

**Geology 1002 (Section 1)
Honors Physical Geology
Howe-Russell E131
TTh 9:00 - 10:30**

- **Instructor:** Jeffrey A. Nunn
- **Office:** Room E339 Howe-Russell
- **Telephone:** 578-3353
- **e-mail:** gjjeff@lsu.edu
- **Office hours:** 3:00 to 5:00 M or by appointment

Resources

- **Class web page**
<http://www.geol.lsu.edu/jnunn/1002.1/>
 - [Course outline, exam schedule](#)
 - [Outlines of each lecture](#)
 - [Chapter Summaries/Review Sheets](#)
 - [Post grades](#)
- **Text:** Understanding Earth (Sixth Edition) (2010), Grotzinger and Jordan
- **Publisher web page:**
<http://www.whfreeman.com/understandingearth/>
 - Photos, Animations
 - Study Guides
 - Links
 - Quizzes

Classroom Conduct

- Turn off cell phones and other electronic devices
- Put away newspapers, magazines etc.
- Arrive on time
- If you **MUST** leave early, let me know and leave quietly

Evaluation

- Three in Class Exams (100 points each)
 - questions may be T/F, multiple choice or short answer
 - make up exams are essay
- Final Exam (150 points) - Comprehensive
- Three Projects (30 points each)
- Service Learning Projects (150 points)
- Eight Quizzes/Blog Entries (Top 6 worth 10 points each)

Service Learning

- Students will be paired into teams to participate in observation and instruction in 8th grade Earth Science classes
- Students will create instructional materials
- reflect on the service activity to gain deeper understanding of course objectives, an appreciation of Earth science as it relates to the global community, and an enhanced sense of civic responsibility.

Field Trip to Tunica Hills (Hagrid and the Forbidden Forest)



- Saturday Nov. 20
- Optional
- Extra Credit
- Fun!!!
- Does NOT conflict with LSU Football

Earth's systems are dynamic: changes can be small or large, continuous or sporadic, and gradual or catastrophic.



Components of Earth's systems may appear stable and change slowly over long periods of time.



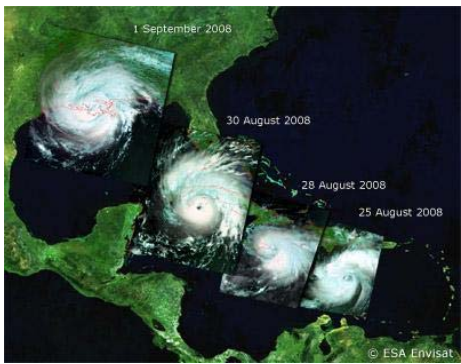
Earth's rocks and other materials provide a record of its history.



Earth's Interior: Humans cannot eliminate natural hazards, such as earthquakes or hurricanes, but can engage in activities that reduce their impacts.



Surface Processes



Soil, rocks, and minerals provide essential metals and other materials

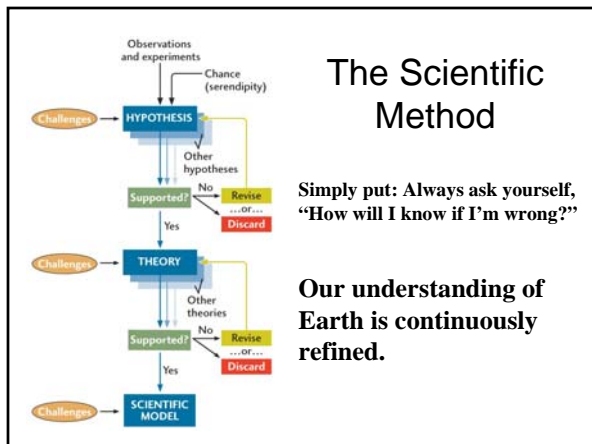


Humans cause global change through fossil fuel combustion, land-use changes, agricultural practices, and industrial processes



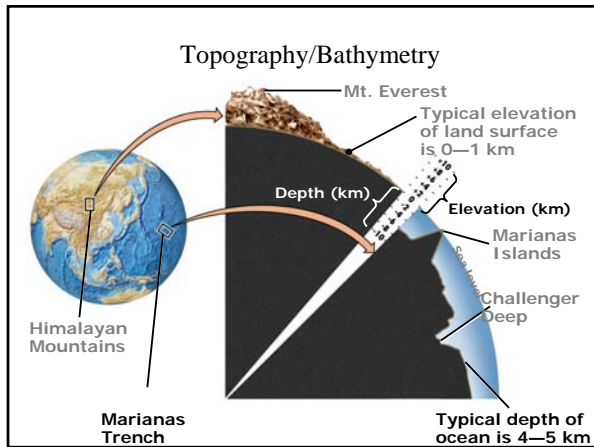
Hypothesis - Theory - Law

- A hypothesis is an explanation initially offered for a set of observations.
- When a hypothesis withstands many tests it may be called a theory.
- A theory for which it seems there to be no sensible reasons to challenge is called a law.

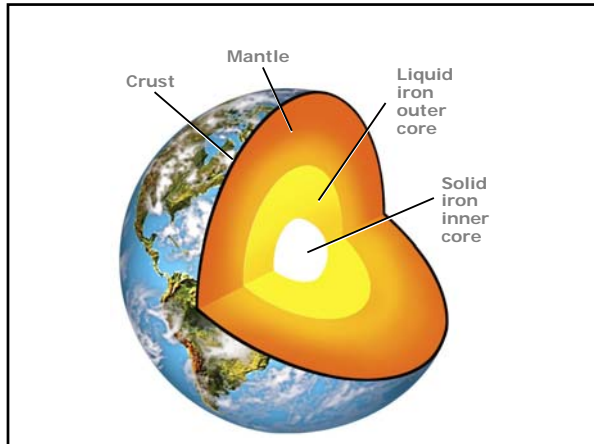


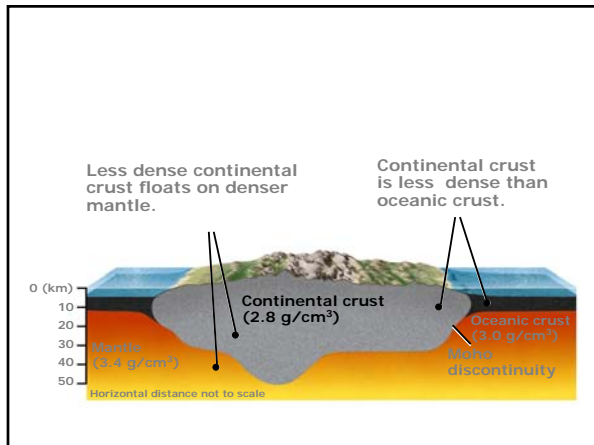
A Good Theory is...

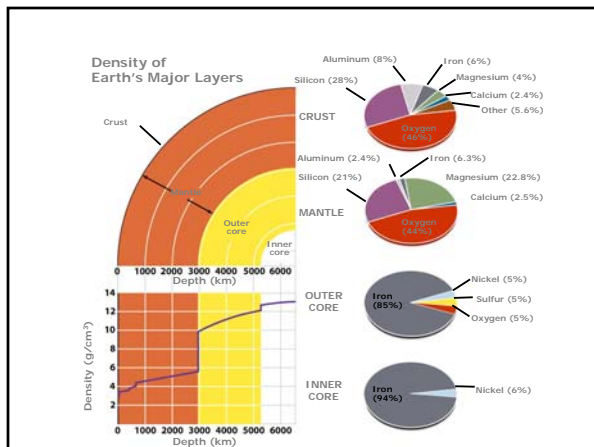
- **Parsimonious**
(is the simplest explanation available)
- **Consilient**
(explains a wide range of phenomena)



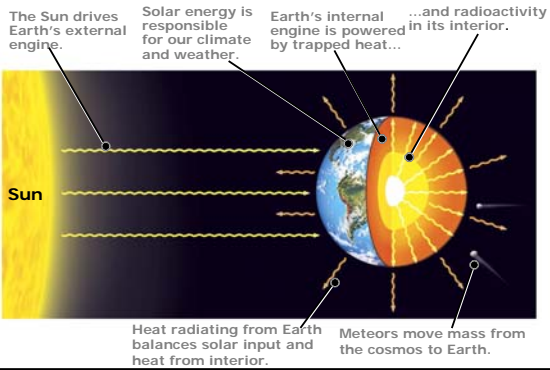




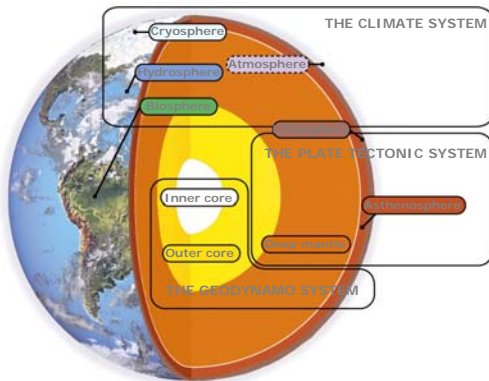




Earth is an open system



The Earth system



Convection causes hot water to rise...

