



# IT'S TIME TO CARE!

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PROJECT DURATION: 1 SEPTEMBER 2018 - 31 AUGUST 2020



# Climate change

## Methodology

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**Experiment carried by the team of Olaines 1.vidusskola on the topic Climate Change. Experiments with papers.**

## Introduction

Forests have four major roles in climate change: they currently contribute about one-sixth of global carbon emissions when cleared, overused or degraded, they react sensitively to a changing climate; when managed sustainably, they produce woodfuels as a benign alternative to fossil fuels; and finally, they have the potential to absorb about one-tenth of global carbon emissions projected for the first half of this century into their biomass, soils and products and store them - in principle in perpetuity.

The number of trees and other vegetation cut down in order to make paper is enormous. Paper companies insist that they plant as many new trees as they cut down. Environmentalists contend that the new grown trees, so much younger and smaller than what were removed, cannot replace the value of older trees. Efforts to recycle used paper (especially newspapers) have been effective in at least partially mitigating the need for destruction of woodlands, and recycled paper is now an important ingredient in many types of paper production. The chemicals used in paper manufacture, including dyes, inks, bleach and sizing, can also be harmful to the environment when they are released into water supplies and nearby land after use. The industry has, sometimes with government prompting, cleared up a large amount of pollution, and federal requirements now demand pollutionfree paper production. The cost of such clean-up efforts is passed on to the consumer.



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## Procedure:

### Experiments with papers

#### Experiment Nr 1. Papers decomposition in the soil.

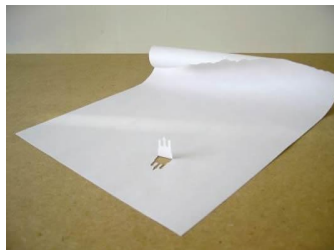
The goal of the experiment is to find out which paper faster decomposes in the soil (sample of fabric paper, sample of biopaper or sample of paper of secondary recycling)

### Hypothesis

- Sample of Biopaper and sample of paper of secondary recycling will faster decomposition in the soil than sample of fabric paper
- After one month in the soil will be only sample of fabric paper



Sample of Biopaper



Sample of fabric paper



Sample of paper of secondary recycling

### Still needed for the experiment :

- Samples of papers;
- Markers;
- Scissors;
- Wooden sticks;
- Spoon.

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Project website: [www.zstravnik.cz/itc](http://www.zstravnik.cz/itc)

## Step 1

Take wooden sticks and with markers and color them



## Step 2

Take all 3 samples of papers and cut into squares by scissors



## Step 3

Write with markers which paper is which



**Orange:** Sample of paper of secondary recycling

**Blue:** Sample of fabric paper

**Green:** Sample of Biopaper

## Step 4

Go outside and dig the paper samples and marks with wooden sticks



## Step 5

Stay for one month!!!



## Step 6

After one month dig out paper samples and write results with conclusions.





## Results

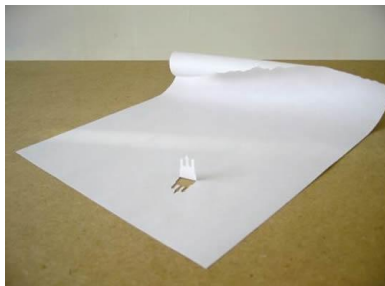
Than

After one month

Sample of Biopaper



Sample of fabric paper



Sample of paper of secondary recycling





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## Conclusions

- After one month we can see than sample of biopaper is almost gone, that means if you drop biopapers to the ground, they will decompose about one or two months.
- Sample of paper of secondary recycling also started decomposed, but it takes more time - about 4 months.
- Sample of fabric paper didn't change. We can see that white colour also has not changed. That means that there is bleach, that is toxic for environment. This paper will decompose about one or two years (info from the Internet).