



**ACTIVITY:**

# PLANT-BASED COOKING

**LEARNING AIMS:**

- To make a simple plant-based snack and discuss the implications of different diets
- Make simple hummus from raw ingredients
- Taste a variety of different plant-based ingredients
- Compare the environmental impact of different food types and diets

**TIME:**

1 hour

**RESOURCES:**

- Knives, hand blender, teaspoons for serving, plates, sinks / bowls, dish cloths, washing up liquid, towels for drying.
- Ingredients for each portion (group of 4):
  - Carrots
  - Cucumber
  - Peppers
  - Pittas
  - 1 tin chickpeas
  - (potentially a tin opener)
  - Juice from 1 lemon
  - 3 tbsp tahini (available from most world food shops and many health shops)
  - 1 garlic clove
  - (garlic crusher or sharp knife and chopping board)
  - 2 tbsp olive oil
  - ½ tsp ground cumin
  - Pinch salt (optional)

*Optional for flavouring:*

- 2 tsp Paprika powder
- 1/2 tsp Chilli powder
- 1 Red pepper
- 1 tbsp Tomato puree



## ACTIVITY DESCRIPTION:

### Introduction & discussion - carbon footprint

- Explain concept of “carbon footprint” – this is the amount of carbon equivalent emissions (this means it includes the warming effect of methane and other greenhouse gases) that a single person is responsible for (Note: a carbon footprint is measured in tonnes of CO2 equivalent. The UK average is 5.6 tonnes per person annually.) To compare how carbon footprint varies around the world, visit [www.globalcarbonatlas.org/en/CO2-emissions](http://www.globalcarbonatlas.org/en/CO2-emissions))
- Pupils work in pairs to discuss what they think they could do to most dramatically cut their carbon emissions.
- Present the most effective ways of reducing carbon footprint:
  - Having 1 less child - saving 60 tonnes
  - Never using a car - 2.4 tonnes
  - Giving up a return flight to America - 1.6 tonnes
  - Buying green energy - 1.4 tonnes
  - Buying a more efficient car - 1.1 tonnes
  - Eating a plant-based diet - 0.8 tonnes

This compares with some common ways that are promoted for reducing carbon emissions:

- Washing clothes in cold water - 0.3 tonnes
- Recycling - 0.2 tonnes
- Hang-dry clothes instead of using a dryer - 0.2 tonnes
- Installing energy-efficient light bulbs - 0.1 tonnes

For graph and more information, see: [www.sciencemag.org/news/2017/07/best-way-reduce-your-carbon-footprint-one-government-isn-t-telling-you-about](http://www.sciencemag.org/news/2017/07/best-way-reduce-your-carbon-footprint-one-government-isn-t-telling-you-about)

- Pupils to discuss any surprises and what they think they could personally manage in their lives.
- Would pupils consider a plant-based diet (no meat, fish, dairy, eggs, etc.)? Do they think there are any trade-offs?

Explain that plant-based diets have lower carbon emissions because producing meat and dairy involves feeding animals food which has its own carbon footprint, repeatedly. There are also methane emissions from livestock. However, there are also drawbacks with an all plant-based diet (as well as diets that include meat), like the amount of air miles used to move food around the globe (e.g. some tropical fruits, meat raised abroad, vegetables grown around the world), and others have high water impact (e.g. beef and pork, coffee, and some nuts)



## Making Hummus

- Crush or finely chop the garlic and put in blender
- Squeeze lemon juice into blender
- Add all essential ingredients. Different groups could create different flavours - some keep it plain, others add one of the optional flavour ingredients
- Blend all ingredients until fairly smooth (2 minutes with electric blender, a little longer with the hand-pull blender)

### *A note on Health & Safety around Plant-based Cooking:*

- Wash hands before starting.
- Check for allergies before any food items are introduced. Risk assess individually.
- Blender contains sharp blades. Do not dismantle. Ensure lid is on securely before using.
- Tin will have sharp edges once open. Dispose of appropriately immediately once emptied.
- Make own risk assessment for the individuals participating before using sharp knives.

### Chopping Vegetables (can be done at same time as making hummus by different groups of pupils)

- Cut the cucumber and carrot into sections 5-8cm long.
- Cut these sections into long, thin slices approximately 1cm thick.
- Cut the peppers in half and remove the seeds and stalk. Cut into 1cm wide slices.
- Cut across the pittas into 2cm wide strips.

### Tasting your creations!

- Each pupil to take 1 tsp of each flavour of hummus and put on a plate and 1 of each strip of vegetable and the pittas
- Compare tastes and flavours – what's your favourite?

### Conclusion – Should/could I give up meat?

- Show pupils the graph “Kilograms of greenhouse gas emissions per serving” at [www.bbc.co.uk/news/science-environment-46459714](http://www.bbc.co.uk/news/science-environment-46459714) or use the interactive content at the top of that page to compare different foods.
- Pupils to discuss in small groups how they feel about the information provided. What could they do to reduce their food carbon footprint? What level of sacrifice is required? What are the barriers to reducing carbon footprint of their food?
- Will they make 1 pledge to reduce their food carbon footprint? For example, committing to adding 'Meat Free Monday' to their diet?

