Date	Class Level Fifth and Sixth * *Also suitable for younger students*	Subject Art
Strand Construction	**Strand Unit** Making constructions Looking and responding	

Title
Seashore flotsam and jetsam treasure hunt and making a 'Tallest castle' or a 'Mutant Sea monster'

Objective(s)
The lesson plans includes a number of activities that can be conducted on the seashore. Variations of lesson can be adapted to suit the children's abilities and time allocated on the seashore. The children will complete a treasure hunt collecting flotsam and jetsam samples from the seashore to construct a 'tallest castle' or a 'mutant sea monster' on the seashore. The children will also learn about the benefits of becoming environmentally aware and active in their local community.

Skills Required
Imagination, team building observation and communication the students will construct and then discuss their concepts. They will share their thoughts about environmental care and the benefits of caring for the ocean. The children will have developed a sense of place and space knowing learning about their local seashore as well as develop an understanding of the effects litter has on the ocean and its species.

Learning Objectives	Learning Activities
The child will be enabled to: Working in groups to gather, identify and communicate information about items (including marine debris, flotsam and jetsam) found on the seashore. Develop their creative and construction skills. Look and respond to both their own and other students work. Understand the effects that marine debris can have on the marine	**Teacher Directed Approach:** Begin the seashore activity with an anecdote about how when we are on the seashore we can often find little "treasures" as well as some "monsters" in the sand. The treasures may include colourful shells, rocks and seaweeds. The "monsters" may include marine debris including litter, flotsam and jetsam. Question the children of their understanding or explain the definitions of marine debris, flotsam and jetsam: Marine debris includes items that are manufactured or processed, that ends up in on the

environment and species. Actively care for the environment and how to become more environmentally aware and active.	seashore or in the ocean intentionally or unintentionally. This may include plastic bottles left on a beach after a picnic, or plastic bags being blown onto the beach by the wind, or rubbish washed into the ocean down storm drains. Flotsam are items that *were not thrown* off a ship or boat at sea on purpose. It may be a result of a shipwreck or damage caused to a boat during a storm. Jetsam are items that *were thrown* overboard from a boat or ship on purpose. This may because the crew needed to lighten the ships load during a time in distress and emergency. Discuss with the students what type of items they think they could find on the beach that would fit these descriptions. Elicit answers including: People leaving or forgetting to take rubbish from the seashore such as drink cans or plastic bottles etc. Rubbish blown out to sea by the wind e.g. from overloaded rubbish bins, rubbish dumps (and then being washed up onto the shore). Rubbish washed out to sea by drainage systems e.g. cigarette butts. Wooden or plastic pieces breaking off boats and ships. Containers falling off boats. Discuss how some of these items – if they end up in the ocean - can cause harm to the animals that live in the sea. For example, if a large plastic container falls from a boat into the ocean - over a period of time it will break down or deteriorate. The plastic toxins from the deterioration can "dissolve" into the water. These toxins can then harm animals making them sick or causing mutations. Discuss what they think mutations are.Ask the children what would happen if an octopus, dolphin,

	turtle or a fish ate all of the plastics toxins in the sea. What would these animals look like if they became mutated? Elicit the answer “sea monster”. **Activity:** Split the class into groups of five. Each team is to make the ‘tallest’ castle or a ‘sea mutant monster’ using marine debris, flotsam or jetsam that they find on the seashore. **The treasure debris hunt:** Opt. 1. Complete the treasure hunt quiz (quiz is at the end of this lesson plan) to find materials. Opt. 2. Alternatively, get the students to randomly collect a mixture of “treasures” and marine debris to make a ‘tallest’ sand castle or a sea mutant monster *Prior to the search remind students of their safety on the shore – in the event of finding hazardous or sharp objects get assistance from the teacher / supervisor. Also remind the children not to run over the seaweeds. Explain that as part of a team the students are to work together collecting and gathering different items on the shore. (Depending the age of the class the treasure hunt quiz can be adapted providing the clues all at once or in stages). The teams should be allocated approximately 20 minutes to search for the items on the seashore. On the whistle they are to return to their stations. on the shore. Go through the answers to the treasure hunt quiz. Discuss the debris they have found and the affects these items could have on the animals in the

	ocean. **Building the 'tallest castle' or 'sea mutant monster':** Instruct the students in their teams: a) to build the tallest castle. Leave it to the students to decide if they want to use debris from the seashore to add to the height of the castle. Give the children 10 - 15 minutes for building. b) to build a sea mutant monster using sand and the treasures and debris from the seashore. They are to imagine that the monster they are going to create has eaten the different types of debris they have collected – forming into sea mutant monster. Give the children planning time to examine what they have collected and to work out as a team what they are going to build and how they are going to build it. Allocate approx. 15 - 20 minutes to create the sea mutant monster. **Talk and Discussion:** Take a photo of the castles or sea monsters and the children with each construction.

	Castles: Discuss each castle height with the children. Ask the children how they can measure the heights of the castles. What tools can they use to measure the height? If the children have used debris – discuss if this should be included in the total height. Mosters: When the monsters are all made, each team presents their sea mutant monster to the rest of the class. Encourage the children to use their knowledge about the seashore and their imagination: What is the sea mutant monster's name, How did it become a mutant. Where does it live (on the seashore or in the ocean), What does it eat, What eats it etc. The students may also like to tell a story of how they think the sea monster ended up on the seashore. They may decide that the monster has special powers: good or evil etc. Ask the students to consider what we can do to help stopping rubbish from ending up in the ocean. Highlight the importance of beach cleans and caring for our environment. Get the students to "dismantle" the monsters removing the debris that isn't biodegradable (e.g. plastics etc/ pieces of wood are ok). Ensure that all marine debris is put into a rubbish bag to be

	taken away or bins.
	Resources: • KWL chart • Seashore treasure and debris hunt: - Waterproof shoes or wellies - are a must! - Waterproof parka, jacket etc - Buckets - Treasure hunt quiz • Making the sea monster: - Small spade (for digging sand to build the sea monster) - Wipes for cleaning hands and feet etc / access to running or fresh water. • Other - First Aid kit - Mobile phone and whistle

Differentiation

Higher and Lower order questioning. Differentiate group activities and roles to account of individual needs, by support, task. Mixed ability pairing.

Assessment

Students: KWL chart (What I know, What I want to know, What I learned)
Teacher observation and questioning.
Examine learning outcomes before and after e.g. knowledge, understanding, and skills.
Evaluation: Reflect on learning experiences that lead to the outcomes e.g. attitudes, enjoyment, as well as motivation to learn about the subject.

Linkage and Integration

Science: Environmental Awareness and Care - caring for my locality, environmental awareness, caring for the environment:
Science: Living Things – Plants and Animal life: see Explorers lesson plans and teachers resources relating to sea shore safaris etc.
English: Oral language – receptiveness to language, competence and confidence in using language, emotional and imaginative development through language
Maths: Length, Area

An example of a seashore monster made from marine debris and treasures found on the seashore.

SEASHORE TREASURE HUNT CLUES:

Work out the clues below to help you find seashore 'treasure' as well as marine debris:

CLUES:

1. I look like a volcano and have a foot like a rasp. Find an empty one of me shouldn't be too much of a task? **Limpet shell**
2. Something yellow, red or black … I am very little and often can be found washed up on the sand. **Smooth or flat periwinkles**
3. I'm green and slimy and limpets love me. But take care not to walk over me where you might slip and hurt your knee. **Green seaweed**
4. I'm hollow and light and help birds take flight. **Feather**
5. Something that makes a noise. You might bang, tap or squeeze me. Humans can accidently or intentionally dump me at the sea. **Flotsam, Jetsam or Marine debris**
6. I'm mentioned in the song along with muscles in Alive-alive-o. Empty ones can often be found on the shore line. **Cockle shells**
7. I've got air bladders to keep me afloat. **Seaweed**
8. I'm part of the earth, sometimes hard, ragged or round and difficult to walk across. I can be tiny, medium sized or very large - too heavy to lift. **Stones or Rocks**
9. I have come from the sea where I was dumped by accident or intentionally. On the beach I don't belong but often can be found. Put me in a recycling bin would make everyone happy. **Litter / Marine debris**
10. I might shine or not… I might be from nature or not… but to you I remind you of a little piece of treasure and you like me a lot. **Anything from the seashore that students like.**

CLUES & ANSWERS:

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