

Color, temperature and Climate Change

Primary Teacher: Vasiliki Strataki

Age of students: 9-15 years

Lesson time: 4-5 hours

Materials:

- post-it notes
- already printed color maps of the planet on A4 sheets , which show the increase in temperature in recent years.
- skeins of knitting wood (one for each color, for about 20 students)
- small tree branches that we will have collected from a walk in the countryside, already cut or broken. CAUTION! We do not cut branches ourselves. This is not how we promote the ecological consciousness of our students.
- A4 paper
- Markers or crayons
- Scissors
- safety pins

Summary

Students will learn about the color mapping of temperature, the importance of a 1.5° /2° C global temperature rise and the effects of climate change on our environment (biodiversity, society, economy), using hand-made constructions.

Methodology:

Investigative Learning, Scientific Approach and Comparative Study, Kinesthetic Learning, Learning by doing

"Color, Temperature and Climate Change" Lesson Plan

1st Stage

inceptions

A. We ask the students to bring information to the class and inform their classmates about articles that they found on the internet about the increase of temperature on the planet in recent years and its connection to Climate Change.

If the students are of early age and unable to search for information on the internet on their own, then we can show articles that we have collected on the topic, such as:

1. National Statistical Service, Greece <https://www.statistics.gr/sdg13>
2. NASA: 2021 The sixth warmest year ever recorded
<https://www.news247.gr/perivallon/nasa-to-2021-i-ekti-thermoteri-chronia-poy-echei-katagrafei-pote.9493353.html>
3. The climate in the last 200 years in Greece
<https://www.cnn.gr/ellada/story/257964/xristos-s-zerefos-to-klima-ta-teleytaia-200-xronia-stin-ellada>
4. How much has the climate changed in the last 19 years? <https://www.kathimerini.gr/k/k-magazine/561986692/poso-allaxe-to-klima-ta-teleytaia-19-chronia/>
5. Climate change: "Unprecedented in the last 4,000 years the rise in sea levels"
<https://www.ot.gr/2022/07/01/green/klimatiki-allagi-protofanis-ta-teleytaia-4-000-xronia-i-anodos-tis-stathmis-ton-thalasson/>

It is of great importance to focus the students' attention, not only on the rise in temperature, but on the great speed this has been happening in recent years, which creates the problem of Climate Change.

B. Then and after discussing the articles we read, we can watch some short videos about global warming, the greenhouse effect and climate change.

In a manner of illustration, such:

1. Short lessons on climate change #1 Temperature, KPE Eleftheriou Kordeliou
<https://youtu.be/5-solZxgPj8?t=2>
2. Short lessons on climate change #2 Carbon dioxide, KPE Eleftheriou Kordeliou
<https://youtu.be/RONkS-YZTG8?t=2>
3. Climate Change & its Consequences – Climabiz <https://youtu.be/y-VNfbKEjRU>
4. Global Warming - Climabiz 2 <https://youtu.be/YPU88stLC38>
5. Global Warming and Climate Change in Simple Words https://youtu.be/CWMnQ6fZ_wc
6. 100 years of climate change-the bars represent each country
<https://youtu.be/clZytLdprNM>

2nd Stage

We learn to read and capture the temperature color palette

We have found on the internet and printed on A4 sheets, some color maps of the planet, showing the increase in temperature in recent years.

We divide the students into pairs and give each pair an A4 sheet from the color maps.

We ask them to paint with their colors on another white A4 paper this variation from dark blue to dark red and write next to each colored box the corresponding Celsius degree, as they imagine it based on the previous information they received from the 1st Stage.

3rd Stage

We create, if possible, a large table in the center of the room, joining the desks. The students sit around the table. This gives the feeling of a textile production workshop, fun, creation, cultivation of fine mobility.

The students choose threads from all the colors we mentioned earlier and after watching the teacher make a bracelet, they try to make one for themselves.

The wristband is a personal commitment of children to the planet. By wearing it they will always remember all that we can do in our microcosm to help stabilize the climate.

To learn how to make macrame bracelets you can watch the following video: 16 Easy Macrame Knot Tutorial <https://youtu.be/o8fue3bjNWQ>

Then the students, depending on their ability level, can construct:

a) Flags with the same colors made of threads and branches of trees to carry with them on a climate change awareness march in the school grounds or in the neighborhood. We thus lead the lesson plan into an integrated action.

b) Tree guardians to place on trees in the school yard or forest during their educational visit there. Thus, they will link the protection of forests with the reduction of carbon dioxide CO₂, a necessary measure for Climate Stability.

IDEA! We let the children think of what else they can construct with our materials to help and protect the planet.

The results will surely surprise us!!!

Extensions

This lesson plan can definitely have ramifications for topics other than Climate Change, such as:

a) Intangible Cultural Heritage and Textiles in Greece and the World

b) Refugees from Mikra Asia and the first Textile Factories in Nea Ionia Attica, Beginning of the Industrial Period in Greece, Energy and Circular Economy

c) Symbolism: Flags around the World (Learning Geography),

d) Morals and Customs of tradition (in relation to amulets): From ideologies to Science and many more that we can think of.

Let's never forget: We learn best when we have fun playing!

Have fun!