## Stage.02 Zero Waste School Program (ZWSP)

Eco-Activities #1: Waste Separation					
Outcome Learning/ Purpose	<ul> <li>Knowing the 3 categories of waste types: organic, recyclable and residue according to the #GerakanNasionalPilahSampahDariRumah.</li> <li>Understanding that all kinds of waste are bad, always makes life difficult because we have to take care of it.</li> <li>Understand that waste also pollutes the environment.</li> <li>Motivate students to try not to produce waste.</li> <li>Before the lesson educator will find out about the recyclables from the nearest Waste bank</li> <li>https://drive.google.com/open?id=1eo6_R96wuMeSMdoErZgEJvn_XycyYU4zPe1ccQHoch8</li> </ul>				
Lesson 1					
Opening Activities	Watch an animated film about waste separation: "Tami Wereng" and then answering questions.	10 minutes			
Main Learning Activities	<ul> <li>The educator gives explanations about 3 types of waste and shows them the example of each waste. Recyclable waste is described in accordance with the local Waste bank demand.</li> <li>The educator asks the students what kind of waste that they usually find in their environment.</li> <li>Students will categorize waste into 3 types of waste: organic, recyclable and residue.</li> </ul>	25 minutes			
Reflections	Answering questions related to learning activities.	5 minutes			
Lesson 2	Lesson 2				
Opening Activities	Sing a song "3 Cara kelola sampah" (3 ways to take care of waste).	5 minutes			
Main Learning Activities	Playing games "Memilah Sampah" (Separating waste).  • 2-3 groups of students run relay to separate waste (prepared by the educator) into assigned boxes (organic, recyclable and residue).  • Educator checks and discusses with the students about the result.	20 minutes			
Reflection	<ul> <li>Answering questions related to learning activities.</li> <li>Label waste bins around the school for 3 types of waste</li> </ul>	15 minutes			

Eco-Activities #2 : Bio Decomposition Experiment			
Outcome Learning/ Purpose	<ul> <li>students learn the process of bio decomposition through experimentation.</li> <li>students realize that the easiest to handle is the organic waste because we can take care of it ourselves, it bio decomposes.</li> <li><a href="https://drive.google.com/open?id=1VMvYpVxob_gwS_zmBZe0mSNPSbDHSF38r6XjQOgnDZ4">https://drive.google.com/open?id=1VMvYpVxob_gwS_zmBZe0mSNPSbDHSF38r6XjQOgnDZ4</a></li> </ul>		
Opening Activities	Explanation of the steps regarding the experimental activity and its purpose.	5 minutes	
Main Learning Activities	In this experiment, students mix soil, organic waste, and pieces of plastic and insert it into a container made from up-cycled water bottle.	30 minutes	
Reflection	<ul> <li>Tell the students to make their own hypothesis about the result of this experiment.</li> <li>Students observe the experiment for 2-3 weeks and record which elements bio decompose and which don't.</li> </ul>	5 minutes	

Eco-Activities #3: Bio Decomposition Through Story of Bacteria				
Outcome Learning/ Purpose	<ul> <li>Students learn through a story that bio decomposition is done by bacteria.</li> <li>Students realize that bacteria can only break down organic waste.</li> <li><a href="https://drive.google.com/open?id=1quM0TjEJglkvldVeUZl6_UIPz8sOJt3n0KJn-2gKuTA">https://drive.google.com/open?id=1quM0TjEJglkvldVeUZl6_UIPz8sOJt3n0KJn-2gKuTA</a></li> </ul>			
Lesson 1				
Opening Activities	Discussion about organic waste management in students' homes and in the local community.	10 minutes		
Main Learning Activities	<ul> <li>Educator reads the story of "Bakta and Eri" and students answer the related questions.</li> <li>Students draw illustrations based on the story of "Bakta and Eri".</li> </ul>	25 minutes		
Reflections	<ul> <li>Question and answer using the questions contained in the story "Bakta and Eri".</li> <li>Observing the results of the experiment (Eco-activities #2 on ZWSP volume 2)</li> </ul>	5 minutes		

	Homework: Finishing "Bakta and Eri" illustration			
Lesson 2				
Opening Activities	Create groups and arrange stories "Bakta and Eri" which have finished drawing illustrations by the students.	5 minutes		
Main Learning Activities	Retelling the story of "Bakta and Eri" using puppets prepared by the educator.	30 minutes		
Reflection	Sing the song "3 Cara Kelola Sampah" (3 ways to take care of waste).	5 minutes		

Eco-Activities #4 : Bio decomposition Through Bacteria Game			
Outcome Learning	Students learn how bacteria can easily decompose organic waste through a game.		
	https://drive.google.com/open?id=1IANB50n0A_fjokm1K7gdAJS_k_A0K5thM	C1QvLBf2hlt	
Opening Activities	Discussion based on the story of "Bakta and Eri" and questions related to lesson 3 (non-organic waste).	5 minutes	
Main Learning Activities	<ul> <li>"Bacteria Game (Permainan Bakteri)".</li> <li>Some students form firm and loose bonds representing non-organic and organic matter and the rest of the students try to tear them apart.</li> <li>Students learn that the firm non-organic bond is difficult to separate by the bacteria.</li> </ul>	25 minutes	
Reflection	<ul> <li>Discussion and question and answer about "Bacteria Game".</li> <li>Evaluate student's hypothesis and result of the experiment (Eco-activities #2 on ZWSP volume 2)</li> <li>Remove plastic from the up-cycled bottle, and use the rest of the mix to plant seed.</li> <li>Motivate students to reduce the use of single-use plastic because plastic can not be bio decomposed.</li> </ul>	10 minutes	