

Title: Spheres of Earth Magazine
Grade(s): 5th
Subject(s): Science
Author: ICAC Team
Overview: This lesson provides students opportunities in developing artistic expression, writing skills, research skills, science knowledge, technology skills, and group collaboration skills. Using art supplies listed below, students will create a digital science magazine that can be printed and bound by the teacher or converted into a website (instructions are listed). The topic of the project will be the different spheres of earth. During the research phase, the students will use the **Internet** to gather information. The teacher’s role will be to instruct the students on how to conduct research and guide them in the research and writing process.

This lesson plan has been developed based on Lynn Hobson’s original “To Infinity and Beyond... Magazine of Planetary Studies.” ALEX ID: 24117.

Content Standards:

- SC (5) 10. Identify spheres of Earth, including the geosphere, atmosphere, and hydrosphere.
- ELA(5) 8. Express meaning through writing varied sentence structure, detailed paragraphs, and multi-paragraph compositions in an organized manner.
- ELA(5) 11. Use search strategies in the research process to identify reliable current resources and computer technology to locate information.
- TC(3-5) 2. Use various technology applications, including word processing and multimedia software.
- TC(3-5) 8. Collect information from a variety of digital sources.
- TC(3-5) 12. Create a product using digital tools.

Local/National Standards:

Primary Learning

Objectives: The students will identify spheres of earth and their characteristics.

Additional Learning

Objectives: Students will use computer software to produce a magazine and/or website about the spheres of earth.

Approximate Duration of Lesson:

This lesson will require two 45 minute sessions

Materials and Equipment:

Art paper, colored pencils, rulers, and scissors. Science textbook for reference. Magazines and other reference materials may be available in the school library.

Technology Resources Needed: Desktop Computer, one flash drive for each group, printer access; some things may need to be photocopied if the work is done by hand.

Background/Preparation: Knowledge about GoogleSites usage is necessary if the teacher wishes to produce a website. Also, information about the different spheres of earth and proper research techniques are required for the discussion in Step 1.

Procedures/Activities: Step 1 Facilitate a discussion about the spheres of the earth: **geosphere**, **hydrosphere**, and **atmosphere**. Write the terms on the board and have students tell what they know about each. Make a list of questions that they have about each sphere.

Below are websites that may provide information on the topic.

Geosphere:

(<http://earth.rice.edu/mtpe/geo/geosphere.html>)

Hydrosphere:

(<http://earth.rice.edu/mtpe/hydro/hydrosphere.html>).

Atmosphere:

(<http://earth.rice.edu/mtpe/atmo/atmosphere.html>)

Tell students that they will have an opportunity to learn more about the spheres. They will work with their group to produce a magazine or website about the earth's spheres. Assign each group to one of the spheres. (You may wish to assign two groups to each sphere – 6 groups total - so that the groups will be smaller.)

Their magazine or website must contain **basic information** about the sphere, **photographs** of several features of the sphere, and **original drawings** of some of the features. The information should be organized into several articles about different aspects of the sphere.

Review the process of conducting research in books, magazines, and the Internet. Provide students with the three above websites as starting points for their research. Demonstrate how to **cite references**. Make available the paper and artist supplies for students to use to make original drawings.

Step 2 Text for the articles will be entered into **Microsoft Word** on the computer. Each group should decide on topics related to their assigned sphere and produce a short illustrated article

on each topic. Review with students how to use **Microsoft Word** if necessary.

Images to illustrate the articles may be found on the Internet by searching for Images. Images can be saved to the computer or to a flash drive. To save an image from the Internet, right click on the image and Save Picture As.

To import a picture into Microsoft Word:

On the **Insert** menu, click **Picture**. Then locate where your image is saved. Click on the image and then click **Insert**.

- Have students save their documents to a flash drive.
- Step 3 When each group has completed the articles about its assigned sphere, upload the articles to the class website or transfer them to the teacher's computer for printing. Use a flash drive to transfer each group's project.
- Step 4 When all group articles have been transferred to a PC, the final product may be created. This may be a hard copy magazine (or three separate magazines for each sphere) or a webpage.

To create a hardcopy magazine, plug the flash drive into a computer that is connected to a printer. Then print out the articles. Have students design a cover for the magazine. Then, bind all the printed articles together to create a magazine.

To create a website using the materials gathered in this lesson visit the GoogleSites web site where you can create one easily (and for free).

<https://www.google.com/accounts/NewAccount?hl=&service=jotspot&continue=http://sites.google.com/>

You will need to create a class username and password. All articles may then be uploaded and arranged to create a digital magazine on the website.

- Attachments:** Rubric
- Assessment Strategies:** See Rubric
- Extension:** Students may develop magazines or websites for other topics being studied in class.
- Remediation:** Give students readings that are on their current reading level and that relate to the spheres of earth.

Assessment Rubric for Spheres of Earth Magazine

Score:	1	2	3	4
Participation	No participation in the activity.	Some participation, but didn't work well with the group.	Participated throughout activity, contributed to the successful outcome.	Worked well with everyone in group, offered ideas, contributed to successful outcome.
Project	Did not produce a magazine or was missing most of the required information and images.	Produced a magazine, but some information was inaccurate or missing.	Produced a magazine, conducted accurate research, but only included some of the necessary information and images.	Produced a magazine using the Desktop computer, conducted research, wrote at least three articles that included accurate information and images about their sphere.