

IB 106/GEOL 106/ESES 126  
Discussion Activity: Week 5  
Due: September 22-23, 2009

## Illinois Through Time

**GOAL:** To reinforce an understanding of the geologic timeline and the environmental and geographic changes of the Phanerozoic. We will achieve this by collectively reconstructing the geologic and paleontological history of Illinois.

How would you describe the geography and climate of Illinois? Perhaps you will first think of our relatively flat topography, our seasonal climate with hot summers and cold winters, and our native prairie plants. But what did Illinois look like 100 million years ago – at the time of the dinosaurs? Or 250 million years ago – at the moment of Earth's largest mass extinction? Or 320 million years ago, when most of the coal of Illinois was formed? Have you ever wondered: where did all the vegetation that forms our coal beds come from?

This week, we are going to take a trip through time, focusing on the most recent 12% of earth history – the last 542 million years – also known as the Phanerozoic. This is the our current eon and the span of Earth history which contains the most abundant fossil record.

You will be assigned a period within the three eras of the Phanerozoic. Follow the link on the Compass website to access the assignment website and learn more about your assigned period:

<http://www.life.illinois.edu/punyasena/IllinoisTime/>

Using the assignment website and other web and library resources, fill out the attached worksheet ("Pre-Class Worksheet") and bring copies of your completed worksheet to discussion next week. Be sure to keep track of the source of the information by listing the sources you use in your research.

### **PLEASE BRING TWO COMPLETED COPIES TO SECTION NEXT WEEK.**

In section next week, you will share your report with your classmates and collectively reconstruct a historical geology timeline for Illinois and the Midwest.

GRADING RUBRIC

POINTS	PRE-CLASS WORKSHEET	IN-CLASS WORKSHEET
5	All questions are answered Demonstrate knowledge and use of assigned website External web research included in report	All sections are complete Demonstrate significant knowledge of time periods other than your assigned period
4	All questions are answered Demonstrate knowledge and use of assigned website	All sections are complete
1-3	Worksheet incomplete, missing answers to one or more questions  Did not bring two copies of completed worksheet to class	Worksheet incomplete
0	Worksheet not turned in at beginning of class	Worksheet not turned in at the end of class

Maximum assignment grade: 10 points

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### Illinois Through Time

PRE-CLASS WORKSHEET: **PLEASE BRING TWO COMPLETED COPIES TO SECTION NEXT WEEK**

Name:	
Discussion section & TA:	
Assigned geologic period(s):	
Time span of period(s):	
Era:	
Eon:	

On an attached sheet, please answer the following questions for your assigned geologic period or combination of geologic periods:

1. Provide a description of where Illinois was located, particularly its location relative to the equator and poles. Cut and paste a copy of the paleo-map(s) of the period(s) and mark the approximate location of Illinois. (Note that "Laurentia" refers to an ancient continent which incorporates much of modern North America and Greenland).
2. What were some of the notable climatic, tectonic, and biotic events of the period(s)?
3. Are there any rocks of this age in the Midwest? If there are, where are they located and what fossils do they contain? If not, why not?
4. Describe the climate of Illinois during that period. Was it warm or cold or both? What type of environment is represented?
5. Choose at least three species that are found in the Midwest during this period or combination of periods. Do a web search of their names. Describe what we know about them: What did they look like? In what environments they live? If there are few or no fossils of that age in the Midwest, explain what we would expect were there a fossil record, and your best hypothesis for why that portion of the record is missing.