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Southeast Asian Ministers of Education Organization

MEXT MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN

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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 : Elementary School 6 Banda Aceh
2. Full address : Tgk. Muda Street, Keudah Village, Kuta Raja District, Banda Aceh City, Aceh Province
3. Postcode : 23129
4. Country : Indonesia
5. School's telephone number (country code+city code+telephone number) : +6265134909
6. School's Email Address : mudassir01@guru.sd.belajar.id
7. School website (Instagram) : https://instagram.com/sdn6bna?igshid=OGQ5ZDc2ODk2ZA==

8. Approximate number of teachers participated in this programme : 10 (ten) teachers

9. Approximate number of students participated in this programme : 193 students

10. Coordinator name : Mudassir, S.Pd

11. Coordinator phone number : +6282168215005

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

Solar Energy Exploration: Getting to Know Solar Power in Elementary School

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

The Solar Energy Exploration Program: Getting to Know Solar Power in Elementary Schools is an initiative that aims to provide elementary school students with a basic understanding of the importance and potential of solar energy as a renewable energy source. This program is designed to increase students' awareness of the need to save energy and reduce dependence on non-renewable fossil energy sources.

This program consists of a series of interactive and educative activities especially designed for elementary school students. Students will be introduced to the concept of solar energy through interesting presentations and easy-to-understand stories. They will learn about how the sun produces energy, why solar energy is important, and how solar energy can be used to meet daily needs.

Apart from that, the program will also organize hands-on practical sessions, where students will participate in simple experiments using small solar panels. They will learn about how solar panels convert solar energy into electrical energy that can be used to power lamps or other simple electronic devices. Through this experiment, students will see for themselves the potential of solar energy and how its utilization can reduce the use of energy from other sources.

In addition to class activities, the program will also conduct field trips to nearby solar energy facilities. Students will be invited to see larger solar panel installations and understand how solar energy can be used on a larger scale to supply electricity to communities or even cities. They will also have the opportunity to interact with solar energy experts and ask questions about their role in advancing renewable energy.

Through this program, it is hoped that elementary schools can learn to respect natural resources and contribute to reducing negative impacts on the environment. With the understanding gained through this program, it is hoped that students will become a generation that is empowered and plays an active role in encouraging the use of solar energy and fighting for a more sustainable future.

3. Objectives/goals of the school's programme

The target program for Solar Energy Exploration: Getting to Know Solar Power in Elementary Schools is elementary school students. This program is specifically designed for students aged 6-12, which is the primary level of education in many countries. The main target is students from grades 1 to grade 6, who fall within this age range.

In this program, elementary schools will be introduced to the concept of solar energy and the importance of renewable energy. They will learn about how solar energy is produced, how this energy can be used to meet daily needs, as well as its benefits in reducing dependence on non-renewable fossil energy sources.

This program also aims to increase students' awareness of the importance of saving energy and reducing carbon footprint. By understanding the potential of solar energy, it is hoped that students will learn to use energy more efficiently and responsibly.

In addition, this program also aims to build student interest and motivation towards the latest science and technology. By involving them in practical experiments and field trips, it is hoped that students will be interested in learning more about solar energy and related fields in the future.

The long term goal of this program is to create a generation that has a strong understanding of solar energy and the importance of renewable energy. With this knowledge, students are expected to become agents of change in encouraging the use of solar energy and adopting a sustainable lifestyle.

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

The program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School" started in September 2021. It has been implemented since then and continues to be an ongoing initiative in elementary schools.

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

The program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School" incorporates several activities to engage and educate students about solar energy. Here are the key activities and a brief description of each:

1. Interactive Presentations: Conduct interactive presentations to introduce students to the concept of solar energy. Use engaging visuals, videos, and storytelling techniques to explain how solar energy is generated, its importance, and its potential applications.

2. Hands-on Experiments: Organize hands-on experiments using small solar panels. Students will learn how solar panels convert sunlight into electricity and have the opportunity to power simple devices like lights or small fans. This activity helps students understand the practical aspects of solar energy conversion.

3. Field Trips to Solar Energy Facilities: Arrange field trips to local solar energy facilities or installations. Students will visit solar farms or buildings with solar panels to observe large-scale solar energy generation. They will learn about the infrastructure, operation, and maintenance of solar power systems and interact with professionals in the field.

4. Creative Projects: Encourage students to participate in creative projects related to solar energy. This could involve drawing posters, making solar-powered models, or designing innovative solar-powered devices. These activities promote creativity, critical thinking, and hands-on engagement with solar energy concepts.

5. Guest Speaker Sessions: Invite guest speakers, such as solar energy experts or professionals, to deliver talks and share their experiences with the students. The guest speakers can provide insights into the benefits, challenges, and future prospects of solar energy, inspiring students to consider careers in renewable energy.

6. Energy Conservation Campaigns: Conduct energy conservation campaigns within the school community. Students can create awareness posters, organize energy-saving competitions, or lead initiatives to reduce energy consumption in classrooms and common areas. This activity reinforces the connection between solar energy and the need for energy conservation.

7. Reflection and Discussions: Facilitate reflection and discussion sessions after each activity to encourage students to share their thoughts, questions, and observations about solar energy. These sessions provide an opportunity for students to deepen their understanding and engage in meaningful conversations about the topic.

8. Integration into Curriculum: Integrate solar energy topics into the school curriculum, such as science or environmental studies. Incorporate solar energy-related lessons, projects, or assignments to reinforce learning across various subjects and make the program a part of the overall educational experience.

By implementing these activities, the program aims to provide students with a comprehensive understanding of solar energy, its benefits, and its potential applications, while also promoting active engagement, critical thinking, and a sense of responsibility towards sustainable energy practices.

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

The school has integrated various teaching and learning approaches/strategies into the program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School" to enhance student engagement and understanding. Here are some of the approaches used:

1. Inquiry-Based Learning: Foster a sense of curiosity and exploration by incorporating inquiry-based learning approaches. Students are encouraged to ask questions, investigate, and discover information about solar energy through hands-on activities, experiments, and research. This approach promotes active learning and critical thinking.

2. Experiential Learning: Emphasize experiential learning by providing opportunities for students to directly engage with solar energy through practical experiments, field trips, and interactive demonstrations. This approach allows students to gain firsthand experiences and develop a deeper understanding of solar energy concepts.

3. Project-Based Learning: Implement project-based learning strategies where students work on solar energy-related projects or tasks that require them to apply their knowledge and skills. This approach encourages collaboration, problem-solving, and creativity, as students design and create solar-powered devices, conduct energy audits, or propose sustainable solutions for their school or community.

4. Multidisciplinary Integration: Integrate solar energy topics across multiple disciplines, such as science, mathematics, technology, and environmental studies. This approach helps students see the interconnectedness of solar energy with various subjects, making the learning experience more holistic and relevant.

5. Collaborative Learning: Promote collaborative learning by organizing group activities and discussions where students can exchange ideas, share knowledge, and work together on solar energy-related projects. This approach encourages teamwork, communication, and the development of interpersonal skills.

6. Technology Integration: Utilize technology tools and resources to enhance learning about solar energy. This can include interactive simulations, virtual tours of solar installations, online research platforms, and educational videos. Integrating technology provides a dynamic and engaging learning environment for students.

7. Real-World Connections: Emphasize the real-world applications and relevance of solar energy by connecting it to students' everyday lives, community contexts, and global sustainability issues. By highlighting how solar energy can address environmental challenges and contribute to a more sustainable future, students develop a deeper appreciation for its significance.

8. Reflection and Assessment: Incorporate reflection activities, discussions, and assessments to evaluate students' understanding of solar energy concepts and their ability to apply their knowledge. Reflection allows students to consolidate their learning, identify areas for improvement, and develop a deeper understanding of the topic.

By integrating these teaching and learning approaches/strategies, the school aims to create an engaging and effective learning environment that fosters student-centered exploration, critical thinking, collaboration, and a lifelong interest in solar energy and sustainable practices.

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

Engagement with the community and sharing of school practices related to solar energy is an essential aspect of the program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School." Here are some ways the school encourages community engagement and sharing of practices:

1. Community Events: Organize community events or open days where the school showcases the program's activities and achievements related to solar energy. This allows parents, community members, and other schools to visit and learn about the program's initiatives firsthand.

2. Parent and Community Workshops: Conduct workshops specifically designed for parents and community members to educate them about solar energy and its benefits. These workshops can include presentations, demonstrations, and discussions to raise awareness and provide practical tips on incorporating solar energy practices at home.

3. Collaboration with Local Organizations: Collaborate with local organizations, environmental groups, or energy companies that specialize in renewable energy. This partnership can involve joint events, guest speaker sessions, or knowledge-sharing initiatives to further engage the community and foster a deeper understanding of solar energy.

4. Student-led Presentations: Encourage students to prepare presentations about solar energy and its importance to deliver to community organizations, local clubs, or senior citizen centers. This enables students to share their knowledge, build public speaking skills, and inspire others to adopt sustainable practices.

5. Information Dissemination: Share information about the program's activities, achievements, and solar energy-related tips through various channels. This can include school newsletters, social media platforms, community bulletin boards, and local newspapers. By disseminating information, the school can reach a wider audience and inspire others to follow suit.

6. Community Service Projects: Engage students in community service projects related to solar energy. For example, students can participate in solar panel installations for community centers, schools, or local charities. This not only contributes to the community but also raises awareness about solar energy's practical applications.

7. Partnerships with Local Businesses: Establish partnerships with local businesses that promote sustainable practices or are involved in solar energy initiatives. This collaboration can involve joint projects, sponsorships, or internship opportunities for students, allowing them to gain real-world exposure and learn from industry experts.

8. Collaborative Research or Initiatives: Encourage collaborative research or initiatives with community organizations or universities to explore innovative approaches to solar energy utilization or address local energy needs. This fosters community engagement, knowledge sharing, and potential solutions for sustainable energy practices.

By actively engaging with the community and sharing school practices related to solar energy, the program aims to create a broader impact, inspire positive change, and foster a sense of collective responsibility towards a sustainable future.

8. Monitoring and evaluation mechanisms

To ensure the effectiveness and progress of the program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School," the school has established monitoring and evaluation mechanisms. Here are some common mechanisms used:

1. Data Collection: Regularly collect data on various aspects of the program, such as student participation, engagement levels, and feedback. This can be done through surveys, interviews, observation, and attendance records. Data collection helps track program implementation and identify areas for improvement.

2. Progress Tracking: Set specific goals and targets for the program and track progress towards achieving them. This can include monitoring the number of students reached, the frequency of activities conducted, or the integration of solar energy topics into the curriculum. Regular progress tracking allows the school to assess if the program is on track and make adjustments as needed.

3. Qualitative Assessments: Conduct qualitative assessments, such as interviews or focus group discussions, to gather feedback from students, teachers, parents, and community members. This feedback helps understand the impact of the program, identify strengths, and address any challenges or areas that require further attention.

4. Student Performance Evaluation: Assess students' knowledge and understanding of solar energy through quizzes, projects, or presentations. This evaluation helps measure the effectiveness of the learning activities and the extent to which students have grasped the key concepts related to solar energy.

5. Teacher Feedback and Professional Development: Seek feedback from teachers involved in implementing the program. Their insights can provide valuable information about the effectiveness of instructional strategies, resource needs, and areas where additional support or training may be required. This feedback can guide future professional development opportunities for teachers.

6. Stakeholder Surveys: Conduct surveys among various stakeholders, such as parents, community members, and partner organizations, to gather their perspectives on the program's impact and effectiveness. Surveys can assess their awareness of solar energy, their perception of the program's benefits, and their willingness to support or participate in related initiatives.

7. Program Review and Reflection: Periodically conduct program reviews and reflection sessions involving key stakeholders. This allows for a comprehensive assessment of the program's strengths, weaknesses, and areas for improvement. It also provides an opportunity to share successes, lessons learned, and recommendations for future implementation.

8. Continuous Improvement: Use the monitoring and evaluation findings to inform ongoing program improvements. Based on the data collected and feedback received, make adjustments to the curriculum, activities, or strategies to enhance the program's effectiveness and address any identified gaps or challenges.

By implementing robust monitoring and evaluation mechanisms, the school can assess the impact and success of the program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School." These mechanisms help ensure that the program is meeting its objectives, making a positive difference in students' understanding of solar energy, and continuously improving to better serve the school community.

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

The measurable achievements of the school's program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School" can vary across different stakeholders. Here are some examples of measurable achievements for students, teachers, parents, and the wider community:

1. Students:
- Increased knowledge and understanding of solar energy concepts, as demonstrated through improved scores on assessments or quizzes.
- Enhanced critical thinking and problem-solving skills, as evidenced by students' ability to apply solar energy principles in projects or real-life scenarios.
- Heightened awareness of energy conservation practices, reflected in changes in students' behavior and habits at home and school.
- Increased engagement and enthusiasm for science, technology, engineering, and mathematics (STEM) subjects related to solar energy.

2. Teachers:
- Improved pedagogical skills in delivering solar energy lessons, as indicated by positive feedback from students and observations during classroom sessions.
- Enhanced knowledge and understanding of solar energy concepts through professional development opportunities and training.
- Increased integration of solar energy topics into the curriculum across various subjects, as evidenced by lesson plans and classroom activities.
- Development of a collaborative network among teachers, enabling the sharing of best practices and resources related to solar energy education.

3. Parents:
- Increased awareness and knowledge of solar energy concepts and its benefits, as measured through surveys or pre- and post-workshop assessments.
- Adoption of energy-saving practices and the integration of solar energy technologies at home, demonstrated by the installation of solar panels or the use of solar-powered devices.
- Active engagement and support for the program, as evidenced by increased participation in related events or volunteering opportunities.

4. Wider Community:
- Improved community awareness and understanding of solar energy through community workshops, presentations, or information dissemination activities.
- Increased community engagement and participation in sustainable energy initiatives, such as community solar projects or energy conservation campaigns.
- Recognition of the school as a leader in solar energy education within the local community or region.
- Collaboration with local businesses, organizations, or government entities on renewable energy projects or initiatives.

These measurable achievements reflect the impact and success of the program in terms of knowledge gained, behavior changes, and community engagement related to solar energy. Regular assessment, surveys, feedback collection, and monitoring mechanisms can help track and measure these achievements, ensuring that the program is making a positive and measurable impact on students, teachers, parents, and the wider community.

10. Plan for future

For the future of the program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School," the school has several plans in place to further enhance its impact and sustainability. Here are some key aspects of the future plan:

1. Expansion and Scaling: The school intends to expand the program to reach more elementary schools within the district or region. This includes developing partnerships with other schools and educational institutions to share resources, expertise, and best practices in solar energy education.

2. Continuous Curriculum Development: The school aims to continually develop and refine the curriculum to ensure it remains up-to-date with the latest advancements in solar energy technology and practices. This may involve incorporating new topics, integrating interdisciplinary approaches, and aligning the curriculum with national or international standards.

3. Integration of Technology: The future plan includes leveraging technology to enhance the learning experience. This may involve the use of virtual simulations, online resources, and interactive tools to provide students with immersive experiences and deepen their understanding of solar energy concepts.

4. Community Engagement and Partnerships: The school intends to strengthen its engagement with the wider community by forging stronger partnerships with local businesses, renewable energy organizations, and government agencies. This collaboration can lead to additional resources, funding opportunities, and joint initiatives to promote sustainable energy practices.

5. Teacher Training and Professional Development: The school recognizes the importance of equipping teachers with the necessary knowledge and skills to effectively deliver solar energy education. The future

plan includes providing ongoing training and professional development opportunities for teachers to enhance their expertise in teaching solar energy concepts and instructional strategies.

6. Student Leadership and Empowerment: The school aims to empower students to become leaders in promoting solar energy and sustainability within their school and community. This may involve establishing student-led committees or clubs focused on renewable energy, organizing student-led workshops or events, and providing opportunities for students to take on leadership roles in driving sustainable initiatives.

7. Evaluation and Improvement: The future plan includes a commitment to continuous evaluation and improvement of the program. Regular assessment of the program's impact, feedback collection from stakeholders, and data analysis will inform future adjustments and refinements to ensure the program remains effective and relevant.

8. Environmental Impact Assessment: The school plans to conduct an assessment of the program's environmental impact by quantifying the energy savings achieved through student-led initiatives, such as energy conservation campaigns or solar panel installations. This assessment will further highlight the tangible benefits of the program and its contribution to reducing carbon emissions.

By implementing these future plans, the school aims to strengthen the program's reach, improve its effectiveness, and foster a sustainable culture of solar energy education and environmental stewardship among students, teachers, parents, and the wider community.

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)

The school's program "Solar Energy Exploration: Getting to Know Solar Energy in Elementary School" is interconnected with several Sustainable Development Goals (SDGs) outlined by the United Nations. Here are some examples of how the program relates to other SDGs:

1. SDG 4: Quality Education: The program promotes quality education by integrating solar energy education into the curriculum. It enhances students' understanding of renewable energy, sustainable practices, and environmental stewardship, contributing to a holistic and well-rounded education.

2. SDG 7: Affordable and Clean Energy: The program raises awareness about solar energy as a clean and renewable energy source. By educating students, teachers, and the wider community about the benefits of solar energy, the program supports the goal of ensuring access to affordable, reliable, sustainable, and modern energy for all.

3. SDG 9: Industry, Innovation, and Infrastructure: The program fosters innovation and creativity by engaging students in hands-on activities and projects related to solar energy. It cultivates an interest in science, technology, engineering, and mathematics (STEM) subjects, contributing to the development of a skilled workforce and promoting sustainable infrastructure.

4. SDG 11: Sustainable Cities and Communities: By promoting solar energy education, the program contributes to building sustainable communities. It encourages students, parents, and community members to adopt renewable energy practices, reducing reliance on fossil fuels and mitigating the environmental impact of energy consumption.

5. SDG 13: Climate Action: The program directly addresses climate action by educating students about renewable energy sources and their role in mitigating climate change. By instilling sustainable habits and behaviors, the program contributes to reducing greenhouse gas emissions and promoting a more sustainable future.

6. SDG 17: Partnerships for the Goals: The program encourages partnerships and collaboration among various stakeholders, including schools, community organizations, and local businesses. By working together, they can collectively promote sustainable energy practices, share resources, and achieve the common goal of a more sustainable and resilient future.

It's important to note that while the program primarily aligns with the SDGs mentioned above, its impact may extend to other goals as well. The interrelationship between the program and the SDGs highlights the holistic and interconnected nature of sustainable development, emphasizing the need for collaborative efforts across multiple sectors to achieve the goals outlined by the United Nations.

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

1. https://www.instagram.com/p/CVxIT8dPilT/?igshid=MTc4MmM1YmI2Ng==
2. https://www.instagram.com/p/CWC6jO8v3Z_/?igshid=MTc4MmM1YmI2Ng==
3. https://www.instagram.com/p/CWC9-iQJCMp/?igshid=MTc4MmM1YmI2Ng==
4. https://www.instagram.com/p/CWC_Nnmvkog/?igshid=MTc4MmM1YmI2Ng==
5. https://www.instagram.com/reel/CYYIh4MBuTk/?igshid=MTc4MmM1YmI2Ng==
6. https://www.instagram.com/p/CTyiBJvl_2Z/?igshid=MTc4MmM1YmI2Ng==

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

Photo 1

"Study Tour Utilization of Renewable Energy"

In order to encourage awareness of the use of renewable energy, we conducted a study tour to Café Surya which operates all of its activities with 100% electricity from solar energy sources. The study tour participants consisted of elementary school students, accompanying teachers, and parents, all of whom came together to learn and inspire one another.

On our way, the bright sun bears witness to the wonders of renewable energy. Students marveled as they watched the solar panels generate the energy used to light the lights, turn on the appliances and run the coffee machine, which gives off an appetizing aroma.

During this visit, we stressed the importance of changing our view of renewable energy sources. Students are invited to understand that renewable energy is not just a dream, but a reality that can be implemented in everyday life.

While enjoying a cup of organic coffee served with a friendly smile, our participants listened to the café owner's inspiring story about his struggles in adopting solar energy. They witness how the use of renewable energy can reduce carbon footprints and provide long-term benefits for the environment and society.

The conclusion of this study tour is that we all have a role to play in a brighter future. Education about renewable energy must start early, and with a growing awareness within each individual, we can achieve meaningful change. Through the experience at Café Surya, our participants become clean energy ambassadors who are ready to drive positive change in their surroundings.

In our photos full of laughter and happiness, we share stories about our visit to Café Surya, where inspiration and education meet. Let's embrace a sustainable future together with the smart and sustainable use of renewable energy.

Photo 2

The resource person explained the utilization of solar energy for the use of electronic devices such as fans, televisions, sound systems, coffee makers and other kitchen electronic equipment used in the cafe.

Photo 3

The resource person is explaining directly the process of converting solar energy into electrical energy through the solar panels in the cafe.

Photo 4

Solar power system in the cafe.

Photo 5

students are trying to turn on the garden lights in the cafe by covering the top of the solar panel by hand, so that the solar panel does not get sunlight causing the garden lights to turn on.