COMPARING ECOLOGICAL FOOTPRINTS ACTIVITY

Calculate your ecological footprint and share your activity results online to compare with other classrooms from around the world. Here are the steps to get started!

1 Ask a Question

What is my ecological footprint score and how does it connect to sustainable development? How do ecological footprint scores compare in different locations around the world? Guide a classroom discussion to help students think about the above investigation questions to set the context for the activity. For more resources and background materials, see the content at **www.aag.org/gceclimatechange**.

2 Get data to Observe

Hand out the Ecological Footprint Activity Guide (pg. 2). Students should use the recommended online Global Footprint Network's ecological footprint calculator to obtain scores that can be compared with other MyCOE participants. (Online at: http://www.footprintnetwork.org/en/index.php/GFN/page/personal_footprint/) Students are asked to respond to an online quiz about their lifestyle and resource use. At the end of the quiz, scores are provided for the number of planets required (lifestyle), the number of global hectares required, tonnes of carbon, and a breakdown of percentages for food, shelter, mobility, goods, and services. Record these scores.

3 Use these GIS tools to Analyze

After recording their scores, students have the option to "*Edit your footprint*" which lets you adjust your responses in different categories to see how different choices affect their score. Students can also choose to "*Explore scenarios*" to see how changes in their lifestyle choices might affect their total score. Ask students to speculate about how their scores may compare to other locations? Students can look at trends by country using the "*Footprint for Nations"* information under the "*Footprint Basics"* menu link on the Global Footprint Network website (http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_for_nations/). The country trends information is accessed from the popup menu of countries. Select a country and analyze the chart of country trends for ecological footprint and biocapacity. Ask students to examine the country trends for their country to see how the country's score compares to their personal carbon footprint score as well as to trends in other countries. Record whether each country's trends are increasing or decreasing for the ecological footprint and biocapacity.

4 Develop ideas for a Solution

Lead a discussion to identify factors that may make a difference in the trends for different countries. The per-person resource demand (Ecological Footprint) and resource supply (Biocapacity) varies each year. Since factors such as ecosystem management, agricultural practices (such as fertilizer use and irrigation), ecosystem degradation, and weather are highly variable, changes in these things would affect the trend data. Ask students to write a brief paragraph that includes their ecological footprint score, their observations about the trend data for their country, and a summary of their findings and conclusions as well as new questions they may have from the activity. Calculate an average ecological footprint score for the class and compile a list of interesting observations, solutions, and questions to include in a project description. *Optional: create a hand drawn or digital map showing the country scores or map both the ecological footprint and biocapacity scores using a combination of colors and symbols to represent increasing-decreasing-stable score values students charted during the activity.*

5 Take action and Share it!

Share your project results with other MyCOE participants and begin a classroom exchange about ecological footprints and country trends. Use the instructions on page 3 of this guide. This can be done by the adult point of contact for the project. If you made your own hand drawn or digital map, follow STEP ONE and submit it to **www.mycoe.org** to be considered for recognition or prizes related to UN Rio+20. To be able to share your results with other MyCOE GCE classrooms, add a project point to the online MyCOE Project Exchange map following the instructions under STEP TWO. View other projects at MyCOE GCE sites and exchange comments on the projects in STEP THREE.

ECOLOGICAL FOOTPRINT ACTIVITY GUIDE

This activity will help you investigate the following questions:
What is my ecological footprint score and how does it connect to sustainable development?
How do ecological footprint scores compare in different locations around the world?
An ecological footprint calculates how much land and resource use it takes to support your lifestyle. There is evidence that human activities are directly contributing to global environmental changes. The indicators used in this activity are one way of estimating the impact humans have on the planet.

1. **Take the Quiz** (http://www.footprintnetwork.org/en/index.php/GFN/page/personal_footprint/).
   Click the "*Take the Quiz*" link to begin. Select your country or a location close to your location if your country is not listed. Answer the questions for the different lifestyle categories to complete the quiz. At the end of the quiz when your results are displayed, record your scores below.

YOUR ECOLOGICAL FOOTPRINT

How many planet Earths?		Breakdown of your ecological footprint:

How many planet Earths?

_____

How many global hectares of Earth's productive area?

_____
(_____ tonnes of carbon)

Breakdown of your ecological footprint:

Food _____

Shelter _____

Mobility _____

Goods _____

Services _____

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2. If you have time, you can "*edit your footprint*" to see how different quiz responses might change your total score or "*explore scenarios*" to see how different choices might impact your scores.

3. Next explore how your scores compare to averages for your country as well as for other countries.
   Go to (http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_for_nations/) and select a country from the popup menu in the **COUNTRY TRENDS** box and record your observations in the table below.

YOUR COUNTRY:	ECOLOGICAL FOOTPRINT (increasing/decreasing/steady)	BIOCAPACITY (increasing/decreasing/steady)
COMPARE WITH OTHER COUNTRIES:		

4. **OPTIONAL**: *Create a hand drawn or digital map showing the locations of country scores or map both the ecological footprint and biocapacity scores using a combination of colors and symbols to represent increasing-decreasing-stable score values from your chart above. Be sure to include a legend on the map explaining your symbols! (HINT: Think carefully about how the colors help communicate information to users viewing the map when you assign the values to the symbols.)*
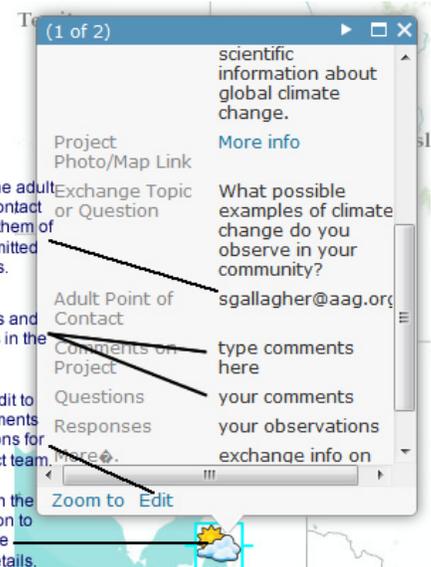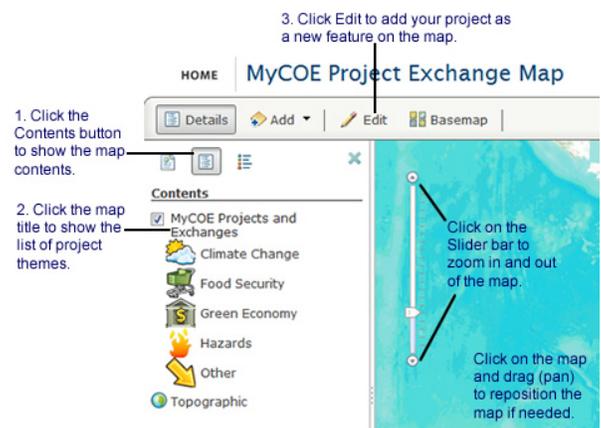
Share your project and exchange comments with other MyCOE participants!

STEP ONE (*Optional***):** **If you made a map during the themed activity, please report your project to MyCOE to be considered for recognition or prizes related to the UN Rio+20 conference.**
1. Go to mycoe.org, click on "***5. Take action and Share it!***" button at the top of the page to submit your project details using the MyCOE online submission form.

STEP TWO: How to share your project on our MyCOE Project Exchange Map
1. Go to mycoe.org, click on the "***3. Use these GIS tools to Analyze***" button at the top of the page.
2. Enter "MyCOE Project Exchange Map" into the search box (where it says, "*Find maps, applications, and more…*"). Click on the search icon or hit the Enter key.
3. Select the link "***MyCOE Project Exchange Map***" from the results list.
4. Simply click *Open* or select "*Open in ArcGIS.com map viewer*" in the drop down menu below the map icon.
5. To add your project to the map, zoom in or out using the slider bar on the map and click on the map and drag (pan) to reposition the map in order to find and view your location.
6. Click on the *Contents* button to display the map contents. Click on the map title under contents to display the list of project themes.
7. Click on the Edit button to add a point for your project to the map.
8. Click on the project theme icon for the project you would like to add to the map then move your mouse to the location on the map where you wish to add the point and click on the map.
9. Enter the details about your project in the fields in the pop up box. Be sure to type in one of the five project themes since the theme field will determine your project icon! There are hints to help you input the correct information and any entry can be edited and updated if needed. If you have a link to a project photo or map, include it with your details. Click Close.
10. Your project and details are now displayed on the map! All changes are automatically saved when you close the browser window.
11. Return to the map occasionally to check your project point on the map to see if you have any comments or questions.

STEP THREE: How to view and comment on other projects displayed on the MyCOE Project Exchange map
1. Click on a project icon on the map to view the project details for that project.
2. To add your comments and questions, click Edit at the bottom of the pop up box.
3. Enter your comments or questions into the appropriate fields.
4. Email the adult point of contact to inform them of your submitted comments and your exchange information.
5. Click close and all changes are saved automatically.