

'Marine Infrastructure' Construction Project

Prepared by Carmel Madigan, Artist & Explorers Outreach Officer, Loophead Summer Hedge School



Aim: This activity aims to create a 3D construction of an infrastructure found near the ocean. It aims to provide children the opportunity to reflect on our inter-connection with the ocean in terms of how we access the ocean, how we move around on the sea with boats and shipping, as well as structures used to protect us while at sea. The project will also involve studying the constructive and monochromatic art of American sculptor Louise Nevelson (1899-1988).

Discussion: Humans have been ingenious at finding ways and solutions to enhance and enrich their living conditions. To this end, we have developed unique infrastructures on the edges of the seas and ocean around the world to help us access the ocean, guide our navigation through the ocean and to protect ourselves from invaders.

The types of infrastructures one sees by the coast are unique to the coast. We have piers, slipways, man made harbours, marinas, quays, jetty's, lighthouses, light beacons, and we have highways of the seas just like we have highways on land. We have built castles, coast guard and look out stations, battery forts close to the waters edge to keep watch and be ready to do battle!

Marine Infrastructures around our coast allow our fishermen to dock with their catch and keep their boat safely moored when not in use. These infrastructures have to be strong to withstand rough and stormy seas. Many lighthouses were for instance built on rocks out at sea to aid the safe navigation of shipping and ocean transportation away from such rocks.

Lighthouses were often designed and built elsewhere, and then each stone was taken down and numbered, transported to the exposed site, where the lighthouse was again erected on a tall rock. This was an incredible effort and feat to protect the ocean sailors and pilots of the world. One such example is Fastnet rock off the coast of county Cork. (take a look at Fastnet rock lighthouse online and consider the effort involved in constructing a lighthouse with all the elements of wind, waves powerfully impacting on your every move!)



Materials Required - 'Marine Infrastructure' - Construction Project



Mixed pebbles -
1-2 cm size



Super Heavy
Gel medium



Palette
Knife



Lego
Barrier
Pieces



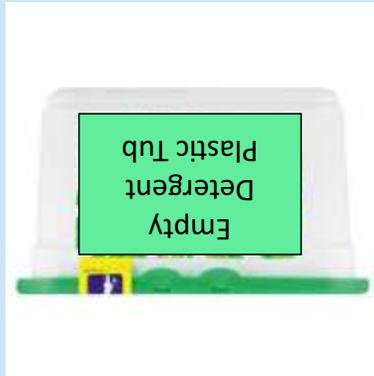
Mixed
marine
plastics



Grey Spray
paint
(Optional)

+ protective covering for work surfaces

Step by Step creation of 'Marine Infrastructure' - Creating with mixed materials



1

Cover the work surface with a suitable protective cover as this is a 'messy' job!

Place the empty detergent (pod) carton upside down. This gives a better shape for the pier construction.

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2

Place the pebbles in the open container and put the detergent box in the centre of table (so that 2 persons can work on it from different sides). Use the palette knife to (very) generously apply the gel to the surface of the tub. Using pebbles in landscape format (similar to building stones), build a wall of stone on the outside of the tub.



3

In class group situation, other members of the class can sort through the marine plastic collection seeking potential shapes and surfaces for making a lighthouse on a rock for instance, some boats, or even a castle, slipway. They can then follow the same procedure of making a stone faced infrastructure.

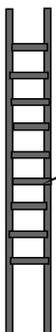
Visual Step by Step creation of 'Marine Infrastructure' - Construction project

Add 'cushions' to protect the vessels against crashing in against the rocky surface (like tyres used in real situations). If possible make and add a ladder using found materials.. to allow for access to vessels and add a lego or other barrier at the top of the pier.

The work, when completed will be wet and will have to be moved carefully (preferably on a tray) to a free space for it to dry over a few days. When dry, you will notice white spots peering through, where the stone work has not covered the plastic surface. It is now possible to either spray paint the lot in grey spray paint or paint the lot grey using a brush and grey paint.

4

Assemble all parts



P.S..missing from picture..don't forget to add a ladder to pier access boats!

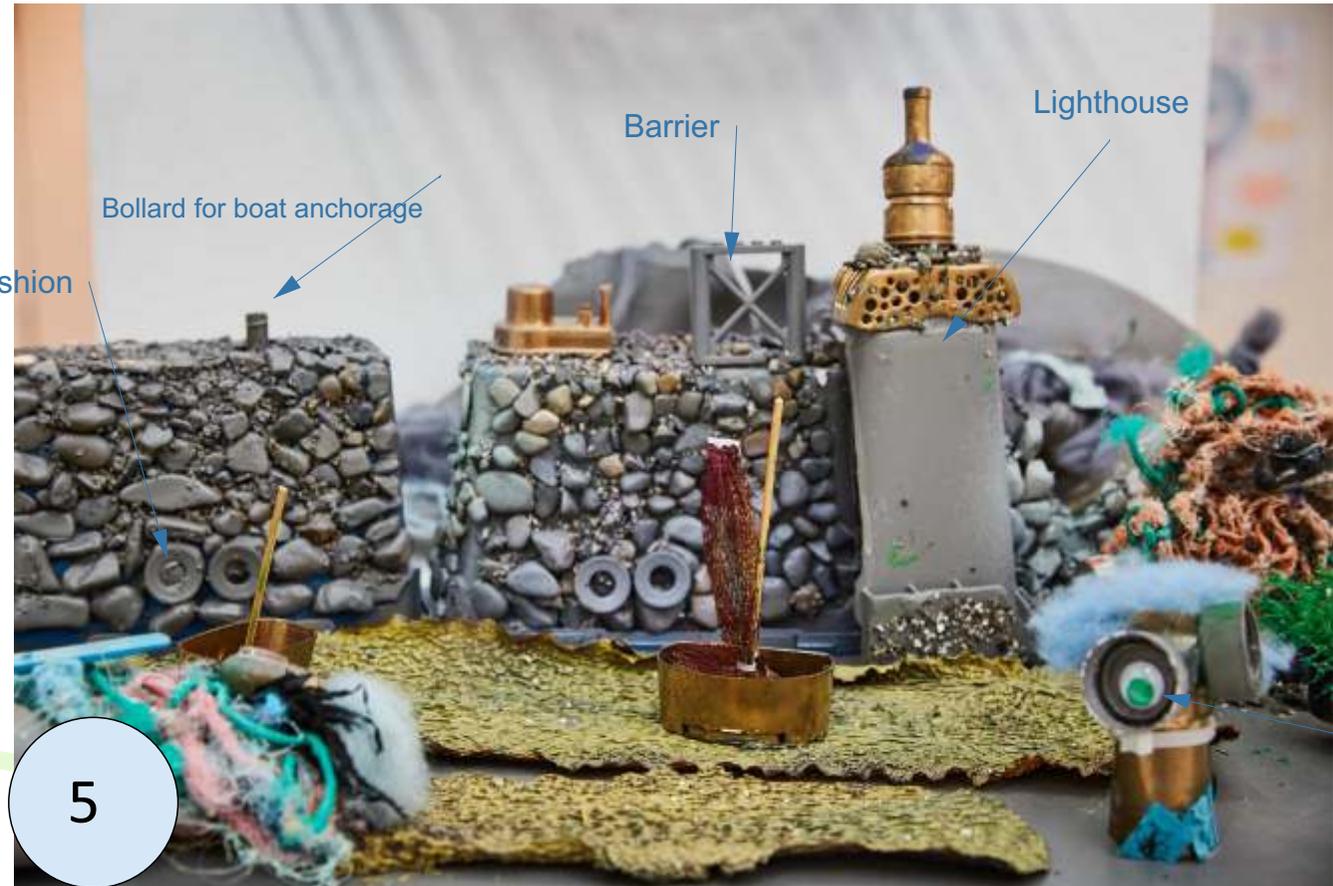
Cushion

Bollard for boat anchorage

Barrier

Lighthouse

5

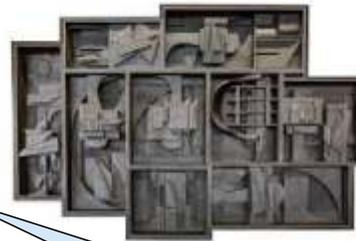
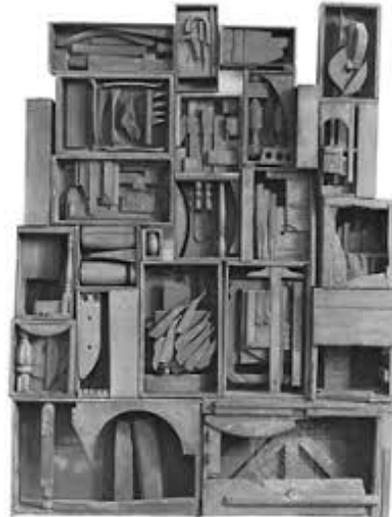


Finally it is 5 out of 5, as you bring all the pieces together that class members have been quietly working on in the background adding everything from Robot coast guards to seaweed surfaces, retrieved from the tub of bits and pieces of marine plastics and collections that should be available to use for any marine based construction project and to allow all that classroom creativity to wander and flow!!!

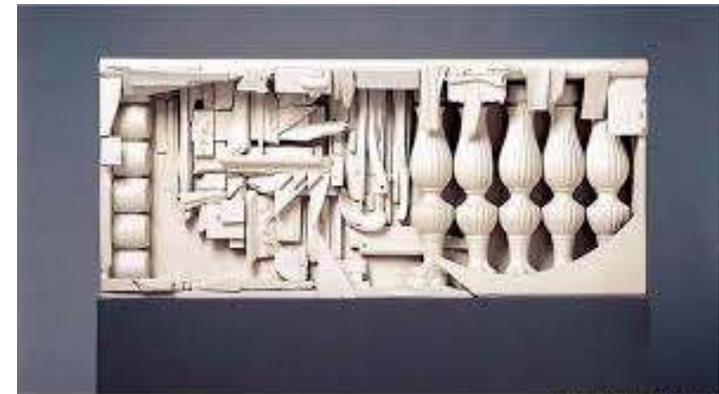
Draw your Construction! Normally an engineer would first design by drawing and fine tuning their vision for a project. You have created the construction first, because you were lead by your available materials. So now you can draw your completed work.



Construction Art may also be called Assemblage Art.



What do you think?
Compare with your
own construction.



Meet **Louise Nevelson**,
American Sculptor, (1899-1988).

Nevelson's unique and whimsical work involved constructions of all sorts of found materials (mostly wood), which she carefully engineered into striking and fantastical constructions. The works are powerful and visual and the 3d effects are strengthened by Nevelson's use of a single colour (monochromatic) throughout each construction. The rest of the colour is provided by the shading cast through three dimensional components.

