Make an Ocean Ecosystem Dessert

1 Overall aims:

- Engage with nature;
- Emphasize with nature;
- Develop observation skills;
- Stimulate the imagination;
- Respect others, animals and nature;
- Internalize the importance of teamwork;
- Respect the environment of animals;
- Developing manual skills.

2 Vocabulary – keywords:

Nature; Ecosystem; Oceans; Plants; Animals.

3 Sustainable abilities developed:

- Strategic competency;
- Collaboration competency.

4 Pillars of sustainability included:

- Environmental sustainability.

5 STEAM domains:

- Science;
- Technology;
- Engineering;
- Art.

6 Teaching methodologies/activity outline:

Introduction:

1. Show the children the material they will need to carry out the experiment and say to them: “What do you think we will do with this material today?”

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2. "Make an Ocean Ecosystem Dessert" is the name of the activity we are going to carry out today.
3. The activity will be used to respect the ecosystem.

It's hard to imagine life on Earth without oceans. The air you breathe used to be an ocean breeze. The water you drink was once in a cloud over the ocean. The ocean is also important to the many species of plants and animals that call the water their home. This community of organisms is called an **ecosystem**.
Human-caused climate change is warming our planet, and the oceans are feeling the heat. Plants and animals in the ocean ecosystem are sensitive to changes in the ocean's temperature. Some organisms can adapt to the change, but others can't survive the warmer temperatures. Since so much life is dependent on these waters, it's important to keep the oceans healthy!
Scientists are monitoring the temperature of the ocean with an instrument called the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's Aqua satellite. The satellite measures the temperature of the top millimeter of the ocean's surface.

Activity:
After explaining the activity to the pupils, the teacher gives them all the materials needed to carry out the activity and guides them through the activity.
With this activity, learn to make a cool and tasty version of the ocean ecosystem at home!

What to do:

1. **Make the ocean water.** Follow the directions on the box of blue gelatin dessert mix by pouring 4 cups of hot water into the bowl with 2 packages of blue gelatin powder. Stir for 2 minutes. Once the powder is dissolved, mix in 4 cups of cold water. Place the bowl in the refrigerator for approximately 45 minutes. (*Note: This amount of time should allow the gelatin to become a thick liquid that is only slightly firm*).

2. **Make the coral.** While the gelatin is in the refrigerator, use the scissors to cut the red licorice strips into short sections that are only a few inches long. The licorice will

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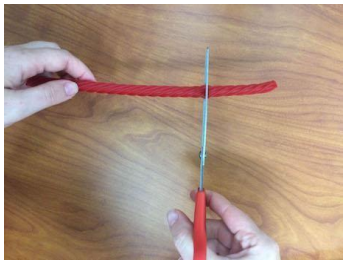
represent the coral in your edible ecosystem.



3. **Make the seaweed.** Cut the mint into segments approximately 2 to 3 inches long. The mint leaves will represent the seaweed in your edible ocean ecosystem.
4. **Remove gelatin from refrigerator.** After 45 minutes has passed, remove your gelatin from the refrigerator. It should be thicker than liquid, but not completely firm. If the gelatin is still very runny, place it back in the refrigerator for 10 minutes and check it again.
5. **Assemble your ocean ecosystem.** Once the gelatin has become a thick liquid, begin placing your seaweed (mint), coral (licorice), and fish (gummy fish) in the ocean of blue gelatin. Push each item into the gelatin with your finger. Be sure to place some of your fish, coral, and seaweed right next to the glass so that they're easy to see. When you're done, jiggle the gelatin a bit to repair the holes.

6. **Refrigerate gelatin again.** Place gelatin in the refrigerator for another 2 to 3 hours. This will allow the gelatin to become totally firm.

7. **Enjoy your tasty ocean-themed dessert!**

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7	**Expected learning outcomes:** **The child will be able to:** • Follow instructions; • Engage with nature; • Develop fine motor skills using experimental materials (e.g., scissors) under the teacher's supervision; • Color and paint; • Develop senses.
8	**Assessment:** The evaluation is implemented through observation of the activity by the teacher who assesses pupils' commitment and participation.
9	**Equipment and materials to be used in learning unit (tools, ingredients etc):** • 1 large clear bowl (deep and 10+ cup capacity); • 2-6 oz boxes of blue gelatin dessert mix; • Red licorice twists; • Gummy fish; • Scissors; • Mint leaves; • Hot water; • Cold water; • Measuring cup (not pictured); • Spoon (not pictured).
10	**Kind of setting - lab, kitchen, outdoor etc:** Science laboratory.
11	**References - source:** NASA's Climate Kids website: climatekids.nasa.gov/seed-ball https://climatekids.nasa.gov/make

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