audited LIBRARY

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? 18 °C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

WURUNDJERI



Spring

What Aboriginal season is it?

APRIL - JULY = WARRING, WOMBAT
AUGUST = GUNLING, ORCHID



Summer



Autumn

Heating and cooling appliances in the room

Does this room have air conditioners (AC)? Yes No How many (Tally) 1

Does this room have heaters? Yes No How many (Tally) 1

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input checked="" type="radio"/> AC <input type="radio"/> heater	LIBRARY CEILING	WARM
Unit 2	<input type="radio"/> AC <input type="radio"/> heater		
Unit 3	<input type="radio"/> AC <input type="radio"/> heater		
Unit 4	<input type="radio"/> AC <input type="radio"/> heater		
Unit 5	<input type="radio"/> AC <input type="radio"/> heater		
Unit 6	<input type="radio"/> AC <input type="radio"/> heater		
Unit 7	<input type="radio"/> AC <input type="radio"/> heater		
Unit 8	<input type="radio"/> AC <input type="radio"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters? Yes No

Do you have signs showing correct temperatures for air conditioners and heaters? Yes No

What other observations did you make?

AC DID NOT HAVE A TEMPERATURE SETTING 'ON' AND 'COOL' WAS SHOWN ONLY.

Basic energy audit – windows and doors

Name (s): VAUGHAN + DEACON Date: 29/7/21

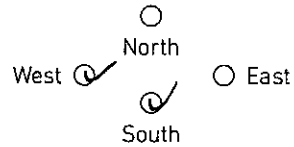
Name of room being audited LIBRARY

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
 (Note: Most north and west-facing windows need shading or shelter)



- Are there any curtains or blinds on the windows? Yes No
- Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? Yes No
- Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No
- Are there trees or an awning outside the window? Yes No
- Can windows be opened to allow natural airflow or cross-ventilation? Yes No
- Is there any draughtproofing on the doors? Yes No

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

NIL

List three actions in this room that will save energy at your school:

- 1 FRONT (INTERNAL) + BACK (EXTERNAL) DOORS CAN BE OPENED FOR
- 2 CROSS VENTILATION.
- 3 A THERMOMETER TO BE USED TO MONITOR ROOM TEMPERATURE

Basic energy audit – lighting

Name (s): ROBYN + KELLY Date: 29/7/21

Name of room being audited Gym

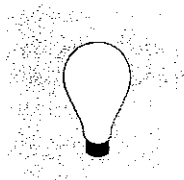
Tools required: Lux meter

For information on using a lux meter, refer to Appendix 2: Tools and calculations.

Light globes

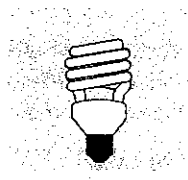
What types of light globes are used in this room? Circle the globe type below. Note that these are not the only style of each kind of light. Some LED downlights can look similar to the halogens light pictured here.

Globe type:



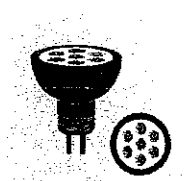
Incandescent light

No. of globes: _____



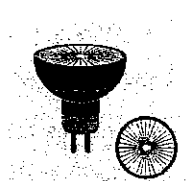
Compact fluorescent light

No. of globes: _____



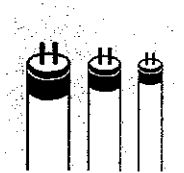
LED light

No. of globes: _____



Halogen light

No. of globes: _____



Fluorescent light tubes

No. of globes: _____

T12s are the old fluorescent light tubes. T8s are thinner than T12s. T5s are thinner than T8s.

The thinner they are the more energy efficient they are.

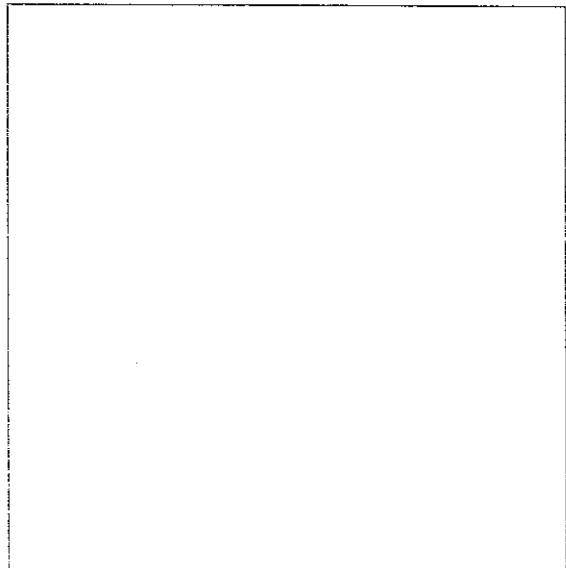
✓ Other globe types

No. of globes: 12 x 400 W

If your light globe is not listed here, draw it in the box to the right.

Try to find out what it is. LEDs are preferred as they are most efficient.

← MERCURY VAPOUR
PENDANT LIGHTS.



Light signage

Are there signs reminding people to turn off lights? Yes No

Are the signs easy to see and read? Yes No

Do you have any other comments?

[Large empty area for handwritten comments]

Australian Standard lighting levels

What is the light level (lux) in the middle of the room? 350

What level of lighting is needed in this room? Australia has a list of Standards with recommended lighting levels based on the activity in the room. Circle the type of activity you would expect to see in the room you are auditing and see how the light level in the room compares to the recommended standard. Is the room too dark or too bright?

Australian Standard (lux)	Location or task
40	Hallways, corridors
80	Change rooms, storage rooms
160	Areas for occasional reading of printed materials e.g. entrance hall
240	Food preparation areas, counters for transactions
320	Classrooms with desks, offices
400	Classrooms with specialist activities e.g. fine woodwork
600	Libraries and areas for proofreading, fine painting
1200	Graphic art inspections
1600	Watchmaking and fine jewellery making
?	<u>Gym</u>

How does the light level in your room compare to the Australian Standard?

[Large empty area for handwritten comparison and notes]

Worksheet Basic energy audit – heating and cooling

Name (s): ROBYN + KEM Date: 29/7/21

Name of room being audited GYM

Tools required: Infrared thermometer

For information on using an infrared thermometer, refer to Appendix 2: Tools and calculations.

Record the room temperature and answer the questions below.

Room temperature

The RSS guide for temperature settings for optimum indoor thermal comfort are:

- > Winter: 18–20°C
- > Summer: 24–27°C

What is the temperature of the room in degrees Celsius (°C)? 18 °C

How does the room feel (thermal comfort)? Too cold Okay Too hot

Seasons

What season is it? (tick one)



Winter

Aboriginal groups have their own seasonal cycle depending on where they live, with 6 to 8 seasons each year. Find out who are the Traditional Owners where you live and what season it is.

Traditional Owners of my region

WURUNDJERI



Spring

What Aboriginal season is it?

APRIL - JULY = WARING, WOMBAT
AUGUST = GULING, ORCHARD



Summer



Autumn

Heating and cooling appliances in the room

Does this room have air conditioners (AC)? Yes No How many (Tally) 1
 Does this room have heaters? Yes No How many (Tally) _____

What temperature are appliances set at?

Heating and cooling appliances	AC or heater (select one)	Location	Set temp (°C)
Unit 1	<input checked="" type="radio"/> AC <input type="radio"/> heater	NO TEMP SHOWN. "COOL"	ONLY —
Unit 2	<input type="radio"/> AC <input type="radio"/> heater		
Unit 3	<input type="radio"/> AC <input type="radio"/> heater		
Unit 4	<input type="radio"/> AC <input type="radio"/> heater		
Unit 5	<input type="radio"/> AC <input type="radio"/> heater		
Unit 6	<input type="radio"/> AC <input type="radio"/> heater		
Unit 7	<input type="radio"/> AC <input type="radio"/> heater		
Unit 8	<input type="radio"/> AC <input type="radio"/> heater		

Heating and cooling signage

Do you have signs reminding people to turn off air conditioners and heaters? Yes No
 Do you have signs showing correct temperatures for air conditioners and heaters? Yes No N/A

What other observations did you make?

• A/C UNIT ONLY HAS 'ON', 'COOL' FAN 'HIGH' 'LOW'

Basic energy audit – windows and doors

Name (s): ROBYN + KEEM Date: 29/7/21

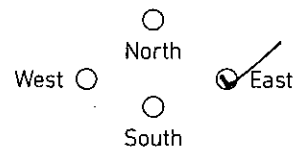
Name of room being audited GYM

Tools required: Paper strips

Assessing windows and doors for energy efficiency

Complete the table below.

What direction are the windows in the room facing?
(Note: Most north and west-facing windows need shading or shelter)



- Are there any curtains or blinds on the windows? NO WINDOWS Yes No N/A
- Are the curtains or blinds open and windows clear of artworks, etc. to let in natural light? Yes No N/A
- Do the curtains or blinds work? (Do they reduce sunlight? Do they keep the heat or cold in the room?) Yes No N/A
- Are there trees or an awning outside the window? Yes No N/A
- Can windows be opened to allow natural airflow or cross-ventilation? Yes No N/A
- Is there any draughtproofing on the doors? Yes No

Test the windows and doors for leaks or draughts (use a strip of paper or feather to detect air movement).

List the ones that leak.

2X EXTERNAL DOUBLE DOORS

List three actions in this room that will save energy at your school:

- 1 REPLACE LIGHTING FOR MORE ENERGY EFFICIENT LIGHTING.
- 2 DRAUGHT-PROOF EXTERNAL DOORS
- 3 THERMOMETER IN GYM TO MONITOR AC TEMPERATURE
REPLACE LIGHTING SIGNAGE

Basic energy audit – appliances

Name (s): KEVIN + ROBYN Date: 2/8/21

Name of room being audited STAFF ROOM

Optional tool required: Plug-in digital power meter to capture the real-time energy consumption of each appliance. Energy consumption for each item can be added but is not necessary for a basic audit.

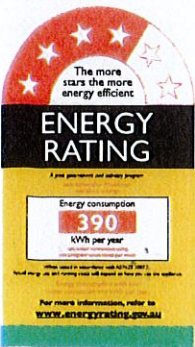
For information on using a plug-in power meter, refer to Appendix 2: Tools and calculations.

Appliances in the room

List all appliances in the room, such as fridges, dishwashers, air conditioners, heaters, televisions, computers, and so on.

If the appliance has an energy rating label, record the star rating and yearly energy consumption. The more energy efficient a model, the less energy it will use and the less it costs to run.

If the appliance has no rating label, it should have an electrical rating plate where you can see the power rating of the appliance in watts (W) (see example below).



An example of an energy rating label

This appliance has a four-star rating and uses 390 kWh per year. More stars equal more energy savings.



An example of a rating plate

This appliance uses 190 W of energy (190 J per second) when in good working order. This is also called the power rating.

Note that energy star ratings have changed over the years. Appliances like fridges tend to lose efficiency over time so the energy use listed on the star rating label cannot be taken as true for older appliances. Find out more about energy rating labels, visit energyrating.gov.au/label

If you have a power meter, you can measure the real-time energy consumption of each appliance and compare it to the power rating listed on the rating label or plate.

Appliance	Is the power on? (Yes/No)	Is it being used? (Yes/No)	Energy rating label stars (1-7 or no rating)	Energy consumed per year (kWh per year on the Energy Rating Label)	Power rating listed on rating plate (W or kW)	Real-time energy use measured with power meter (kWh)
1. T.V	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	?	NO LABEL		0
MICROWAVE 1	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	?	NO LABEL		3.392 W
MICROWAVE 2	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	?	NO LABEL		1.666 W
TOASTER 1	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	?	NO LABEL		0
TOASTER 2	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	?	NO LABEL		0
SANDWICH MAKER	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	?	NO LABEL		0
FRIDGE	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="radio"/> Yes <input type="radio"/> No	5	NO LABEL		7.539 W
DISHWASHER	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	4 UNABLE TO ACCESS. →			→

What other observations did you make?

MICROWAVES NEED TO BE TURNED OFF AT THE WALL AFTER USE - NOT LEFT ON STANDBY.
MICROWAVE ① IS OLD + MAY NEED REPLACING.

Calculating greenhouse gas emissions

The formula for calculating carbon or CO₂e emissions from your electricity and gas consumption can be found in Appendix 2: Tools and calculations.

Basic energy audit – discussion with relevant stakeholders

Organise to meet with (or invite to your class) your principal, business manager, IT person and maintenance team to gather more information. Use these questions as a guide to understand more about energy in your school. This information will be useful when completing the RSS energy module checklist.

What insulation does our school have? For example, ceiling, walls, double-glazed windows. Which rooms have insulation?

- NO DOUBLE GLAZING
- INSULATION → BUSINESS MANAGER HAS NO INFORMATION ON WALL OR CEILING INSULATION.
- SCHOOL IS 28 YEARS OLD.

How do we know the lights, air conditioners and heaters are working properly and that the reflectors (lights) and air filters (air conditioners) are clean?

ALL HEATERS + AIR CONDITIONERS ARE SERVICED ON A 6 MONTHLY BASIS.

Do our tea/coffee and hot water systems boil water 24 hours a day or do they have timers? If we have timers, what times are they programmed for?

SMALL TEA + COFFEE HOT WATER SYSTEM IN ON 24/7 DUE TO THE SCHOOL BEING HIRED OUT ON WEEKENDS.

What is our shutdown process to save energy overnight, and for holidays and weekends?

2 X PHOTOCOPIERS TURNED OFF OVERNIGHT, WEEKENDS + HOLIDAYS.
SWITCHED TO 'ENERGY SAVER' DURING THE DAY.

Are the school's computers and printers programmed with sleep and/or shutdown modes and what times are these set for?

NO DESKTOP COMPUTERS IN CLASSROOMS ANY MORE.
1:1 DEVICES SET TO 'SLEEP' AFTER 5 MINUTES OF
NO USE.
ADMINISTRATION COMPUTERS ARE TURNED OFF EACH
NIGHT.

Do we have any energy generation at our school, such as solar panels and wind turbine?

YES 70.3 KW SOLAR PANEL SYSTEM INSTALLED
JULY/AUGUST 2021.

Are our school facilities used by community users? If so, has the school calculated their energy usage? Does the hire agreement include energy-saving clauses?

HIRERS CHARGED A FLAT RATE.
IT'S TOO EXPENSIVE TO INSTALL SEPARATE METERS TO
TO MONITOR ENERGY USAGE OF HIRERS.

