



Support material #8

Teacher information about energy rules

Each rule outlined below is sourced to a website that is referenced on page 2.

In what condition should electrical cords be?

Some of the suggestions include the following. (1)

- Extension leads should have plugs with three metal cores (pins). Plugs with two cores are not earthed and are dangerous. They should be used only with double-insulated electrical equipment.
- Extension leads that are damaged, frayed or have the inner wires exposed should be thrown away or repaired by a qualified repairer or licensed electrician.
- Do not attempt to repair electrical leads yourself, and never join them by twisting or taping.
- Check that electrical cords are not hanging from benches where children can grab them.
- Never place extension leads under carpets or rugs and never rest furniture on them as they may overheat.

How many plugs can be safely used in a power board?

This rule depends on the current rating of the power board, i.e. the maximum current (amps - short for ampere - which is the unit of current) and what exactly you are plugging in (e.g., a hairdryer or a computer?).

- Do not overload power points or power boards by piggybacking plugs into one socket with double adaptors. Instead, have another power point installed by a registered electrical contractor. (1)
- If possible, use a surge-protected power board, with each cable labelled. (2)
- Do not plug high wattage appliances (such as heaters) into power boards as they could overheat the circuit wiring through overloading and cause a fire. (1) Newer power boards will automatically switch off when too much current is flowing through.

Position of kettle in relation to the sink

- Never use any electrical appliance near water. (2)
- Be extremely careful when using appliances connected to power points near sinks, baths, swimming pools, showers and spas.
- Extra care should always be taken around water as it conducts electricity. Electrical outlets should be located well away from all water splash areas in the house. (5)
- Do not locate power points or electrical appliances near water unless they are specifically designed to be used with water. (5)

What is an RCD and what does it do?

An RCD is a residual current device, or safety switch. It is a safety mechanism designed to instantly switch off the power when electricity leaking to earth is detected at a level that could potentially cause harm to a person using an electrical appliance.

Electric shocks occur most often through the use of faulty electrical leads and appliances – a permanent or portable RCD can assist in providing protection against such shocks.

An RCD is no substitute for safety measures but is to be used in addition to them. RCDs need to be tested and maintained on a regular basis. (6)

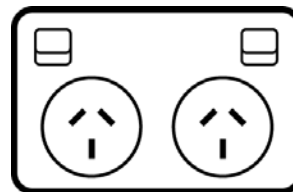
Fuse breakers in switchboards

- Use mains-operated circuit breakers (MOCBs) instead of fuses to eliminate the possible use of inappropriate fuse wire. Be aware, MOCBs do not act in the same way as safety switches and should not be confused with them. (3)
- Know where the fuse box for your premises is and know how to turn off the power supply in case of an emergency. Check that each switch, circuit breaker and fuse is correctly labelled and call a licensed electrical contractor if there is any confusion. Use only the correct size fuse wire to rewire fuses. (2)

Support Material #8: Teacher information about energy rules (continued)

Electric cords running over the ground

- Do not place extension leads near heaters and cookers. (1)
- Never place extension leads under carpet or rugs as they may overheat. (1)
- Do not use extension leads or power leads in wet areas unless they are specifically designed to work in these areas. (5)



How can we test for gas leaks?

LP Gas has no natural odour of its own, so gas suppliers add a small amount of chemical to give it a noticeable smell in the event of a gas leak.

In the event of a suspected gas leak

- check the entire system for indication of a leak, such as smell or hiss (4)
- test joints, bends, taps and connections by immersing hoses and fittings in soapy water, or coating with soapy water using a sponge. Bubbles will appear at any point where gas is escaping. (4)

Sources

- 1 originenergy.com.au/safety
- 2 www.powerwater.com.au/_data/assets/pdf_file/0007/1600/PWC_s_top_dozen_electrical_safety_tips_-_July_2008.pdf
- 3 www.health.qld.gov.au/ph/Documents/hpu/12685.pdf
- 4 originenergy.com.au/files/Gassafety.pdf
- 5 originenergy.com.au/2213/Electrical-safety#gappli
- 6 www.education.vic.gov.au/safe@work/modules/electric/rcd.asp

