

Marina

Anchored in Sustainability with a Marina for Tomorrow

Keywords:

marina, sustainability, environment, boat, community, design, eco-friendly

Target group:

primary school pupils
(ages 6-11)

Objectives:

This activity introduces pupils to the concept of sustainable marina design by combining creativity, teamwork, and environmental thinking. Pupils will learn about the key components of a marina, including its infrastructure, community use, and impact on marine ecosystems.

They will explore how eco-friendly technologies—such as solar panels, recycling stations, and wildlife-friendly design—can help reduce environmental harm and promote biodiversity. By the end of the activity, pupils will be able to identify the essential elements of a marina, and explain why sustainability matters in coastal areas.



General Guideline on Time Allocation:

The duration needed to carry out this activity may vary depending on the specific group of children. Teachers are encouraged to adapt the implementation according to the needs, interests, and dynamics of the group.

In the preparatory phase, teachers may use a variety of activities to introduce and contextualize the chosen topic. These can include discussions, videos, drawings, storytelling, or even a field trip, depending on the age and background knowledge of the children.

The main construction phase, during which children plan and build their urban element using LEGO bricks, should typically not exceed 45 to 60 minutes. However, this phase often stimulates further curiosity and questions among the children, potentially leading to extended engagement or follow-up activities. For more detailed instructions and pedagogical support on how to implement activities of INNO-kids project, please download the Teacher's Methodological Guide.



Materials and Resources Needed:

- Large sheets of paper, markers, crayons, and coloured pencils, scissors and glue, recycled materials such as cardboard, plastic bottles, bottle caps, or packaging (to build marina structures, piers, or boats)
- Pictures of different marinas and marine environments (to inspire designs and prompt discussion)
- LEGO bricks or other building blocks
- Access to research materials (optional – printed resources or internet-enabled devices)

Note: Encourage pupils to repurpose available materials creatively. If LEGO bricks are not available, pupils may use basic craft supplies to bring their ideas to life through drawings and handmade models.

Introduction:


Begin the activity by asking pupils about their experiences with lakes, rivers, seas, or oceans. Have they ever seen a marina? What kinds of boats or activities did they notice there? Show pictures of different types of marinas — large and small, urban and natural — and explain that a marina is a special place where boats are docked and maintained, and where people interact with the water in many ways. Then introduce the idea that marinas, like all human structures, can affect the environment.

Procedure:

Preparation:

Divide pupils into small groups of three to four. Begin with a brainstorming session: What makes a marina special? What kind of boats and activities might we find there? Encourage pupils to think beyond tourism and include ideas such as fishing, transport, community spaces, or environmental protection. Introduce eco-friendly marina features — like solar-powered docks, recycling stations, floating gardens, and marine wildlife zones — using images and simple explanations.

Construction:



Provide each group with paper, drawing tools, and recycled materials. Invite them to sketch and build a model of their marina. Their design should include:

- Docking areas for different types of boats
- Eco-friendly infrastructure such as solar panels, wind turbines, or water filtration systems
- Biodiversity zones such as oyster reefs, mangroves, or floating gardens
- Community spaces like paths, small shops, or picnic areas
- Waste management solutions, such as recycling bins or oil spill prevention features

Details:

As pupils work, support them in adding realistic and thoughtful details to their models. Ask questions such as: How does your marina protect marine animals? How do visitors learn about the environment here? What makes your marina different from a traditional one? Help pupils see the marina not just as a structure, but as a living system that interacts with water, wildlife, and the community.

Stories:

Encourage pupils to create short stories set in their sustainable marina. They can imagine a day in the life of a harbour worker, a boat captain, a child exploring the shoreline, or even a sea turtle swimming near the docks. The stories could involve marine adventures, environmental discoveries, or community events that take place at the marina.

Presentation:

Invite each group to present their sustainable marina model and share the story they created. During the presentation, pupils should describe the key elements of their marina, focusing on how these features support both people and the environment. Encourage them to explain their use of clean energy, waste management systems, and wildlife-friendly areas. Classmates can ask questions or comment on interesting solutions they noticed.

Tips:

- Provide visual materials and real-life examples of innovative marina projects to spark ideas.
- Support creative thinking by encouraging pupils to imagine not only boats and buildings, but also the animals, plants, and people who interact with the marina.
- Celebrate original ideas and encourage a sense of pride in building something that cares for both the community and the natural world.





Additional Considerations:

Differentiation:

Provide additional support or simplified instructions for pupils who may require extra assistance. For advanced pupils, offer extension tasks such as researching further sustainable practices or designing more complex models.

Assessment:

Assess pupils based on their participation and engagement during discussions and hands-on activities. Evaluate the creativity, effort, collaboration, depth of understanding demonstrated in their models, critical thinking, ability to provide constructive feedback and presentation skills.

Extension Activities:

- Organise a debate or discussion on the pros and cons of developing a new marina in a local area.
- Invite a speaker from a marina or environmental organization to talk about marine protection.
- Plan a virtual or in-person visit to a nearby marina or port to observe sustainability features.

Curriculum Connections:

This activity integrates:

Science (*ecosystems, marine environments and biodiversity; impact of human activities on the environment*)

Social Studies (*community planning, geography, civic engagement*)

Language (*oral communication, storytelling, and listening skills*)

Art (*design, drawing creativity, spatial reasoning skills*)

SDG Connections:

- **SDG 11:** Sustainable Cities and Communities – Pupils consider how marinas can serve communities while respecting natural systems.
- **SDG 14:** Life Below Water – The activity promotes protection of marine life through sustainable coastal design.
- **SDG 17:** Partnerships for the Goals – Through teamwork and shared problem-solving, pupils learn the value of collaboration in achieving sustainability.