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MINISTRY OF EDUCATION,
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SCIENCE AND TECHNOLOGY-JAPAN

In partnership with



2023 SEAMEO-Japan ESD Award

Theme: Promoting Environmental Education through Utilizing Renewable Energy

SUBMISSION FORM

The submission deadline is **15 August 2023**

Full Information: <https://link.seameo.org/2023SEAMEOJapanESDAward>

- To participate in the 2023 SEAMEO-Japan ESD Award, please submit the information of your school's programme on "Promoting Environmental Education through Utilizing Renewable Energy" by using this template of Submission Form on or before 15 August 2023.
- The **digital format of this Submission Form** can be downloaded from the SEAMEO website: <https://link.seameo.org/2023SEAMEOJapanESDAward> or request through email: seameojapan.award@seameo.org
- The **guidelines for submission** and the **judging criteria** are detailed in page 8-10 of this document.
- **How to Submit the Entry:** Please send the completed submission form of 2023 SEAMEO-Japan ESD Award and a link of 3-minute video clip together with supporting documents to the following google form:



<https://link.seameo.org/2023SEAMEOJapanESDAward/submission>

- Important Note: to align with the ESD practices and to save the environment and energy, the Committee **WILL NOT** accept the entry in hard/printed copies.
- More information, please visit: <https://link.seameo.org/2023SEAMEOJapanESDAward> or contact the SEAMEO Secretariat's email: seameojapan.award@seameo.org or Tel. +66-2391-0144.

PART I: DETAILS OF YOUR SCHOOL

1. Name of your school SJK(T) SELAMA, PERAK
2. Full address SJK(T) SELAMA, JALAN SIR CHULAN, 34100 SELAMA, PERAK
3. Postcode 34100 4. Country MALAYSIA
5. School's telephone number (country code+city code+telephone number) +60 05-839 4858
6. School's Email Address abd6104@moe.edu.my
7. School website (if available) www.facebook.com/sjktselama
8. Approximate number of teachers participated in this programme 16 Teachers

9. Approximate number of students participated in this programme.....99 students.....

PART II: INFORMATION ABOUT THE SCHOOL'S PROGRAMME

The information of part II from no.1 to 14 should not be over five (5) pages long of A4 in total. The information should be written in Times New Roman/Calibri font, font size 11.

1. Title of the school's programme

ENVIRONMENTAL AWARENESS: SCHOOLS AS AN INFORMATION DISSEMINATION AGENT

2. Summary of the programme (maximum of 300 words)

Our school has always been concerned about nature because students need to be aware of their responsibility in protecting and preserving the environment. We believe that the world's future depends on the students today because they are the ones who will up and run the world in the future. So, a good student with better knowledge about environmental safety and which type of energy is good for the environment will take great care of our world in the future. As an education center, we also believe that it is our duty to update the students with all the knowledge that is going to protect and preserve our world in the future for the sake of all living things. Our school SJKT Selama, Perak (Selama National Primary School), has launched a few activities to educate our students about the environment and how it can be protected through renewable energy utilization. We focus mainly on reusing, recycling, and reducing petroleum-based products such as plastics and increase awareness regarding renewable energies. Some of the leading activities are, the **launching of the 'Plastic Free School' Initiative with the local community, promoting the benefits of solar energy through project-based learning, encouraging students to participate in environment awareness-based competitions and quizzes, promoting reuse and recycle concepts through innovation and design competitions, single-use plastic and polystyrene free canteen, participate in local municipal council's environmental activities together with the local community, distributes flyers and poster about environmental awareness and renewable energy to the local community with the help of the school students and conduct cooking oil collection campaign.** We believe that by organizing and participating in such programmes and activities, students, teachers, and the local community will be aware of renewable energy resources and their role in protecting our environment and become the person who exercises the rights and responsibilities of the members of the community.

3. Objectives/goals of the school's programme

The main objectives are to increase awareness among students, teachers, and the local community about environmental issues, explore possible solutions through utilizing renewable energy, and lay the foundations for individual active participation in protecting the environment and the prudent and rational use of natural resources. The other goals are :

- Raise awareness among students about renewable and non-renewable energy.
- Reduce the use of single-use plastic, such as straws and plastic cutleries.
- Reduce rubbish and preserve energy resources through reusing and recycling.
- Raise awareness regarding environmental preservation among the local community.

4. Period of the time when the programme has been started

Our school environmental awareness programmes were started in 2021 and will be carried out continuously until we fully achieve our goals.

5. Activities (strategies/activities of implementation, and brief information of each activity)

1. Launching of 'Plastic Free School' Initiative with the local community

Although our school has been practising the plastic-free and recycling policy for years, we officially launched the initiative during our school's 70th-anniversary celebration recently, which participated by the school's ex-students, board members, parents, and teacher association committee members, parents, local community members, teachers, and students. After the launch, the visitor was also given a small talk about the importance of the plastic-free initiative launch to our environment and how we can replace plastic containers with plant-based options by the school principal. The main reason for the launch was to share plastic-free, recycling, and renewable energy concepts with the local community apart from the students and teachers. By doing this, we believe that parents and the local community will raise awareness regarding the importance of recycling, the harm of plastics to our environment, and how to preserve the environment through renewable energy utilization. These will indirectly lead to environmental preservation, less consumption of non-renewable energy, and increased usage of more environmentally friendly renewable energy resources.

2. Promoting Solar energy through project-based learning

The Malaysian education ministry has implemented project-based learning concepts in schools for the past few years. We use this opportunity to educate students about solar energy consumption's importance and benefits in households and transportation. The students were also given a chance to experience how solar energy works through hands-on mini-projects and learning aids. By doing this, students will learn how to harvest environmentally friendly solar energy from the sun and use it as an alternative to petroleum and other harmful fuels to power their residents and transportation.

3. Participating in competitions and quizzes that promote environmental awareness

Our school students were frequently updated with information regarding contests and quizzes with environmental concepts and encouraged to participate. The competitions and quizzes were organized by the Ministry or Department of the Environment once in a while to educate school students about the importance of environmental preservation, which includes the arm of non renewable resources and how it can be resolved through renewable energies. During the school events such as canteen day, Independence celebration, and science week, our school's science department took the opportunity to arrange school-level competitions and online quizzes based on environmental preservation. Students directly participate in the competitions to win prizes but are indirectly educated regarding environmental preservation, recycling method, green energy, and the harmful sides of non-renewable energy.

4. Single-use plastic and polystyrene free Canteen

Polystyrene and single-time-use plastics such as straws, cutleries, plastic bags, food containers and water bottles are hazardous to animals, mainly to marine life. Statistics show that plastic kills 1 million sea birds and 100,000 sea mammals, turtles, and fish yearly. Animals can become trapped and injured by plastic, and it disrupts habitats, making it hard for some species to live and breed naturally, leading to depletions in populations. To prevent this, the school has made an agreement with the school canteen management and permanently banned single-use plastics and polystyrene in all canteen businesses. Foods were distributed to students in multiple time-use containers, food-grade paper bags and sheets, and containers made of plant leaves. The school management also explained to students and parents why the foods were distributed in such a way so the students and parents are aware and continue this custom in their daily life. By doing this, we are not only reducing the plastic waste that is harmful to animals but also spreading awareness to students and the local community.

5. Promoting reuse and recycling concepts through innovation and design competitions

We currently live in a society with overconsumption, which comes with increased garbage, which is a significant problem. As we create this problem, The three R's, which include reduce, reuse and recycle, all function by helping to reduce the amount of waste people throw away. The school management has come up with a few solutions to reduce the amount of waste produced in school every day. The canteen is the main place where large amounts of waste are produced daily, mainly through food and beverage distribution. To solve the problem we prepare recycle bins around the canteen area and ask students to throw the paper sheets and bags used to distribute the foods in the recycle bins. Once a week, the paper

sheets and bags were collected and recycled into paper planting bags as an alternative to plastic planting poly bags. The difference between plastic planting bags and paper planting bags is that when a plant needs to be transferred from plastic bags to earth, the plastic planting bags need to be removed from the plant before being planted to the earth, or the plant will die. However, if recycled paper planting bags were used to grow small plants, we could directly transfer them to earth without removing the paper bags because they are biodegradable. By doing this, we are not only reducing waste by recycling it but smartly disposing of it.

Besides that, we also have a program called 1 Month 1 Innovation during extra co-curricular activities every Wednesday evening. In this program, we come up with a theme every month and encourage students from standard 4 to 6 to create a handy craft, creative material design, or innovation based on the theme given by the end of the month. The primary condition of the creation is that it must be created with waste materials such as boxes, straws, beverage containers, and food containers. The best three creations from each class will be awarded prizes after evaluation. The school management also creates an innovation and creative design corner to display the student's creations to motivate more students to participate in the initiative. By doing this, we are creating awareness about reuse and recycling methods among students and eventually reducing waste.

6. National and international innovation competitions.

Besides the school-level competition, our school students are encouraged to participate in Local and international level STEM innovation and design competitions to promote environmental awareness and renewable energy utilization. Most of the projects that were selected to participate are plant-based, environmentally friendly, and designed to preserve the environment. The list of competitions that we participated in and won is as follows:-

- District level inter primary school STEM Design competition – First prize
- District-level STEM innovation competitions – fifth place
- State Level Science Fair – Third Place
- National Level Science Fair – Bronze Medal
- 6th Digitalised International Invention Innovation and Design Johor 2022 – Silver Medal
- Short Video Competition On Climate Crisis By International Islamic University Malaysia - Consolation Award

The reason for the participation was to introduce students to green innovation methodology that could lead them to create green and environmentally friendly innovations that could help preserve our environment through green energy resources in the near future.

7. Participating in local municipal programs that promote environmental awareness

Plogging is a new sustainable initiative invented in Sweden, combining sports like jogging and caring for the environment. Our school students are also involved in rubbish-blogging activities organized by the district municipal council to create awareness among the local community. During the activity, students were given rubbish clippers, gloves and bags and asked to move around the town to collect the rubbish in sight. Once the activity was done, students were also given souvenirs to encourage them to participate in more activities that benefit our environment. The objective of the plogging activity was not only to clean the town but educate the local town about the amount of rubbish thrown out, how it affects our environment, and how it can resolve. At the end of the plogging activity, our school students collected around 26 kilograms of rubbish in just 2 hours. It triggers them to think about the source of the rubbishes collected, the amount of rubbish that could be collected if given more time, and how it will affect our world.

8. Distribution of flyers and posters to the local community

As one of the local education institutes, we believe it is our responsibility to spread awareness regarding environmental preservation and renewable energy that could be a greener choice for daily activities among the local community. The school management and science department cooperatively gave awareness talks about environment preservation during teachers' and parents' meetings frequently. The school also distributes flyers and posters regarding environmental preservation and renewable energy around Selama town with the help of school students and teachers.

9. Cooking oil collection campaign

Cooking oil comes from various sources like plants, nuts, and seeds. Some oils commonly used for cooking include olive, canola, and palm. Cooking oil is not biodegradable because it does not break down naturally in the environment. Cooking oil can be recycled and used for other purposes, like producing biodiesel fuel. Biodiesel is a renewable fuel made from cooking oil, which can be used instead of traditional fossil fuels. Therefore, the school management has started an initiative to collect the used cooking oils from parents and the local community and send them to a recycling facility to turn them into biodiesel. By doing this, we achieved goals such as:-

- Prevent the used cooking oils from ending up in water bodies because they can harm wildlife and disrupt the delicate ecosystem,
- Produce environmentally friendly green fuel for vehicles,
- Spread awareness to the local community and students regarding how cooking oil can harm the environment and how it can be recycled into greener fuel,
- Use the small amount of money from selling collected used cooking oils from other environmental projects.

6. Teaching and learning approaches/strategies that the school has integrated into the programme

Renewable energy topic is a part of the Malaysian science education system for a very long time. It is also taught indirectly in other subjects, such as design and technology studies. Some of the teaching and learning approaches that are integrated into our classrooms are -:

- Detailed Lectures **introducing renewable energy resources** and their benefits compared to non-renewable energy resources from students' daily life through videos and other teaching aids. By doing this, students can identify renewable and non-renewable energy resources, and its motivating them to use more renewable energy resources. After the lecture, the students were also given posters and pamphlets about renewable energy and non-renewable and tasked to explain the pamphlet to their parents. It indirectly will enhance the student's understanding of energies and pass on the knowledge to their parents.
- Malaysia's **electricity is based on hydroelectric** sourced from hydropower dams, which is considered renewable energy. During our teaching and learning sessions, we explain this to students by comparing countries that use other electricity sources such as fossil fuel, solar energy, uranium/nuclear, coal, etc. During the teaching session, we compared the electricity sources. We classified them as renewable and non-renewable energy and explained each electric source's pros and cons so students understand it students better. The students were also given assignments regarding electricity sources worldwide to extend their knowledge regarding the topic.
- The Malaysian education ministry has implemented project-based learning concepts in schools for the past few years. We use this opportunity to educate students about **solar energy** consumption's importance and benefits in households and transportation. The students were also allowed to experience how solar energy works through hands-on mini-projects and learning aids. By doing this, students will learn how to harvest environmentally friendly solar energy from the sun and use it as an alternative to petroleum and other harmful fuels.

7. Engagement with the community and sharing of school practices to the community

- Participating in local municipal programs that promote environmental awareness
- Distribution of flyers and posters to the local community
- Cooking oil collection campaign
- Participate in competitions and quizzes organized by the Ministry or Department of Environment.

Each practice was explained briefly in No 5-Activities

8. Monitoring and evaluation mechanisms

Our school environmental programmes and activities were monitored and evaluated frequently by the school management and teachers, so the programmes and activities fully benefit our environment, teachers, students, and the local community. Some of the programmes implemented by school management were opposed by the local community and parents but accepted later once they were explained to them. For example, we forbid our students from bringing food to school in single-use polystyrene or plastic containers. Instead, they were asked to use plant-based food wrappers or containers that could be washed and used multiple times. The parents initially opposed this by claiming that local restaurants and food stalls only provide food items in polystyrene or plastic containers and refused to follow the initiative. Once the school management explained the reason for the initiative and gave a few solutions for their problem, the parents started to follow our initiative. The cooking oil collection campaign was also not supported by the parents and local community at first, but after a few months, we can see progress and more people coming forward to support our campaign. We also can see changes in student's attitudes toward the environment. After months of programmes, we can observe that students are more responsible and interested in renewable energies and environmental preservation. The changes can be seen during the school activities and learning sessions. The students were also eager to join activities and competitions regarding renewable energy and the environment and won a few district, state, national, and international competitions. Students were also given short quizzes once a while during learning sessions and science week activities to test their understanding of environmental issues.

9. Measurable achievement of the school's programme to students, teachers, parents, and wider community

Student's achievements in environment-based competition in the last two years –

- District-level rubbish plogging competition 2022 organized by District Municipal Council > **First prize**
- District level inter primary school STEM Design competition 2022, organized by District Education office > **First prize**
- District-level STEM innovation competition 2022 organized by District > **Fifth place**
- District Level environmental quiz 2022 organized by State Environment Department > **Third Place**
- State Level Science Fair 2022 organized by Association of Science Technology and Innovation (ASTI) > **Third Place**
- National Level Science Fair 2022, organized by the Association of Science Technology and Innovation (ASTI) > **Bronze Medal**
- 6th Digitalised International Invention Innovation and Design Johor 2022, organized by Mara Technology University > **Silver Medal**
- Short Video Competition On Climate Crisis By International Islamic University Malaysia - Consolation Award

10. Plan for future

Malaysian Electricity provider Tenaga Nasional Berhad -TNB'(<https://www.tnb.com.my/solar>) is come up with a new solar energy plan where we can harvest solar energy from the sun to be used as a power source for our school and can sell back the excess energy back to them. Our school management plans to transform our school into total solar energy-based power consumers but lack of fund to do so. As per our calculation, we need at least Ringgit Malaysia 150 thousand to install solar energy storage accessories such as solar panels, solar photovoltaic inverter control machines, solar photovoltaic energy storage cabinets, solar energy storage batteries, and solar photovoltaic controllers. We are looking for funds and donations and plan to execute the solar energy installations by the end of 2024. Currently, we are using hydroelectric as our school's power supply which is also renewable energy. However, turning to solar energy will be our school's cheaper and more affordable power supply once we are done with the installations. We learn that excavating the necessary area to create the hydroelectric dams can cause problems for the local ecosystems, which include changing a river's course, disrupting plant life, bothering local animal populations, and displacing people living in the new floodplain. Because of the substantial environmental impact caused by creating large-scale plants, hydropower is typically regarded as renewable energy but not green or clean. Once we start using solar energy, we will be an eye-opener for the local community and students. We will slowly guide them to use greener, cleaner, and cheaper solar energy as their residence power supply.

11. Interrelationship of the school's programme with other Sustainable Development Goals (SDGs) (Please refer to page 2 in the Information Note or <https://sustainabledevelopment.un.org/sdgs>)

- i) School program** - 1. Launching of 'Plastic Free School' Initiative with the local community
2. Single-use plastic and polystyrene free Canteen
3. Cooking oil collection campaign

SDGs - 14 > Life below water and 15 > Life on land

- ii) School program** - 1. Promoting reuse and recycling concepts through innovation and design competitions
2. National and international innovation competitions
3. Distribution of flyers and posters to the local community

SDGs - 12 > Sustainable consumption and production

- iii) School program** - 1. Promoting Solar energy through project-based learning

SDGs - 7 > Affordable and clean energy

12. Link(s) to the information of school's programme in social media platforms such as facebook, website, youtube

School Facebook page : <https://www.facebook.com/sjktselama>

13. Photos related to the activity/programme (Maximum of five (5) photos with captions in English)

Photo1



School students, after participating in the plogging activity organized by District Municipal Council

Photo 2



Innovation and creative design corner for 1 Month 1 Innovation program

Photo 3



Cooking oil collection Campaign

Photo 4



Single-use plastic and polystyrene free Canteen

Photo 5



Launching of 'Plastic Free School' Initiative with the local community and students