

## Student worksheet: Do we favour fatty foods?

Watch our [short film](#), which explains how we set up an experiment to test the hypothesis that people favour foods with a higher fat content over those with a lower fat content.

The only variable we changed during the experiment was the amount of fat in each curry. The tasters were not told our hypothesis, they were just asked to taste samples of the three curries and vote for the one that they liked the best. The total number of tasters ( $n$ ) was 107, and each taster was allowed only one vote.

Below are our results. But what can they actually tell us? You'll need to use your skills in handling data to determine if the finding that most people liked the curry with the highest fat content is statistically significant.

Curry	A	B	C
Amount of fat in the curry	medium	high	low
Number of tasters who preferred the curry	15	65	27

### QUESTIONS

- Which statistical analysis will you use?

The first step is to determine the type of data we've collected. If you need some help with this, look at our article [Different statistical tests](#) or look at the [Students' Statistics Sheet \(version 2\)](#) here.

### ABOUT THIS RESOURCE

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- What is the null hypothesis?

Now complete your calculations.

- Should you reject the null hypothesis?
  
- What can you conclude from the outcome? Explaining your reasoning.
  
- Look again at the results for curry A and curry C. What further investigation could you do to understand people's preferences better?
  
- How would you test whether the food with the highest fat content food always comes top in tasting experiments? What results would you expect?

## TAKE IT FURTHER

You have been asked to design your own 'blind' taste-test. What hypothesis would you want to test? How would you design the study? What food or drink might you use? Why?

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