

GLOBIO created Learning Activity Guides are designed to simplify integration of Glossopedia based learning into classroom and extra-curricular activities and curriculum. Each activity is designed around the use of Glossopedia articles and subjects, incorporating technology into interdisciplinary instruction. Learning Activities are intended to be fun, inquiry-driven, and interesting; exciting for students and helpful to teachers.

### Concepts

- Different choices people make affect our planet.
- You can make a difference everyday in the health of our planet
- A healthy ecosystem has increased biodiversity.

## Activities

### Earth Day Around the World Page 2

Give each student a copy of the Earth Day Around the World worksheet. Ask students to complete the sheet as they read the “Earth Day” article in Glossopedia. They will also need to read photo captions.

#### Time:

- 20 minutes

#### Materials:

- Worksheet: Earth Day Around the World
- Pencils

#### Glossopedia:

- [www.globio.org/glossopedia/earthday](http://www.globio.org/glossopedia/earthday)

### Related Topics

- Earth Day Everyday
- Plants
- Animals
- Environments
- Conservation
- Species
- China

### Talking Trash Page 3

### Windowsill “Landfill” Pages 3 - 4

### Banana Peel Decomposition Pages 4 - 5

### Extension: Trash Can Detective Page 6

#### Standards



Standards Key available at [www.globio.org/standards](http://www.globio.org/standards)

#### Recommended Outside Links

- EPA Kids Club: [www.epa.gov/kids/](http://www.epa.gov/kids/)
- PlanetPals: <http://www.planetpals.com/earthday.html>

### Vocabulary

- Vernal equinox
- Biodiversity
- Resources
- Ozone Layer
- Ozone
- Atmosphere
- Global Warming
- Habitat
- Poaching
- Senator
- United Nations
- Equinox
- Climate change
- Indigenous
- Endangered
- Artifacts

## Earth Day Around the World

Name: \_\_\_\_\_

How is Earth Day celebrated in different countries around the world?

### United States



### India

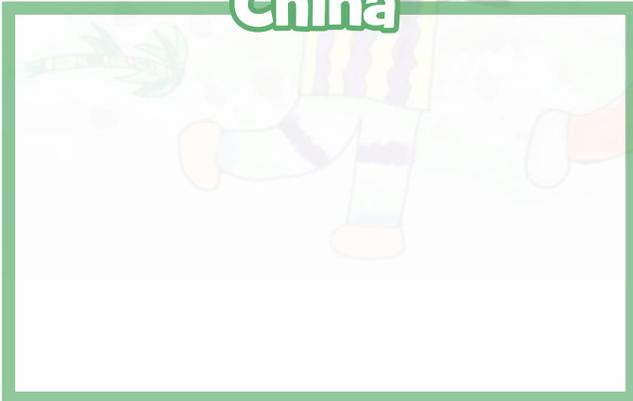
1. Rally with signs



### Kenya



### China



### Australia



## Talking Trash

- Go to the Glossopedia article on Earth Day.
- To find it, enter “Earth Day” into the search box on the Glossopedia home page. Click on the Earth Day entry.
- Scroll to the bottom of the article to the heading, “Rethink, Reduce, Reuse, Recycle.”
- Below the picture of the trash bag are silhouettes of trash.
- Have students try to guess what each piece of trash is and how long it will take to decompose.
- They may click on each picture to see what it is and how long it will take to decompose.
- What does it say about the banana peel?

### Discussion:

- Ask students if they recycle at home or if they put all of their waste into the garbage can.
- Ask them what they would like to recycle that they didn’t before now that they know how long it takes to decompose.
- Does your school recycle? If so, where? If not, could they?
- Does your city/town have a service that picks up recycling?
- Does your school or community also recycle organic waste? Yard waste? How are these different from trash?
- Ask students what they would like to do to raise awareness about the benefits of recycling.

### Time:

- 20 - 30 minutes

### Glossopedia:

- [www.globio.org/glossopedia/earthday](http://www.globio.org/glossopedia/earthday)



## Windowsill “Landfill”

- Have students take the piece of trash they brought from home and clip or break it up into small pieces.
- If it’s a hard object like metal or plastic, help them to break off a small chunk (this will take tools). Glass may be crushed in a paper bag or between pieces of newspaper with a hammer, mallet, or rock.
- Place the pieces of trash in a paper cup and cover with dirt.
- Put the paper cups in a sunny window.

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### Time:

- Up to two months

### Materials:

- Trash
- Paper cups
- Tools to help break up trash
- Sunny window

### Glossopedia:

- [www.globio.org/glossopedia/tropicalrainforest](http://www.globio.org/glossopedia/tropicalrainforest)
- [www.globio.org/glossopedia/leafcutterant](http://www.globio.org/glossopedia/leafcutterant)

- Monitor the trash every week for a month.
- Document the changes with written data, drawings and photos.  
What is happening to the trash?
- Monitor it for another month and write down the results.

### Observation Questions:

- What trash has changed the most?
- What trash changed the least?
- Is anything almost gone?
- What do you think would have sped up the process even more (i.e. water)?
- What trash do you think will take the longest to decompose?
- How do you think this experiment compares to a real landfill?

### Discussion:

- Discuss decomposition and how water and heat and organisms play a role.
- Have students access the video clips of Leafcutter Ants carrying and composting leaves in the tropical rainforest by clicking the video icon in the tropical rainforest article.
- Ask students whether they think the leafcutter ants speed up or slow down forest decomposition.
- Have students brainstorm ideas on how decomposition in a landfill might be sped up.

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## Banana Peel Decomposition

- Have students go to the Glossopedia home page and enter leafcutter ants into the search box. Then click on the leafcutter ant entry.
- Read the first paragraph of the leafcutter ant article.
- Click on the video camera icon and watch the first two video clips.
- Have students record their observations of the ants and explain how they think leafcutter ants aid in nutrient recycling in the tropical rainforest. Have them draw an illustration of the ants carrying leaves.
- Discuss how organic matter might decompose where you live and what sorts of organisms might play a role.

[Continued on next page](#)

### Time:

- One class time; several weeks

### Materials:

- Glossopedia
- Banana peel
- Piece of small mesh wire screen about 1/2 meter square
- Large rocks or bricks
- Science journals
- Digital camera
- Pencils

- Tell them that they are going to observe the decay of a banana peel.
- Choose a location that is not likely to be disturbed by animals or people to put your banana peel.
- Go outdoors to your chosen location and place the peel on the ground. Place the piece of screen over it and weigh it down with rocks or bricks around the edges.
- Have students take photos of the banana peel and draw pictures in their journals. Have them add a date to the page and descriptive notes, as well as what they predict will happen to the peel and how long they think it will take to decompose.
- Go back to observe the banana peel every day for a week. Have students date each journal entry and photograph the peel every day.
- Go to observe the peel only once a week after the first week.

### Observation Questions:

- How quickly did the peel turn black? Mushy? Shriveled?
- Did any animals visit it?
- Did you see insects? Mold? Slime?
- How did the weather affect it? Rain or other precipitation?
- How long do you think it will take to become soil?
- How do you think this compares with decomposition in the tropical rainforest the leafcutter ants live in?

### Discussion:

- Discuss decomposition in different environments and the things that affect it; temperature, moisture, and organisms.
- Ask students if they have a compost bin or pile at home, or if they put their organic waste into the garbage can.
- Does your school compost its food waste? Yard waste? If so, where? If not, could they?
- Does your city/town have a service that picks up food waste for composting? Yard waste?
- Ask students to brainstorm the benefits of composting and how they might begin composting at home if they don't already.

### Glossopedia:

- [www.globio.org/glossopedia/tropicalrainforest](http://www.globio.org/glossopedia/tropicalrainforest)
- [www.globio.org/glossopedia/leafcutterant](http://www.globio.org/glossopedia/leafcutterant)



Banana peels take 2-5 weeks to decompose.

### Extension:

## Trash Can Detective

- At home, empty a trash can onto a sheet of plastic or newspapers on the floor or outside. You may want to wear protective gloves. Try to get everyone in your family to help.
- Sort your trash, putting things that are alike into piles, such as paper, glass, plastic, and metal.
- Write down what kinds of trash you have found.

### Questions:

- What kind of trash is there the most of?
- What kind of trash is there the least of?
- How long do you think it will take for each of these things to decompose?
- Are there some things that will decompose very quickly?
- Are there some things you don't think will decompose at all?
- How many things are in your trash that can be recycled?
- Can you begin recycling these things or do you do it already?

### Time:

- 1 hour

### Materials:

- Trash
- Newspapers or plastic
- Gloves
- Paper
- Pencil