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Low Energy Cooking Challenge

The Energy Saving Champion Programme



Welcome to the Low Energy Cooking Challenge

where you'll discover the secrets of cooking meals with a lower energy demand. This challenge not only benefits your budget but will help you to reduce the carbon footprint of every meal cooked at home.

In the kitchens of the past, the Aga range reigned supreme, serving as the cornerstone of every meal. Today's modern kitchen offers appliances for every culinary task. With all that choice, selecting the most energy-efficient tool for the job takes a bit of consideration.

Both ovens and stovetops are high energy users, making it worthwhile to explore alternative cooking methods. To help you embark on this journey, we've included some delightful recipes to kickstart your low-energy culinary adventure.



The Microwave

Microwaves have become one of the most versatile appliances in our kitchens. They are energy-efficient and can save you money on your electricity bills compared to using a traditional oven. A microwave typically uses about 1.2 kW of energy, significantly less than a 3 kW oven, and it cooks food in a fraction of the time. Microwave cooking may also be a healthier option as it often requires little to no oil.



Do use the microwave to...

- Reheat leftovers quickly
- Steam vegetables
- Cook rice, pasta, or porridge
- Heat beverages like coffee, tea, or milk



Don't use the microwave to cook:

- Raw eggs; they can explode when microwaved
- Whole fruits; they can burst



Recipes

Microwave Biryani

Ingredients

- knob of butter
- 2 spring onions, finely sliced
- 1 garlic clove, crushed
- seeds from 1 cardamom pod
- Pinch of chilli flakes
- 140g rice
- 400ml vegetable or chicken stock
- ¼ tsp turmeric
- ¼ tsp ground cumin
- pinch of cinnamon
- 1 tbsp raisins
- 200g vegetables of your choice, finely chopped or grated
- small handful of coriander or mint leaves, to serve

Method

- In a large microwaveable bowl, combine the butter, chopped onions, minced garlic, cardamom and chilli.
- Microwave on High for 30 seconds.
- Add the rice, vegetable stock, turmeric, cumin, cinnamon, and raisins to the bowl. Stir well and cover with cling film.
- Place a few sheets of kitchen paper on the microwave turntable to catch any spills and put the bowl on top of the kitchen paper. Microwave on High for 2 minutes.
- Remove the bowl, give it a good stir, and let it stand for 1 minute.
- Repeat the microwave process 2-3 more times until the rice is just cooked. The last time, add your finely chopped or grated vegetables to the bowl and stir through.
- Garnish with fresh coriander or mint before serving.

Blueberry Cobbler in a Mug

Ingredients

- 85g blueberries
- ½ lemon, juiced
- 1 tbsp butter
- 1 tbsp maple syrup or honey
- 4 tbsp self-raising flour
- 1 tbsp milk
- pinch flaked almonds
- scoop vanilla ice cream or cream, to serve

Method

- Put the blueberries in a microwave-safe mug and stir in the lemon juice.
- In another microwave-safe mug, microwave the butter on low until melted.
- Mix in the syrup or honey, then add the flour and milk. Stir until well combined.
- Spoon the cobbler mixture on top of the blueberries and scatter the slivered almonds over the top.
- Microwave on medium for 3 minutes or until the cobbler has puffed up.
- Allow it to cool for 2 minutes.
- Top with a scoop of vanilla ice cream.

The Air Fryer

Air fryers have become one of the most versatile appliances in our kitchens. Air fryers are energy-efficient and can save you money on your electricity bills compared to using a traditional oven. An air-fryer will use about 1.5kW of energy compared to a 3 kW oven, and the cooking time is up to 50% faster. Airfryer cooking may also be a healthier option as only a small amount of oil is required.



Do use the air-fryer to cook...

- Potatoes and chips, muffins, cakes, fritters, bacon, chicken, tofu, fish fillets



Don't use the air-fryer to cook...

- Cheese, popcorn, wet batters and sauces



Recipes

Air-fryer roast potatoes

Ingredients

- 1kg potatoes, peeled and cut
- 2-3 sprigs of fresh rosemary
- 2-3 whole garlic cloves, unpeeled
- 2 tbsp oil of choice
- generous pinch of salt

Method

- Boil and cook the potatoes for 8 mins. Then drain and steam dry.
- Add the rosemary, garlic, oil and salt to the potatoes, then shake to coat.
- Add the potatoes to the air-fryer. Heat to 200°C and cook for 18-20 mins, shaking after 10 mins, until golden brown.

Air-fryer double chocolate muffins

Ingredients

- 1 medium egg
- 75g Greek-style natural yoghurt
- 50ml milk
- 75ml vegetable oil
- ½ tsp vanilla extract
- 75g caster sugar
- 100g self-raising flour
- 30g cocoa powder
- pinch of salt
- 100g dark chocolate chips, some reserved

Method

- Preheat the air-fryer to 160°C.
- Whisk egg, yoghurt, milk, oil, vanilla, and sugar until combined.
- Sift in flour and cocoa, add salt, and most of the chocolate chips. Stir until smooth.
- Spoon batter into cake cases, top with reserved chocolate chips.
- Place filled cake cases in the air-fryer basket, bake 12-15 mins until risen and springy.
- Cool on a wire rack for 15 mins before serving.
- Note: Check air-fryer capacity; may need 2 batches.

The Slow cooker

Slow cookers are energy-efficient, convenient, and versatile appliances that can help you prepare nutritious meals ahead of time while reducing your overall energy consumption and cooking costs. Slow cookers have low-wattage heating elements, usually around 160 watts per hour (Wh). This wattage is much lower than the power consumption of most hobs, which can use up to 3,000 Wh.



Do use the slow cooker to cook...

- Stews, soups, chilis, curries, pulled pork or chicken, mulled wine or cider, and desserts.



Don't use the slow cooker to cook...

- Delicate seafood, dairy, leafy greens, frozen ingredients, and quick-cooking vegetables.



Recipes

Slow cooker beef stew

Ingredients

- 1 onion, chopped
- 2 celery sticks, finely chopped
- 2 tbsp oil
- 3 carrots, chopped
- 2 bay leaves
- ½ pack thyme
- 2 tbsp tomato purée
- 2 tbsp Worcestershire sauce
- 2 beef stock cubes or stock pots
- 900g beef for braising such as skirt, buy a whole piece and cut it yourself for bigger chunks or buy ready-diced
- 2 tsp cornflour
- ½ small bunch parsley, chopped

Method

- Sauté onion, celery, carrots, bay, and thyme in 1 tbsp oil. Add purée, Worcestershire sauce, water, and stock cubes. Season with pepper. Transfer to a slow cooker.
- Brown beef in batches in remaining oil, then add to the slow cooker. Cook on low for 8-10 hrs or high for 4 hrs.
- To thicken, mix cornflour with a splash of cold water. Stir into a slow cooker. Cook on high for 30 mins. Add parsley and season. Serve with mash, if desired.

Slow cooker yoghurt

Ingredients

- 2l whole milk
- 100ml live yoghurt, either shop bought or from a previous homemade batch

Method

- Heat the milk in the slow cooker to 82°C (this will take several hours).
- Turn off the slow cooker and allow the milk to cool to 43°C (2-3 hours).
- Add the live yoghurt to the slow cooker and stir well.
- Cover and wrap in the slow cooker in a towel. Let it sit undisturbed for 9-12 hrs.
- Store in the fridge for up to 2 weeks.

Record the appliances used to cook your evening meal and comment on the energy efficiency of your cooking

Date	Time	Household member <i>Initials</i>	Cooking appliance used <i>in minutes</i>	Length of use <i>in minutes</i>	Temperature <i>in °Celcius</i>	Comments <i>How energy efficient was your cooking?</i>



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This document relates to EcoVision's Energy Saving Champion programme, encompassing a community workshop series on 'How to Save Energy at Home' and an accompanying inter household competition. The programme is supported by local Community Energy Advocates.

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