

Making MCQs less Googleable

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Randomised question banks

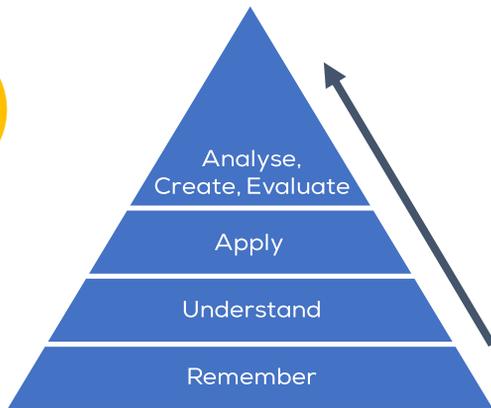
Timed

One attempt

No feedback

Tell the students you know they will have access to other materials

2



Too much information



Too little information



Fermi questions



Multimedia



Data interpretation

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Use a deficit in reasoning/information to allow the student to formulate the question, e.g.:

Q: Which of the following has the highest alcohol content v/v?

- A. Vodka
- B. Beer
- C. Wine
- D. Juice



Q: Four friends each drank 1.5 L of their favourite drink. Who probably ended up in hospital?

- A. Beth: Vodka
- B. TJ: Beer
- C. Nat: Wine
- D. Jo: Juice

Same question, but one is harder to google, even if you copy and paste; try it!

?

Students have to pick out which bits of information are relevant before they can answer. Google can't do this!

Q: Who was not a member of ABBA?

- A. Agnetha Fältskog
- B. Anni-Frid Nilsson
- C. Benny Andersson
- D. Björn Ulvaeus



Q: Which of these is the most accurate report on an ABBA member?

Name: Björn
Instrument: Percussion and trombone
Born: Sweden, 1945

Name: Agneta
Instrument: Vocals and Keyboard
Born: Sweden, 1950

Same question, but too much information to sort through if you're looking at it for the first time. ABBA fans would have no problem! Useful for examining further reading/study.

Name: Frida
Instrument: Vocals and Piano
Born: Norway, 1945

Name: Benny
Instrument: Keyboard, vocals, guitar
Born: Sweden, 1946



Fermi questions are unanswerable, they have to be estimated = no answer anywhere, even on Google!

Q: How big is myoglobin?

- A. 12kDa
- B. 16kDa
- C. 20kDa
- D. 24kDa



Q: Alexandra discovers a new protein, which she names De Montfomin. It has 138 amino acid residues. Roughly how big is it?

- A. 11kDa
- B. 15kDa
- C. 19kDa
- D. 24kDa

Replace something taught with something made up/estimated. Or use analogies, like we often do in teaching but not in exams:

Q: Eva uses an orange to describe kidney anatomy. Which statement is likely to be FALSE?



- A. Orange segments look stripy so represent the renal pyramids.
- B. The region between the orange skin and segments would be the medulla.
- C. If oranges had nephrons they would probably sit between the layer of pith and the segments.
- D. If oranges produced urine, it would be collected in the core.

If you use metaphors in teaching, this doesn't even need to go further up Bloom's!



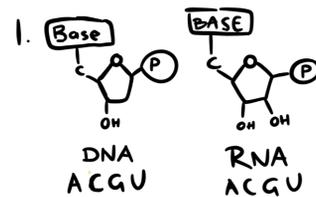
Pictures, diagrams, and graphs are harder to Google—make sure you don't use easily accessible images to prevent reverse image searching!



Q: What went wrong?



Q: Bunmi draws a diagram of DNA and RNA. What mistakes has she made?



Presenting questions as scenarios makes them more Google-proof and more applicable and is particularly useful to those of you wanting to assess practical skills. Correcting, identifying, or completing "student" diagrams is also less google-able and requires no artistic skill on your part!

Formulate	Unanswerable	Information	Exact	Multimedia	Apply
Let students formulate the question	Encourage student intuition	Ask the shortest question	Be less helpful or use analogies	Use multimedia (carefully)	Move up the pyramid!



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See the full webinar [here](#) find useable images [here](#)