

 $\frac{http://topdrawer.aamt.edu.au/Statistics/Good-teaching/Data-collection/Samples-and-populations/Mystery-bag}{}$

Mystery Bag video transcript

The students have four mystery bags, which contain a mixture of coloured tiles.

(Four bags labelled A, B, C and D placed on the table)

They also have four index cards. Each one of these cards has a description of the contents of the bag, and they need to match the card to the appropriate bag.

(Four index cards with description of the contents of the bags placed on the table)

They do this by taking a sample from each bag. So give it bit of a shake and we've drawn a blue tile from this bag.

(Shaking bag then opening it and taking out a blue tile)

The students return the tiles and draw again, another blue, and they do this six times for each bag.

(Putting back tile then redrawing again)

The students also record what they've drawn from the bag on a graph.

(Showing graphs)

So far, I have drawn five tiles from Bag A so I need to draw one more.

(Taking out another tile from Bag A)

It's a red tile. So I record a red tile for Bag A.

(Recording another red tile for Bag A on the graph)

Now that I have samples from each of the four bags, I am in a position to make a decision about which index card belongs to which bag.

(Explaining ways to match bags to their corresponding index cards)

This card says, 'This bag has more yellow chips than any other colour.'

(Reading message written on the index card)

Well, I think it could be that one or it could be that one, I'm not sure.

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(Trying to match bags to their corresponding index cards)

Pick another index card. 'This bag has more yellow chips and green chips than blue and red chips.'

(Reading message written on another index card)

This bag has more yellow and green chips than blue and red. I think it belongs with Bag B.

(Restating message and matching it with Bag B)

That means that this card, 'This bag has more yellow chips than any other colour', probably belongs with Bag D.

(Reading message written on the first index card and matching it with Bag D)

So I continue to look at the index cards until I've allocated them all to a bag.