ConcepTest

What it is:
Multiple-choice question that focuses on one key concept of the lesson.

Implementation:
- Present a short lecture (5-10')
- Post a ConcepTest on board/screen
- Students consider question and answer (by hands, lettered cards, clickers…)
- Students discuss reasons for their answers with neighbors
- Students answer question again
- Instructor, or student spokesperson, explains the correct response

The question should:
- Focus on application of a single concept (not recognize a fact or define a term)
- Be of intermediate difficulty (expect 35-70% of student to initially answer correctly)

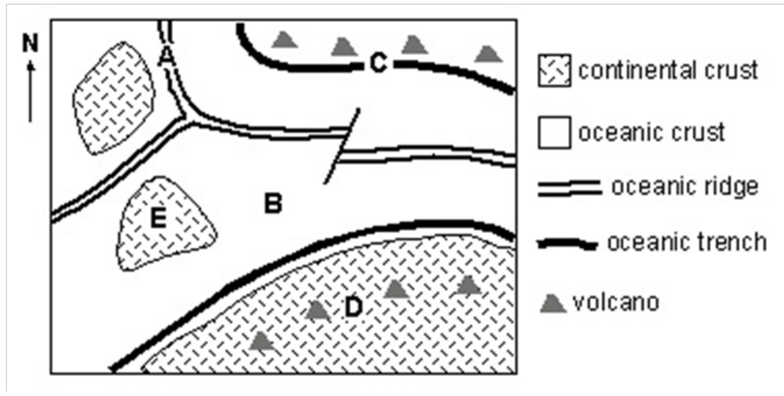
ConcepTests have been shown to:
- Increase student engagement
- Communicate high expectations
- Promote interaction
- Provide prompt feedback
- Increase student course satisfaction
- Improve student attendance
- Improve student learning

Examples

How many plates are present?

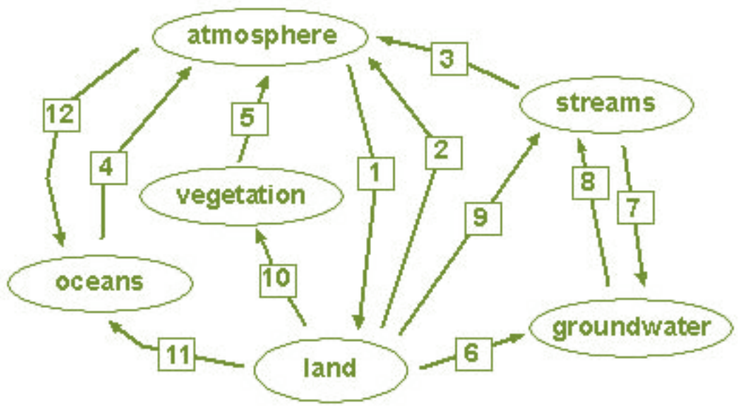
a. 3 (26%; 0%)
b. 4 (19%; 18%)
c. 5 (44%; 75%)
d. 6 (11%; 7%)

Individual responses
Post-discussion responses



McConnell et al., 2006

The following diagram illustrates the hydrologic cycle. Arrow 11 best represents what process?



a. evaporation
b. precipitation
c. transpiration
d. run-off

http://serc.carleton.edu/introgeo/conceptests/examples/hydro_cycle11.html

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On the Cutting Edge project
Information and examples from

http:serc.carleton.edu/introgeo/conceptests/index.html

References

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Greer, L. & Heaney, P.J. (2004). Real-time analysis of student comprehension: An assessment of electronic student response technology in an introductory Earth Science course. *Journal of Geoscience Education*, 52(4), 345-352.

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