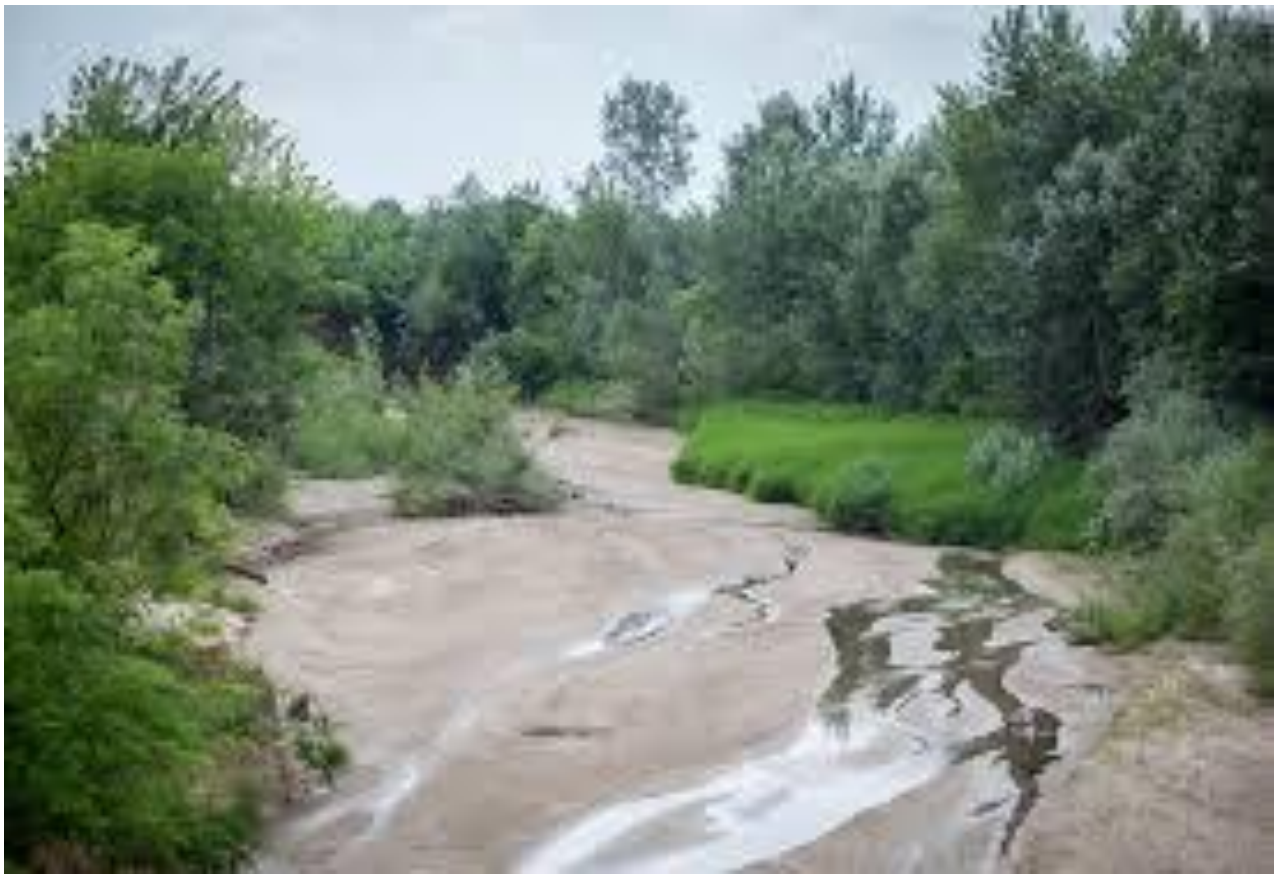
# Water



# Activity 16-Water- What makes the sea rise?

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| Activity | What makes the sea rise? |
| Objectives | Learning about sea level rise and how climate change is affecting this. |
| Subject | Science |
| Age group | 8-10 |
| Individual or Group Activity | Group |
| Classroom or Field Activity | Classroom |
| Duration of Activity | 1 hour |
| Materials | · A medium-sized plastic food storage container ) about 4 inches by 7 inches)<br>· Clay or playdough (enough to fill 1/3 of the container about 1.5 inches high)<br>· Ice cubes<br>· Water<br>· Blue food colouring (optional)<br>· marker |

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| Method | Explanation: The planet is becoming warmer because of climate change. That means many glaciers in Alaska — and around the world — are melting. Water from melting glaciers makes its way into the ocean, causing sea levels to rise. Help your child learn more about climate change by finding resources at the library or researching online together. Invite your child to create a diagram that illustrates what they learned to share with family and friends.<br><br>1) Ask questions about what children already know about glaciers. Research photos online to learn what glaciers look like and where they are located. Then, ask for predictions what will happen in this experiment as the ice melts over time.<br>2) Next, press the clay into one end of the plastic container until it is about 1.5 inches high and fills about one-quarter of the container. The clay represents the land.<br>3) Place ice cubes on top of the clay. The ice cubes represent glaciers.<br>4) Carefully pour water into the empty side of the container. Make sure the water level does not go past the top of the clay. If you choose, add one drop of blue food coloring. The water represents the ocean.<br>5) Draw a line at the water level with the marker.<br>6) Next, let your container sit and come back to it every 30 minutes to observe any change in the water level. Once the ice has completely melted, mark the new water line with the marker. Ask questions, such as, “What happened to the ice? What changed about the water and the land?<br>7) When the children have finished making observations ask about their initial predictions about the ice and the result of the experiment. You may want to ask, "How was the result of the experiment different from what you thought would happen? How was it the same?" |
| Videos and Resources | https://www.youtube.com/watch?v=QH-KYmRAzOA |

# Activity 17-Water- Reflecting on our water use-

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| Activity | Reflecting on our water use |
| Objectives | Students reflect on their water use and understand the importance of water conservation |
| Subject | English |
| Age Group | 7-10 |
| Individual or Group Activity | Group |
| Classroom or Field Activity | Class |
| Duration of Activity | 45 mins |
| Materials | Screen to watch video,<br>cardboard<br>colors to make a poster in groups |
| Method | 1)Watch the video below<br>2)Discuss the video with the class<br>3)Ask questions about water particular to Malta, how we should try and save water more since we have no fresh water sources<br>4) Divide the class in groups of 4/5<br>5) Ask them to write slogans and draw pictures on how we can save water |

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| Videos and Resources | Video Story Book, Why Should I save Water, Mike Gordon<br>https://www.youtube.com/watch?v=Ljgrb8nQovs |

# Activity 18- Water-Marine Pollution

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| Activity | Marine Pollution |
| Objectives | Through a hands-on science experiment kids can see how the various marine pollutants affect the sea life. |

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| Subject | Science |
| Age Group | 4-9 years old |
| Individual or Group Activity | Group |
| Classroom or Field Activity | Classroom; Outdoors |
| Duration of Activity | 1-2 hours |
| Materials | · Sensory Table or Large Plastic Bin/Tub<br>· Water<br>· Plastic Ocean Animals<br>· Seashells<br>· Plastic Toy Boat<br>· Cocoa Powder<br>· Vegetable Oil<br>· Plastic Bags<br>· Coffee Grounds<br>· Sponge<br>· Cotton Balls<br>· Dish Soap<br>· Small Scrub Brush<br>· Fine Motor Tools<br>· Plastic Bottles with Lids<br>· Coffee Filters |

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| Method | **Watch this video as an introduction into marine pollution:**<br><br>A Whale's Tale<br><br>**1.** Fill your large plastic bin/tub halfway with water.<br><br>**2.** Take a sample of the clean water by filling a plastic bottle with lid. Set aside.<br><br>**3.** Add plastic ocean animals, seashells and a plastic toy boat to the sensory bin.<br><br>**4.** Let your children play in the clean water and have fun!<br><br>**5.** Mix a bit of cocoa powder and vegetable oil in a bowl. Dribble the oil into the water, on the boat and on the animals.<br><br>**6.** Let your child examine what has happened to the water. It's no longer as clear or clean. Discuss what happens when oil spills into our oceans.<br><br>**7.** Drop a few spoonful of coffee grounds into the water. Now it's really starting to get gross! The water color is stained and it's become quite cloudy.<br><br>**8.** Shred plastic shopping bags. Add the plastic to the water and stir it around.<br><br>**9.** The plastic has really polluted the water. It's around the animals necks, arms and legs. Discuss what happens when an animal gets stuck in plastic waste.<br><br>**10.** Take a sample of the polluted water by filling a small plastic bottle with lid. Set aside.<br><br>**11.** Use fine motor tools to remove the plastic from the water. Untangle any plastic from the animals.<br><br>**12.** Use cotton balls and sponges to try and absorb the oil that has spilled into the water |

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| | **13.** Use dish soap and a small scrub brush to clean the oil off of the plastic animals<br><br>**14.** Stuff a coffee filter into the top of a small plastic bottle. Filter some of the polluted water through the bottle. Remove the coffee filter and put the lid on the bottle.<br><br>**15.** Place the clean ocean water sample, the polluted sample and the sample after you attempted to clean the water side by side. This helps teach children that pollution has devastating effects.<br><br>Website: Ocean Pollution Clean Up Science Activity ⋆ Parenting Chaos |

# Activity 19-Water- Summary Rain Water Harvesting

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| Activity | Writing a summary about the importance of rain water harvesting |
| Objectives | To understand the importance of harvesting rain water and not letting it go to waste. |
| Subject | English |
| Age group | 9-12 |
| Individual or Group Activity | Individual |
| Classroom or Field Activity | Classroom |
| Duration of Activity | 1-2 hours |
| Materials | Paper<br>Pens<br>Internet access |

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| Method | Explanation: Read the text in the following website to understand the importance of rain water collecting. https://water.org.mt/why-is-it-important-to-harvest-rainwater<br><br>1) After reading the information on the above mentioned website, allow a discussion to take place.<br><br>2) Ask the kids whether they have rain water collection systems at home or whether they ever saw any.<br><br>3) Discuss what could be done at school to facilitate rain harvesting.<br><br>4) Give students time to write a summary based on what was read and the discussion. |

# Activity 20-Water- Making a Rain Harvest Model

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| Activity | Making a rainwater harvesting model |
| Objectives | To understand how rain water harvesting works and how to implement it. |
| Subject | Science |
| Age group | 9-12 |
| Individual or Group Activity | Group |
| Classroom or Field Activity | Classroom |
| Duration of Activity | 45mins x3 sessions |
| Materials | · Cardboard,<br>· Shoebox<br>· leveling pipe,<br>· plastic containers of round and rectangle shapes,<br>· beads,<br>· colored papers,<br>· pebbles,<br>· hot glue... |

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| Method | 1)Make the house out of a shoebox<br><br>2) Cover the shoebox in coloured paper, cutting out and sticking a door and windows.<br><br>3) Decorate as you wish<br><br>4) Put a plastic container on the roof, with a small hole in it, enough for the pipe to enter<br><br>5) Connect the pipe to a plastic container which will serve as a filtration tank. Put small pebbles in this tank.<br><br>6)Put another hole in the filtration tankand connect to another plastic container which will be where the rainwater will be collected.<br><br>7)Look at the video below to get a better idea |
| Video and Resources | https://www.youtube.com/watch?v=JKHdkLOdzoQ<br><br>https://www.instructables.com/Simple-and-Working-Rainwater-Harvesting-Model-Usin/ |