

Name:..... Date:.....

## Frying tonight

Chips are pieces of potatoes fried in a fat or oil and eaten hot (in the UK, crisps are thin slices of potato fried in a fat or oil, flavoured and eaten cold). Many people enjoy eating hot chips. One reason we like the chips or crisps is for their flavour. In this experiment, find out which fat or oil makes the best chips.



### What you need

#### For each bag of chips:

- 100 g old potatoes after being cleaned, peeled, chopped and dried (see below)
- 10 g oil or fat for frying - enough to coat all the potato pieces
- Kitchen spatula / slice to stir the potatoes
- Frying pan
- Paper towels to dry the chips before and afterwards
- Small amount of salt
- Balance or scales
- Eye protection.

### What you do

To make one bag of chips:

1. Clean the potatoes, peel and chop into 1 cm cubes.
2. Dry the potato pieces as well as possible using paper towels.
3. Measure 100 g potato pieces on the balance or scales.
3. Heat the oil or fat in a pan using medium heat. Do not overheat!
4. Test to find if the oil or fat temperature is hot enough by dropping in one piece of potato, if the fat is ready it will sizzle.
5. Add the potato pieces to the pan.
6. Cook the potato pieces for 5–7 minutes until they are golden brown.
7. Shake the pan or stir with the spatula to make sure the potato cubes cook all over.
8. When the potato is cooked, tip the chips on to paper towels to dry off the fat or oil.
9. Add salt - not too much, or you may miss the flavour of the fat.
10. Check the appearance of the chips. Wrap them in a clean paper towel and taste.

### Fats or oils to try

Make a bag of chips with different fats and oils. Here are some suggestions: sunflower oil, vegetable oil, olive oil, lard, margarine, butter, dripping (beef fat), solid vegetable fat

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## Safety

Wear eye protection.

## Results

Put your results in the table.

## Questions

1. Which chips tasted the best?

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2. Which chips looked the best?

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3. Find out more about the favourite fat or oil – what molecules is it made from?

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4. What else might affect the flavour of the chips.

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## Results table

Fat or oil	Appearance	Taste	Comments

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# Chemistry and diet

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## Extension work

Here are some more questions about chips to investigate:

1. Does the potato variety make a difference to the chip flavour?
2. Is the flavour different if the chips are deep-fried, shallow-fried or cooked in a microwave?
3. What is the best temperature to cook chips?
4. Compare hand-cooked and 'oven' chips - which are 'best'?

