



## DRAWING THE COASTLINE IN 2100

Geography | Physics | Chemistry | Mathematics | Biology



CLIMATE CHANGE

## PEDAGOGIC CONTENT:

- Coastal artificialization
- Coastline mapping
- Coastline observation

## PRE-REQUISITES:

Knowledge on urbanization and coastal artificialization (O1 draft).

## NEW COMPETENCIES TARGETED/LEARNING OUTCOMES:

### STUDENTS WILL BE ABLE TO:

- Describe and map coastal spaces
- Learn to use measuring instruments/equipment
- Develop knowledge of the different areas of a coastline
- Identify the biological and geological components of the landscape



DRAWING THE  
COASTLINE IN 2100

## DESCRIPTION:

### PREPARATION

- 🧠 #1: The teacher should choose a local beach as studied site characterized by the coastline mobility (erosion or accretion, with dwellings near the sea, etc.). Then he/she could fix a date and book a bus to do the field work.
- 🧠 #2: The students do some initial research on the management of coastline solutions (e.g. dikes, 'fences' made from chestnut wood which hold the sand in place, sandbags).
- 🧠 #3: The teacher introduces some key notions about climate change and coastal artificialization with the help of the O1 document and the links below to provide to the students a simulation of the water rise in 2100.

### IMPLEMENTATION

- 🧠 #1: The teacher introduces the purpose of the activity and forms 4/5-students groups handing out a sheet and a pencil per person.
- 🧠 #2: The teacher does a first tour of the chosen site to delineate the study area with a decameter, stakes and twine.
- 🧠 #3: The teacher lets the students observe the landscape and describe it for 10 minutes. The goal of this step is to visualize the landscape and define 3-4 landmarks.
- 🧠 #4: Then, the educator lets the students begin the mapping out the site not forgetting to give them the correct indications to report the North, the scale and the date on the drawing.
- 🧠 #5: The teacher observes the data collection of each group and analyzes what they have noticed (human activity, cleanliness, natural elements, etc.), reorienting them if they are too far from the site reality.
- 🧠 #6: In the context of a debate, the students have to plot the sea level projection simulated in 2100 taking into account to the effects of climate change on the landmarks present in the studied site.

- Type of activity  Field research
- Target audience  From 11 years old
- Place  Outside
- Material needed  Work sheet, decameter, stakes, twine, compasses, pencils, computers/tablets
- Duration of activity  Implementation : 2 hours
- Authorship  CPIE Bastia U Marinu  
No authorization required
- Links  <https://www.iucn.org/fr/content/la-mediterranee-un-environnement-marin-cotier-en-mutation-selon-les-scenarios-sur-levolution-du-climat>  
<https://portals.iucn.org/library/sites/library/files/documents/2012-070-Fr.pdf>
- Notes by author  Cameras could be used on the field to take pictures of specific elements (habitations, tourist buildings, dikes, ‘fences’...) present on the coastline and/or visible effects of the erosion/climate change on the landscape.



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