

Which coin is which?

Notes for teachers

KS3 geometry and measures

Students will analyse current British coins to create a classification flow chart.

Learning outcomes

- choose and use appropriate measurement units and instruments
- describe the properties of 3D shapes
- classify shapes by their geometrical properties
- interpret and synthesise information
- present information in a clear and organised way
- show insight into the structure and problems of the presentation choice
- apply reasoning and logical skills

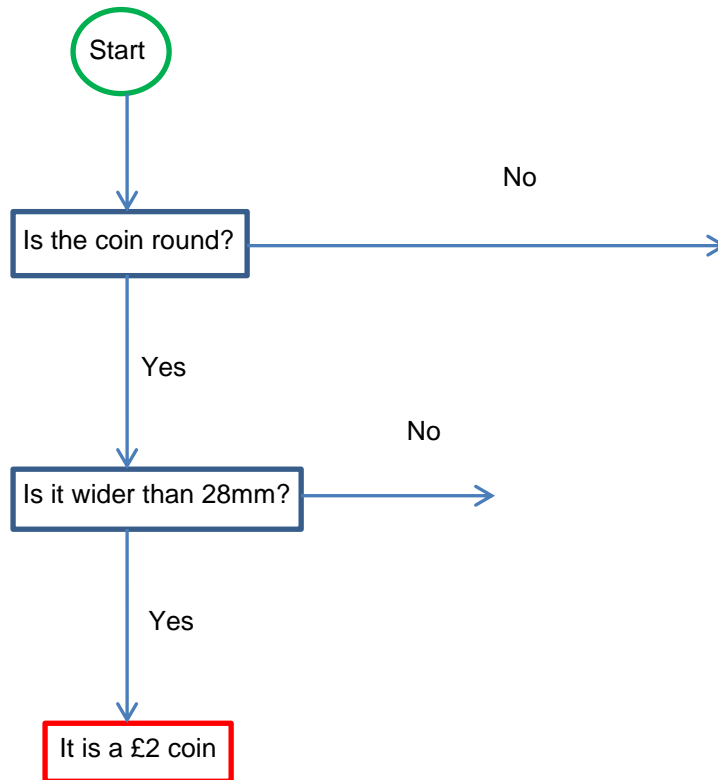
Equipment required

- non-transparent bag containing a mixture of current British coins (1 bag per group), suggested maximum of 10 coins
- ruler
- weighing scales (optional)
- large paper
- variety of coloured pens (optional)

Activity information

- Without looking into the bag, students should try to determine the total value of the coins by feeling them. This should promote student thinking about potential classification criteria.
- Using the measuring equipment, students should record for each coin the number of sides, width, thickness and colour as a minimum.
- Students may record any other data or information they wish, such as area of the face or perimeter of the coin.
- From this information, students should then create a classification flow chart in order to determine which coin is which. This element may result in trial and improvement as students ascertain an appropriate order to synthesise the information. To simplify the activity, use a smaller variety of coins in the bag.
- As an extension activity, students could compare the proportionality change of coin dimensions and weight to the coin value.

Classification flow chart example



Coin measurements

Coin	Width (mm)	Thickness (mm)	Weight (g)
1p	20.3	1.52 (before 1992) 1.65 (after)	3.56
2p	25.9	1.85 (before 1992) 2.03 (after)	7.12
5p	18.0	1.70 (before 2011) 1.96 (after)	3.25
10p	24.5	1.85 (before 2011) 2.07 (after)	6.50
20p	21.4	1.70	5.00
50p	27.3	1.78	8.00
£1	23.4	2.80	8.75
£2	28.4	2.50	12.00

{Source: The Royal Mint}