



Can they tell the difference? – Teacher notes

Activity description

Students carry out and analyse the results of a triangle test.

Suitability and Time

Level 3 (Advanced) 3 – 4 hours

Resources and equipment

Information sheets, slideshow

Key mathematical language

Hypothesis test, triangle test, null hypothesis, alternative hypothesis, Binomial distribution, significance level,

Notes on the activity

The slideshow can be used to introduce the activity. It includes the information on both of the information sheets as well as ‘Think about’ questions to aid class discussion.

Information sheet A gives reasons and suggestions for carrying out the test whilst Instruction sheet B is about analysing and interpreting the results.

During the activity

Students can work in small groups, perhaps each choosing a different product to test.

Points for discussion

Discuss the reasons why food companies carry out triangle tests. As well as being used to find out if a change in ingredients creates a detectable difference in the final product, triangle taste testing is also used in quality control to determine if a particular production run meets the usual standard.

Emphasise the importance of checking whether any of the participants have food allergies and giving them the option of not taking part if they wish.

Explain the reasons for not labelling the samples 1, 2, 3 or A, B, C - people generally associate ‘1’ or ‘A’ with ‘best’ and this may affect the results.

After the test, discuss how to analyse the results. The slideshow includes ‘Think about’ questions to aid this discussion and also some questions that can be used at the end of the activity to help students to reflect on the work they have done.

Extensions

There are other ways of carrying out a triangle test. For example, some volunteers may be given just one sample of the usual product and two of the healthier option.

Coded random numbers could be used to label the samples (see <http://www.umaine.edu/NSFGK-12/images/PDFs/oreo.pdf> for help with this).

Students could use the internet to find out more about this and other sensory tests.