

Key Stage 3

Note-ably different?

Notes for teachers

KS3 number and geometry

Students will create their own banknotes. They will then compare these mathematically to a current and a historical banknote.

Learning outcomes

- understand mathematical similarity
- determine scale factors
- make and justify estimates
- use proportional reasoning to solve a problem
- solve problems involving ratio and direct proportion
- calculate the result of any proportional change using multiplicative methods

Equipment required

- paper
- ruler
- scissors
- calculator
- £5 note (optional)

Activity information:

- Students should spend a maximum of ten minutes designing their own £5 banknote. The main outcome from this is ascertaining the size; students should determine this for themselves rather than being given parameters. From this, students could compare the sizes of their notes.
- Students should then estimate the size of a £5 note.
- Following this, students should compare their banknote mathematically with a £5 note. They could consider the similarity of the shapes, the scale factor of the dimensions or the percentage difference in area.
- Comparisons should then be made to the Ming banknote, one of the earliest forms of paper money.
- For information: a £5 note is approximately 125mm x 65mm and the Ming banknote measures 34cm x 22.2cm.

Historical information

The world's first banknotes were made in China in 1189 during the Jin dynasty and for two hundred years the banknote thrived. This Ming banknote example was made in 1375, printed on Mulberry bark paper. The denomination is shown as an image of 1 string of coins which was worth 1000 coins, arranged in ten groups of one hundred coins.

Students could consider why the size of banknotes has changed, and what they think the ideal size is.

Chinese Ming banknote, AD1375

