



Natural or Not?

Subjects: Environmental Science

Grade Level: 2nd – 5th Grades

Objectives:

Students will be able to...

- 1) Identify natural items vs. un-natural items in nature
- 2) Provide an explanation and provide examples of camouflage, decomposition, pollution, and reusable items
- 3) Explain why recycling, reducing, and reusing items is important

Materials:

- Paper
- Pen
- Clipboard or a book to use as a firm surface behind the paper

Any of the items below that you have available to you:

- | | |
|--|---|
| <input type="checkbox"/> Plastic Bag | <input type="checkbox"/> Leather Item |
| <input type="checkbox"/> Paper Bag | <input type="checkbox"/> Painted Wood Item |
| <input type="checkbox"/> Aluminum Can | <input type="checkbox"/> Fruit peel or vegetable skin |
| <input type="checkbox"/> Plastic Bottle or Cup | <input type="checkbox"/> Seeds |
| <input type="checkbox"/> Styrofoam Item | <input type="checkbox"/> Other man-made and natural items |
| <input type="checkbox"/> Shoe | |
| <input type="checkbox"/> Clothing Item | |

Vocabulary:

Natural- Coming from nature or earth

Un-natural- Something that is man-made, not natural

Recycle- To change trash into new objects and materials

Reuse- To use an item again for another purpose

Reduce- To buy or use less

Camouflage- When an item, animal, or plant blends in with its surrounding or background using colors and patterns

Decompose- To break down naturally with wind, water, weathering, or from animals

Pollution- Man-made materials that cause harm to nature

Activity

Set-Up:

1. Place the items above around an outside space you have access to.
2. Do not completely hide the objects, only obscure them from plain view.

Directions:

1. Fold a piece of paper in half, length-wise/vertically.
2. On one side at the top, write or have your child write Un-natural, and the other side at the top, write Natural.
3. Share the words **natural and un-natural** and some examples.
4. Have your child walk around, writing down lists of what they find as natural and un-natural. Younger children may need you to walk around with them to do this. You may need to help them sound out how to spell words and assist them with writing.
5. Share the word **camouflage**, ask them if they know what it means, and discuss some examples.
6. Inform your child that they can note on their list if an item is camouflaged by putting a dash and a C next to the item, like this. – C
7. Ask them why a camouflaged un-natural item is a bad thing?
 - a. Because it is well hidden and will missed being cleaned up.
8. Ask them why a well camouflaged natural item is a good thing?
 - a. Because it will help the plant or animal survive if it is not seen by a predator.
9. Use the document, “How Long Does It Take to Decompose,” to understand how long it takes un-natural items to **decompose**.
10. Share this document, and talk about some of the implications these items have on the environment when they are left out in nature. Share the word **pollution**. Ask them how pollution harms nature:
 - a. Animals may mistake them for food, eat them, and not survive.
 - b. As they slowly breakdown, chemicals from them enter the dirt and water.
 - c. Animals can mistake these items for a home to live inside of.
 - d. Nest making animals can gather pieces of these items to put in their nest, which is unsafe for their young.
 - e. Animals can get stuck inside of these items or entangled in them, making it difficult or impossible for them to move.
 - f. Natural food items that don’t belong in that area can become a new food source to an animal, which causes them to depend on humans to feed them, rather than allowing them to survive on their own natural diet.

11. Extensions:

- a. Have your child make a craft from un-natural items around the house that you are ridding of. Provide glue and tape to hold items together. Share that they are **reusing** items, so there is less trash in nature. Have your child put the decomposition list of items in order from fastest to slowest to decompose. Compare and contrast these time frames.
- b. Online, look up images of animals that are affected by pollution to have a visual of the impact.
- c. Online and in books, look at pictures of pollution and animals that are well camouflaged in nature.
- d. Have older children research in books and online what are the decomposition rates of other non-natural items.
- e. Have older children research online what these items are made of and why it takes so long to decompose.
- f. Share that they can help even more by **reducing** what you use. Talk about things that you need vs. things that you want when you shop.

How Long Does It Take to Decompose...?

Aluminum cans	200 – 500 years
Plastic six-pack holders	450 years
Plastic film containers	20 – 30 years
Plastic bags	10 – 20 years
Paper bag	1 month
Glass bottles	1,000,000,000 years
Plastic coated paper	5 years
Plastic bottles/jug	forever
Styrofoam (cups, plates)	forever
Cigarette butts	1 – 5 years
Orange and banana peels	2 - 5 weeks
Painted wood	13 years
Nylon fabric	30 – 40 years
Leather	up to 50 years
Wool clothing	1 – 5 years
Cotton rag or clothing	1 – 5 months
Rubber boot/shoe sole	50 – 80 years

- Recycling 1 ton of paper saves 17 trees, 6,953 gallons of water, and 463 gallons. (Recycling 1 ton of paper is also the amount that only 4 households or 5 office workers typically recycle in one year, eliminates 60 pounds of air pollutants, and saves enough energy to power the average home for 6 months and 3 cubic years of landfill space.)
- Recycling 1 aluminum can saves enough electricity to run a TV for 3 hours.
- Recycling 1 glass bottle or jar saves enough electricity to light a 100-watt bulb for 4 hours.
- Recycling 1 ton of plastic saves the equivalent of 1,000–2,000 gallons of gasoline.
- More than 30 million trees are cut down to produce a year’s supply of newspapers.
- Over 1 billion trees are used each year to make disposable diapers (550 years to decompose).
- **REDUCE, REUSE, AND RECYCLE!** Reduce the amount you buy or use, reuse the things you can, recycle to the best of your ability.

Sources:

<http://www.dot.state.mn.us/adopt/facts.html>

<http://www.charmeck.org/Departments/LUESA/Solid+Waste/Home.htm>

<http://webs.anokaramsey.edu/waite/decomposition%20time%20of%20products.htm>

<http://www.zerowaste.ca.gov/3Rs>