

EarthSpace: A National Clearinghouse for Higher Education Materials and Information in Earth and Space Sciences

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Are you looking for Earth and space science higher education resources and materials?

Come explore EarthSpace, a national higher education clearinghouse for undergraduate assets!

Created in response to calls from the Earth and space science higher education community, EarthSpace is a searchable database of undergraduate classroom materials for faculty teaching planetary sciences, astronomy and astrophysics, solar and space physics, and Earth sciences at both the introductory and upper division levels.

Modeled after the highly successful SERC clearinghouse for geosciences assets, EarthSpace was designed for easy submission of classroom assets – from homework and computer interactives to laboratories, lectures, and demonstrations. All materials are peer-reviewed before posting, and authors adhere to the Creative Commons Attribution (CC BY 3.0). EarthSpace materials are automatically cross-posted to other digital libraries (e.g., ComPADRE) and virtual higher education communities (e.g., Connexions).

In addition to classroom materials, EarthSpace provides news and information about educational research and best practices, funding opportunities, and ongoing efforts and collaborations for undergraduate education.

EarthSpace Strategy and Approaches

- **Easy submission:** faculty need to be able to easily submit materials for consideration. EarthSpace is designed to be as painless as possible for submission and still get sufficient information to make it useful for searching!
- **Searchable:** by science topic, audience, type of material, and keywords.
- **Straight-forward behind the scenes:** significant automation of transforming online submission forms into useable and reviewable files
- **Credit for your work and usability of materials:** all assets contributed to EarthSpace use Creative Commons Attribution (CC BY 3.0), an open source license that allows open and free access to licensed materials but still ensures that developers receive appropriate attribution. CC BY 3.0 means that authors give permission for users to share and remix/adapt their work, but ask users to attribute the work in the manner that the author desires. To learn more about CC BY 3.0, visit creativecommons.org.
- **Wide distribution of resources:** once your materials are submitted and posted at EarthSpace, you can choose to 'push' them to other online higher education repositories. There are many virtual repositories / communities and more emerging. As new repositories come online, your EarthSpace materials will automatically be sent. So, you only submit once, and EarthSpace ensures continual distribution as time goes on and new opportunities arise. EarthSpace is currently pushing materials to Connexions, the largest online repository for higher education materials, and soon will engage ComPADRE, an online collection of physics and astronomy resources. **If you have an online repository that you would like to see EarthSpace reach, let us know!**

Home:

- Welcome information
- Quick view of the most recent postings

Education Materials:

- Course descriptions, activities, homework, resource guides, and lectures. Browse the submissions or use the search tool!

Teaching Undergraduates:

- In-class techniques, misconceptions, UG research models, assessment, mentoring, student collaborations, NSF/NRC studies, NAS workforce outcomes, and career materials – browse or search for something specific!

News and Funding:

- AOs, RFPs, deadlines, funding news (NSF, NASA, etc.), internships, tips for writing education proposals.

Search EarthSpace: Search through submitted materials by **keywords** (e.g., Mars), **items** (e.g., course descriptions, activities, homework, teaching undergraduates), **topics** (solar wind, cosmology, climate and weather, galaxies, magnetism, astrobiology, planetary geology, problem-based learning, using technology in the classroom, etc.), and **audience** (e.g., non-major courses, major upper-division courses, pre-service teacher courses).

About: A little bit of background on EarthSpace.

Submit: Submission forms for your own education materials – from course descriptions and lectures to laboratory exercises and homework – as well as news and funding opportunities and information on teaching undergraduates.

Join: If you would like to receive updates about higher education by email, fill out a short form to join HENews, a moderated listserv for the community. Anyone can post news and information, and there is a monthly e-newsletter that rolls up the best from EarthSpace.

Review: if you would like to review submissions, please fill out a short form about you, your availability, and the types of materials and content you would like to review.

Got a Comment: if you have suggestions for or feedback on EarthSpace, please send us your thoughts!

RSS 2.0: if you would like to receive updates via RSS whenever something new is uploaded to EarthSpace, subscribe to the EarthSpace RSS feed!

A National Clearinghouse for Higher Education Space and Earth Sciences

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Administration

RSS 2.0

Welcome

EarthSpace is your One-Stop Shop for information and resources for undergraduate education in planetary science and solar and space physics. Here, you will find the latest news, funding opportunities, and educational research for undergraduate faculty. Most importantly, the clearinghouse is a place where you can submit and find materials for your classroom, including lectures, activities, home work, and other assets.

HNNews

We are excited to announce the new community listserv, HENews! HENews is a place for you to share and receive news and information about higher education, teaching, and earth and space sciences. You can join HENews by clicking [Join!](#) on the left of this page. As part of HENews, you will also receive the EarthSpace monthly newsletter.

Find Education Materials

Search here for course descriptions, lectures, activities and home works that you can use in your classroom.

- **Bill Gates' Great Great Granddaughter's Honeymoon Trip: A Lab:** In this lab, developed for my astronomy-for-poets class at Foothill College, students organize themselves into travel agencies and use Hubble (or other) images to plan the "trip of a lifetime"... *Posted 4/15/2012 by Andrew Fraknoi*
- **Petrographic microscopy of NASA's antarctic meteorite thin section set:** This lab activity made use of NASA's antarctic meteorite thin section set (available on loan from NASA for educational purposes), introducing the mineralogy and petrology of meteorites to students with... *Posted 4/3/2012 by Lindsay McHenry*
- **A laboratory activity using NASA's lunar thin sections set:** This lab activity makes use of NASA's lunar thin section set (available on loan from NASA for educational purposes) for an upper level class where most students have prior experience... *Posted 4/3/2012 by Lindsay McHenry*
- **Online Impact Cratering Lab:** Introduces the fundamental concepts of impact cratering and basic image processing techniques. Image processing software (ImageJ) is built into the website. *Posted 3/21/2012 by Andy Shaner*
- **Autumn Aurora Short Writing Assignment:** Rewrite a newspaper article about the aurora so it is both scientifically accurate and accessible to a general audience. *Posted 3/2/2012 by Erika Harnett*

[View more education materials...](#)

What's the Latest on Teaching Undergrads?

Search here for the latest research on teaching in the undergraduate classroom, including both papers and policy statements.

- **'Free-Range Learners': Study Opens Window Into How Students Hunt for Educational Content Online:** The preliminary results of a multiyear study of undergraduates' online study habits, presented by Ms. Morgan at a conference on blended learning here this week, show that most students shop... *Posted 5/2/2012 by Emily CoBabe-Ammann*
- **Astronomy Education Review:** This is a refereed journal and lively magazine about teaching astronomy and space science (from K-12 through university and in informal settings)... *Posted 4/6/2012 by Andrew Fraknoi*
- **The Center for Astronomy Education (CAE):** The Center for Astronomy Education (CAE), in Steward Observatory at the Univ. of Arizona is devoted to improving teaching and learning in Astro 101 by conducting fundamental research on student... *Posted 9/27/2011 by Emily CoBabe-Ammann*
- **Promising Practices in Undergraduate Science, Technology, Engineering, and Mathematics Education:** Numerous teaching, learning, assessment, and institutional innovations in undergraduate science, technology, engineering, and mathematics (STEM) education have emerged in the past decade. Because virtually all of these innovations have been... *Posted 11/18/2011 by Emily CoBabe-Ammann*

[View more on teaching undergraduates...](#)

<http://www.lpi.usra.edu/earthspace>

Peer Review = Publication!

All materials submitted to EarthSpace undergo peer review before posting. Peer review ensures that the quality of the EarthSpace materials is high and also provides important feedback to authors.

Your submission is a reviewed publication! Beginning in spring 2013, all EarthSpace materials will be assigned a unique, permanent doi (digital object identifier) for publication reference.

When you volunteer to review submissions, we ask for your areas of expertise so we can match the resources submitted to reviewers who know the topics well. Additionally, you will enter your availability; whether you have time to review materials once a month or once a year, your input is valuable!

To help EarthSpace maintain its high standards, **SIGN UP TO REVIEW TODAY!**

Want to learn more?



If you have ideas or would like more information about EarthSpace, please contact:

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