Big Classes: What's the problem?

http://www.mediafire.com/?3xbhmdmsfmd

So, How Big is ‘Big’?

1. Depends on setting … 30? 60? 100?
2. ‘Big’ = you don’t know their names so **they** think they can be anonymous ☺
3. Benefits of big classes (for students)?
4. Drawbacks of big classes (for students)?

Potential Problems

1. Low attendance.
2. Disengaged students.
3. Disruptive students.
4. Poor average performance.

Keeping Students' Attention

1. Use a microphone and move around.
2. Set the tone from 1st day: don't just go over syllabus!
3. Learn every student's name.
4. Speak as if you are letting students in on a secret.

Keeping Students' Attention

5. Ban cell phones, texting, off-task computer use.
6. Ban side conversations.
    a. Prevent many with assigned seating.
    b. Gently but firmly nip them in the bud.
7. Get students actively involved.

Getting Students Actively Involved

1. Active engagement is key to student learning!

2. Encourage attendance: Give students opportunities to earn points every day.

3. Encourage note-taking: Post partial PowerPoint slides

Getting Students Actively Involved

4. Solicit feedback often:

   a. On-line quizzes due right before class—focus class accordingly.

   b. 1-minute essays: what was most interesting/ confusing/surprising?

   c. T- Charts:
      What's Working (+).
      What's not (-):

+	-

Getting Students Actively Involved

5. Just-in-Time Teaching (JiTT)
   a. Students complete on-line assignments due just before class.
      - Warmups: based on readings about material not yet covered in class.
      - Puzzles: based on material already covered in class.
   b. Faculty use partial or incorrect student answers as the framework for lecture.

http://134.68.135.1/jitt/#

Getting Students Actively Involved

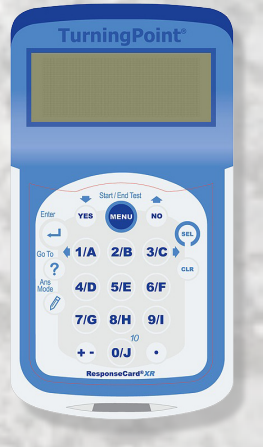
5. Break up the lecture with small-group activities.

   a. Think-Pair-Share

      http://serc.carleton.edu/introgeo/interactive/tpshare.html

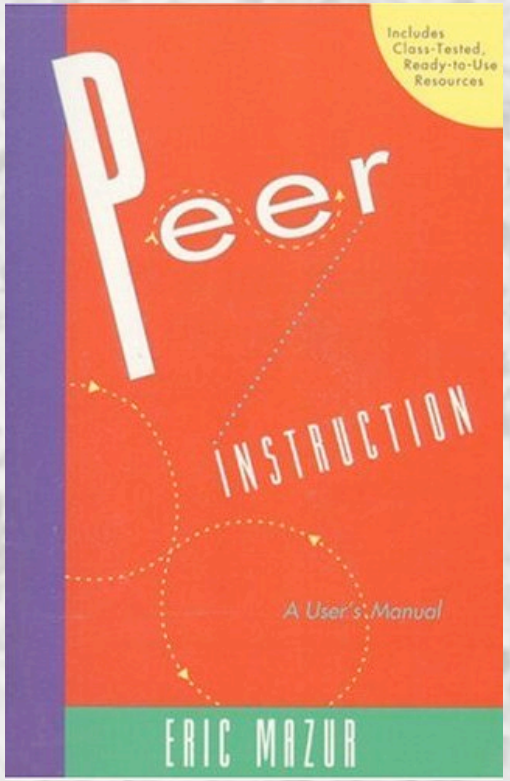
   a. Peer Instruction using clickers

      http://mazur-www.harvard.edu/education/educationmenu.php



Peer Instruction

- Lectures are interspersed with conceptual multiple-choice questions (*ConcepTests)*, designed to expose common difficulties in understanding the material.
  - Students answer the question, using clickers (1-2 minutes).
  - Instructor displays the distribution of answers.
  - Students discuss their answers in small groups (2-3 minutes).
  - Students answer the question again.

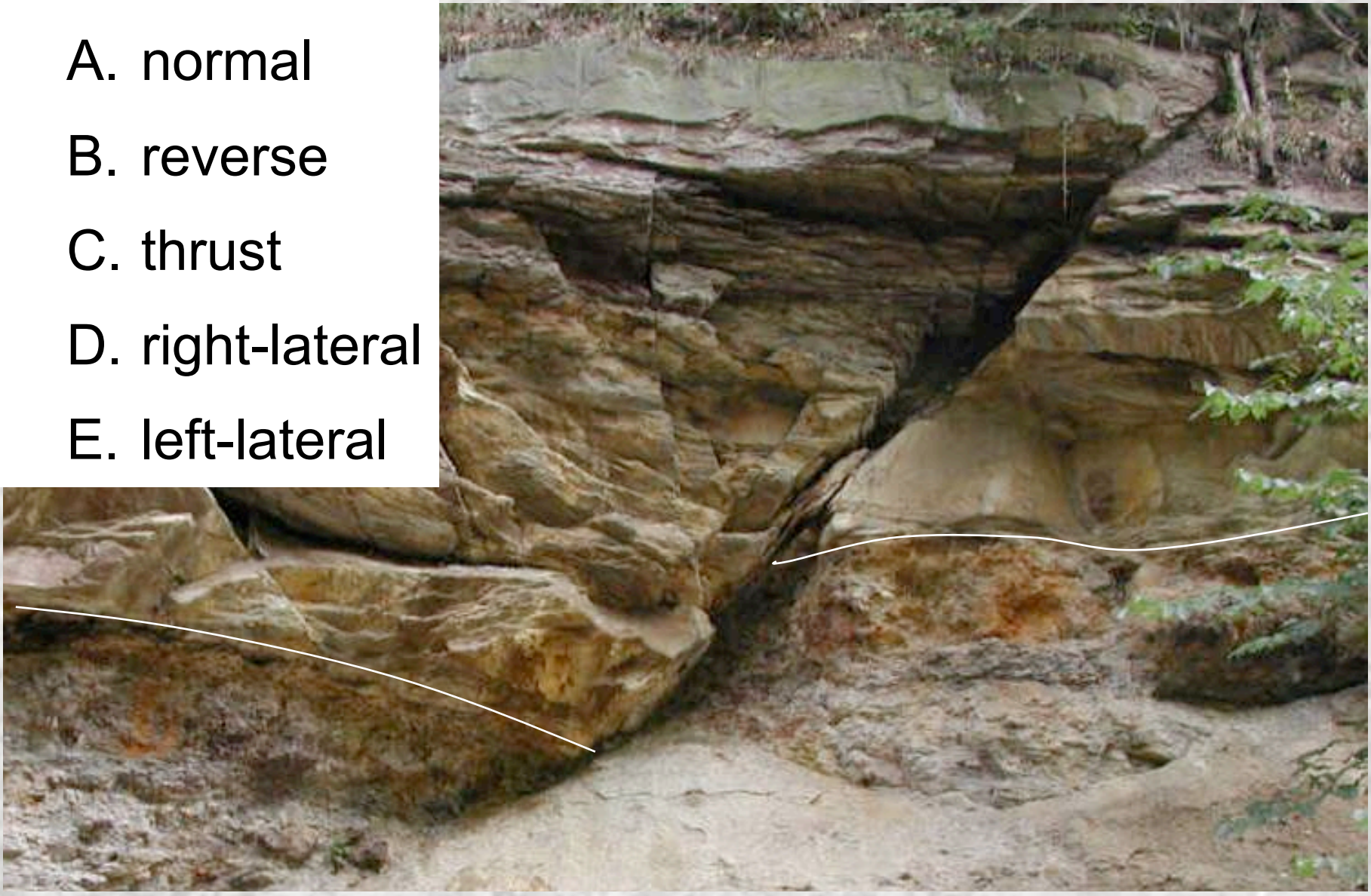


ISBN 0-13-565441-6

http://mazur-www.harvard.edu/

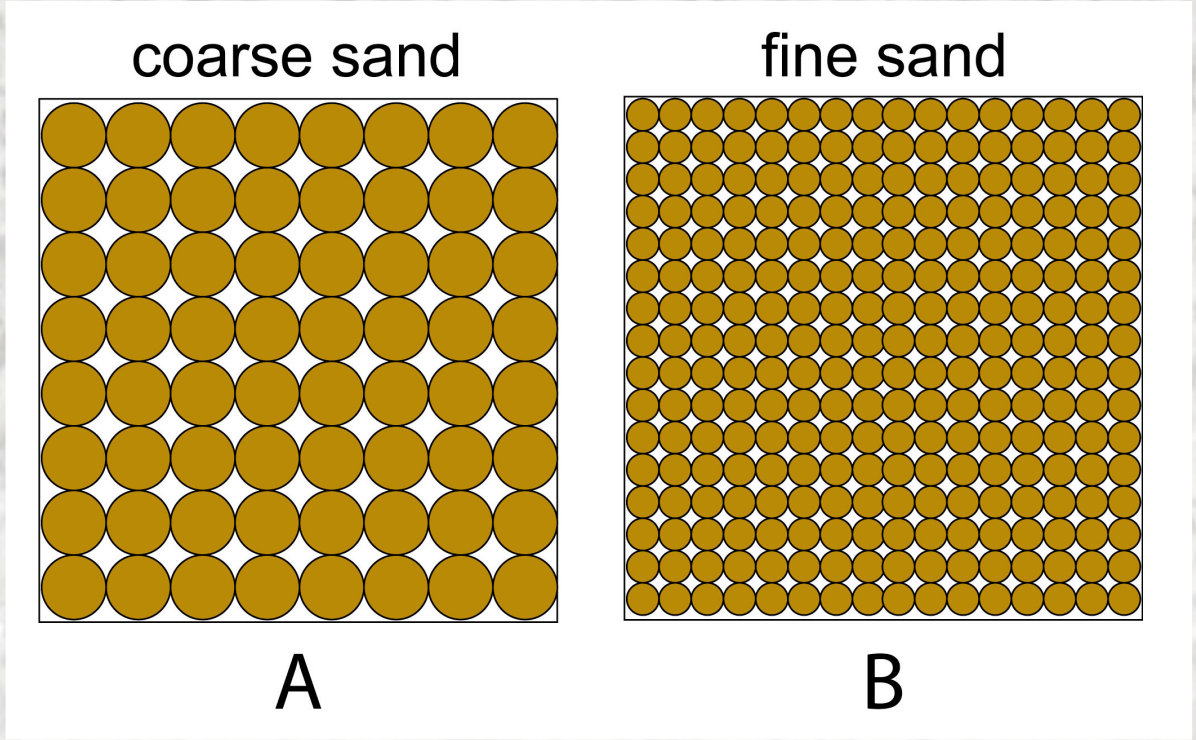
This photograph shows a(n) _____ fault.

A. normal
B. reverse
C. thrust
D. right-lateral
E. left-lateral



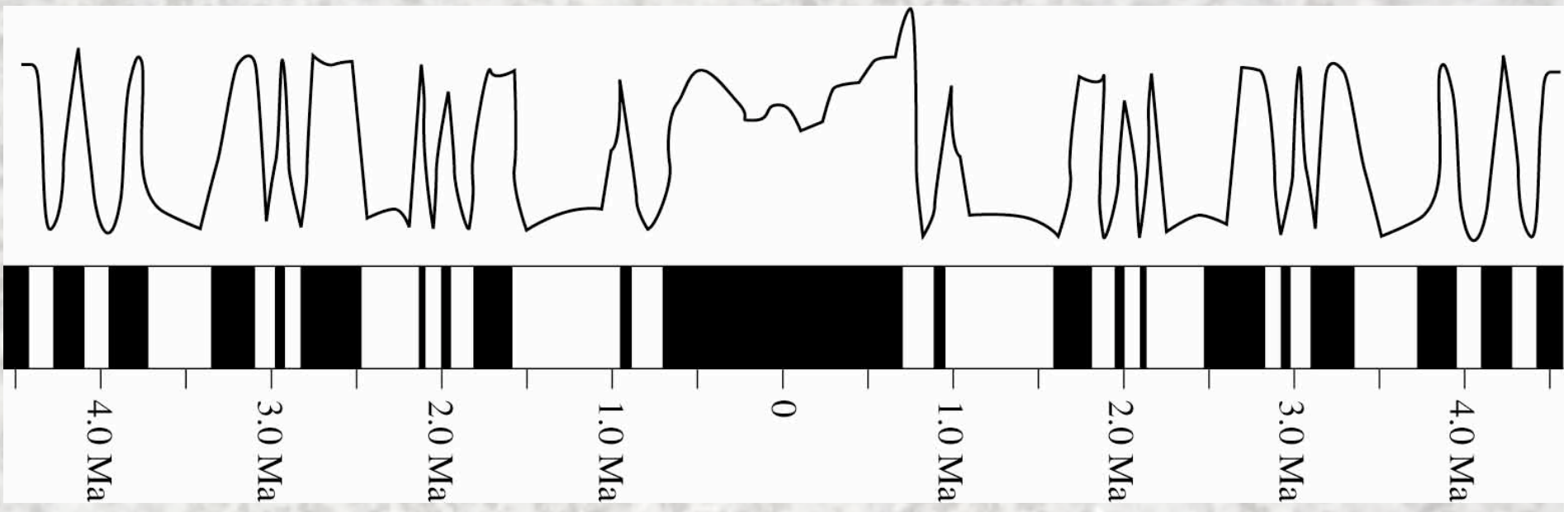
http://www.geology.pitt.edu/GeoSites/site%20VLNCA%207-1new.htm

Which has a higher porosity?



C. They have the same porosity.

Note: “Ma” is an abbreviation for “million years.”



200 Km

What is the rate of sea floor spreading on this ridge?

A. 100 kilometers per million years (10 cm/yr)
B. 50 kilometers per million years (5 cm/yr)
C. 25 kilometers per million years (2.5 cm/yr)