

Lesson: Coastal pollution

Unit 1st: *Smoking also damages seriously the coasts*

Did you know...

The problem of smoking on the beaches is not only about the health of the smokers themselves but also about the health of the rest of the bathers and about the environment itself as well. Every time we leave our cigarette butts on the beach, or throw them into streets and wells in the city, we should know that we are “feeding” the fish and seafood that we put on our table with over 4,000 toxic substances.



Language - ICT

Physics

10 teaching hours



Cigarette butts
Toxic waste

Reuse

Goals

- Become aware of the serious effects of smoking on the environment too.
- Suggest ways to cope with coastal cigarette pollution
- Pass on their knowledge to their relatives and to the local community

Material

Images from the annex - markers, paper A4, glue, computers (internet), projector, plasticizer, toilet paper

Recommended Activities

Activity 1st:

We watch the video ECO News -SKAI Our promise:

Clean Seas <https://www.medasset.org/el/features-el/apotsigara-stin-paralia> afterwards:

1) We give out to all pupils the images from the annex as, paper A4 and we suggest:

To stick the images on the paper and write for each image one of the titles given below, or a title of their own:

Suggested titles:

- “Baby playing on the beach, swallowed cigarette butts and ended up in hospital!”
- “In marine organisms the average lethal dose is approximately one cigarette butt per liter of water.”



- “Ashtray Beach”
- “No more cigarette butts on the beach”
- “Cigarette butts turn into toxic waste poisoning the environment and humans”
- Cigarette butts kill too

We laminate each sheet of paper which pupils take at home with them as a gift to their parents that can be used as a place mat.

Activity 2nd:

We divide the pupils into groups and assign them:

1. to find online at home (parents' inputs desired) solutions that have been given by: a. different countries, b. organizations and c. bodies involved in this problem
2. appoint a representative and present their research to the class
3. in addition, each group is required to select and propose a reasoned action from those that could be implemented directly in the area of their city with the school's potential contribution to its implementation, by distributing specific assignments to members of the student community. e.g. Organizing an informative event for parents and citizens, making good use of the specialized knowledge that scientists and ecological organizations of the region have, a public information campaign with the production and distribution of informative material by pupils to the wider community (newsletters under the titles like: «butt vs butt», etc.)

Activity 3rd:

We plan an excursion to a nearby beach in our area, we take photos and write down the types of rubbish in order to find out if cigarette butts hold the largest percentage, according to statistics.

Activity 4th:

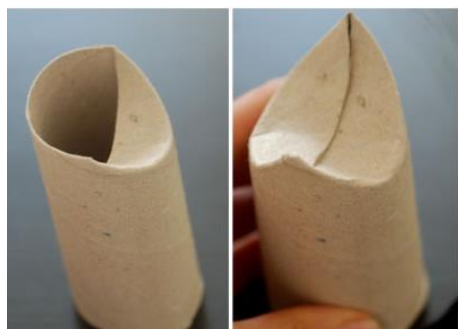
We encourage and guide the pupils to create a poster by using digital tools, photos, information and conclusions. Afterwards we encourage them to post their work on billboards on coastal roads. (Note: the suggested activity could also be incorporated into Activity 2nd, see above).

Activity 6th:

We encourage the pupils to write a letter to the mayor and to the clubs involved with the coast in order to be published in the local press, **providing proof regarding their viewpoint towards the need of taking countermeasures against coastal pollution. This activity fosters writing skills and especially writing argumentative text. In addition, pupils are getting familiarized with active citizenship projects.**

Activity 7th:

We ask from pupils to collect the toilet rolls in order to reuse them. We easily make ashtrays for cigarette butts as shown in the picture (with a well-known



slogan on them that pupils will find and paint). We will donate these creations to the Mayor (our goal is to promote our topic in the local community) so that these ashtrays to be distributed to the bathers in the summer.

Activity 8th:

We discuss with the children after having read the information from the annex. We ask them to transfer the information to their acquaintances and relatives and record the responses of their relatives whether or not they agree with the measures taken in other countries. As soon as we gather the answers from all the children, we first evaluate the gallop result and then publish it on the school website and in the local press.

Activity 9th:

We organize a dialectical confrontation (role game) with children in roles of: Smokers, tobacco manufacturers, non-smokers, coast cleaners, doctors, specialist scientists. **We call on our students to prepare their arguments in order to put forward their views as part of their role.**



Unit 1-Annex

. photos



Cigarette Butts- Poisons in the seas



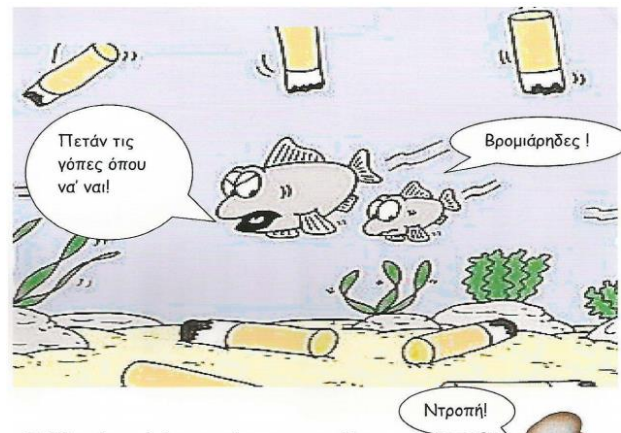
Cigarette's componets



Do not smoke.
We play here!



Toxic wastes not just rubbish!





Learn what is happening in other countries

A) In Italy: A fine of 300 euros will be applied to Italian smokers who throw their cigarette butts in the street.

The village of Bibione, in the province of Venice, has successfully approved the project "Breathe The Sea Air", which bans **smoking** not only on the homonymous beach but also within an eight-kilometer radius.

B) In Paris: The fine for a smoker who throws the cigarette butt on the sidewalk or on the street is 68€.

C) In San Francisco: Each pack of cigarettes is charged \$ 0.2 for the costs incurred by municipal authorities in cleaning.

D) In Thailand: Smoking is prohibited on many beaches throughout the country, including the tourist hotspot Phuket.

E) In Spain: Today smoking is banned on 79 Galicia beaches, according to the El Periodico newspaper. Catalonia follows with 12 non-smoking beaches, while similar efforts are being made in Murcia, Ibiza and the Canary Islands.

F) In Singapore: A 38-year-old is asked to pay an amount of about 13,000 euros as a fine in Singapore for throwing his cigarette butts out of the window of his apartment. Security cameras recorded the 38-year-old to throw away the cigarettes that he had just stubbed out, out from his window 34 times in just 4 days.

The fine was imposed on all 33 cigarettes and amounts to approximately 410€ per cigarette. For the 34th cigarette butt the man will "pay" by cleaning a public road for 5 hours.

Singapore is a country renowned for its cleanliness. The rules are very strict and the authorities even impose fines on people who chew chewing gum.

The National Environment Agency has installed security cameras in about 600 locations in the area.

Bibliography - Links

Reference source: www.naturanrg.gr/apotsigara-vlaptoun-sovara-ygeia-kai-perivallon

<https://www.tanea.gr/2009/05/30/world/kai-ta-apotsigara-skotwnoyn/>, .

<https://twitter.com/PrasiniseGreen>, <http://www.topontiki.gr/article/175603/toxiki-vomva-oi-3500-tonoi-apotsigara-poy-svinoy-me-kai-afinoy-me-stis-paralies>,

<https://www.naftemporiki.gr/story/904957/sigkapouri-prostimo-rekor-se-kapnisti-pou->

petakse-apotsigara-apo-to-parathuro, <https://snoopit24.com/2017/01/14/xelwna-apo-1-000-apotsigara/>

Unit 2nd: *Volunteers transform Versova beach*

Did you know that...

Versova Beach in Mumbai 2.5 km long was covered with litter. Today though is crystal clear as millions of pounds of rubbish got rid of. About 500 volunteers participated in the largest coastal cleanup ever. They worked eight hours every weekend, cleaning more than 16,000kg of rubbish.



Mathematics

Geography



2 teaching hours



Volunteering

Reduce
consumption

Goals

- Understand the effects of volunteering and that with a little effort we can all work wonders
- Suggest ways to tackle coastal pollution
Realize the huge amounts of plastic found in seas and shores
- To appreciate the aesthetic value of the coastal environment

Materials

Computer, Projector, Photos from the annex - (google map)-

Suggested Activities

Activity 1st:

We divide the pupils into 4 groups

In the first group we give the photos we have printed out and we encourage them to put them in chronological order and write a short story either individually or as a group.

In the second group

We give the web sites:

<https://www.naftemporiki.gr/story/1455597/india-oi-xelones-epestrepsan-episima-meta-ton-megalutero-katharismo-paralias-stin-istoria>&

<https://www.cnn.gr/taksidi/kosmos/story/81840/itan-mia-apo-tis-pio-vromikes-paralias-tis-indias-tora-prokalei-ton-thaymasmo> to read them and write a summary with their conclusions.

Mathematical calculations are assigned to the **third group**.

The riddle

About 5 million pounds of garbage have been collected on an Asian beach. Five hundred volunteers participate for 8 hours per

week after calling for help. During the first week they managed to collect 16,000 kg of garbage. If they continue with the same pace, the same number of volunteers and assuming that the waste will not increase:

- A) How many pounds of waste will each volunteer collect?
- B) In how many months the collection of these waste will be completed?

The fourth group is tasked with locating the beach on the google map and investigating whether coastal pollution is a common phenomenon in that country, while recording its possible causes.

In plenary each group will present its work and then the video

<https://www.otherside.gr/2018/02/anthrwpou-pou-katharizei-9000-tonous-skoupidiwn-apo-paralies-mumbai/> will be displayed. For the rest of the teaching time, it is suggested to conduct a discussion-evaluation in order to draw conclusions.



Possible extensions

We encourage students to “adopt” a beach in our area as a classroom. This means visit the area frequently and make sure it is kept clean. We can also organize a protest march with a placard (made by children) on the beach to inform the local community about the impact of marine litter.

Bibliography - Links

Information from Sky News

Source: www.lifo.gr

<https://www.otherside.gr/2018/02/anthrwpou-pou-katharizei-9000-tonous-skoupidiwn-apo-paralies-mumbai/>

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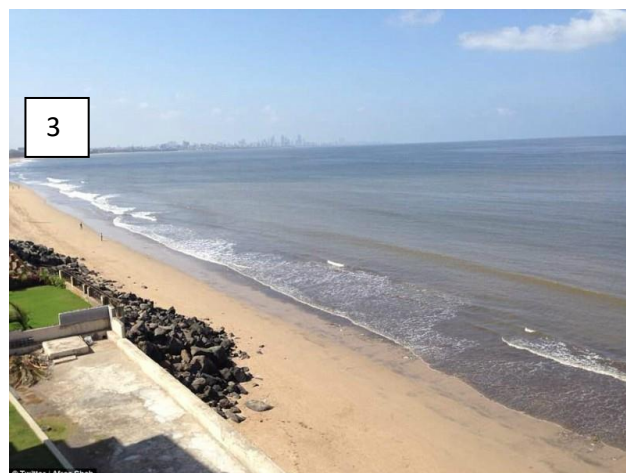
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<https://slpress.gr/fotorama/o-megalyteros-katharismos-paralias-sti-vomvai/>



Unit 2-Annex

Photos



Unit 3rd: *There, where the sea meets civilization.....*

Did you know that...

"Minoan dolphins are a creation monument of human civilization that has been alive for almost 3,500 years. For the same amount of time the only legacy that modern civilization will leave is the trash we produce. When using an object for just a few minutes, we are wasting resources that took millions of years to be created, in addition, the objects we throw in the trash will remain there for hundreds of years. **The culture of disposable is probably the greatest waste of humanity**" (Campaign manager for the marine environment at the Greek office of Greenpeace)



History

Geography

1 teaching hour



Minoan frescoes

Disposable plastics

Goals

- Understand the effects of over-consumption of disposable plastics
- Understand the enormous differences between the Minoan civilization and today's civilization of plastic

Materials

Computer, projector, photos from the annex- song lyrics from the annex-

Suggested Activities

Activity 1st:

A) We listen from YouTube the song "My Dark Sea" and we try to understand its lyrics

B) We divide the pupils into 3 groups

In the first group, we urge them to visit the Greenpeace website <https://www.greenpeace.org> Homo plasticus - We and our plastic culture

In the second group

To observe the Minoan frescoes and compare them with present-day nature pictures from the annex

In the third group we assign the commentary on the following photos. At the same time we ask from them to find on the internet if the information in the photographic material is true.



We set 15 minutes for their assignments and 10 minutes for their presentation. In the time remaining we perform the evaluation.

Indicative questions:

- What disposable plastics do you use in your daily life, and how could you reduce them?
- The Minoans were one of the first civilizations who painted landscapes of nature without the human presence in their tents. Do they show their admiration for nature in this way? **What do you think? Do you find similarities or differences if compared with today human's attitude toward nature?**
- Greenpeace launched their new campaign against disposable plastics with a huge mosaic of 10,000 plastic cups of coffee. Think about why they did it and give an idea of what we can do to achieve the same goal in our city.



Bibliography - Links

<https://eclass.uoa.gr>, <https://www.greenpeace.org>, YouTube <https://www.i-eidisi.com/2017/06/07/entyposiako-minoiko-psifidoto-me-10-000-plastika-potiria/>, <https://dialogos.com.cy/neos-nomos-apo-ek-gia-apagoreysi-plastikon-mias-chrisis>

Unit 3-Annex

“ My Dark Sea”

Nikos Portokaloglou

Ah my dark sea, wild sea
where will you take me in the morning
in what foreign land
where will you take me in the morning
in what foreign land
Ah my dark sea, wild sea

Once, I had it all but I wanted more
what can I do with them now
tonight that I lose you

Inside your black waters
my life in pieces
ah my deep sea
that you are hiding my island
ah sea...





