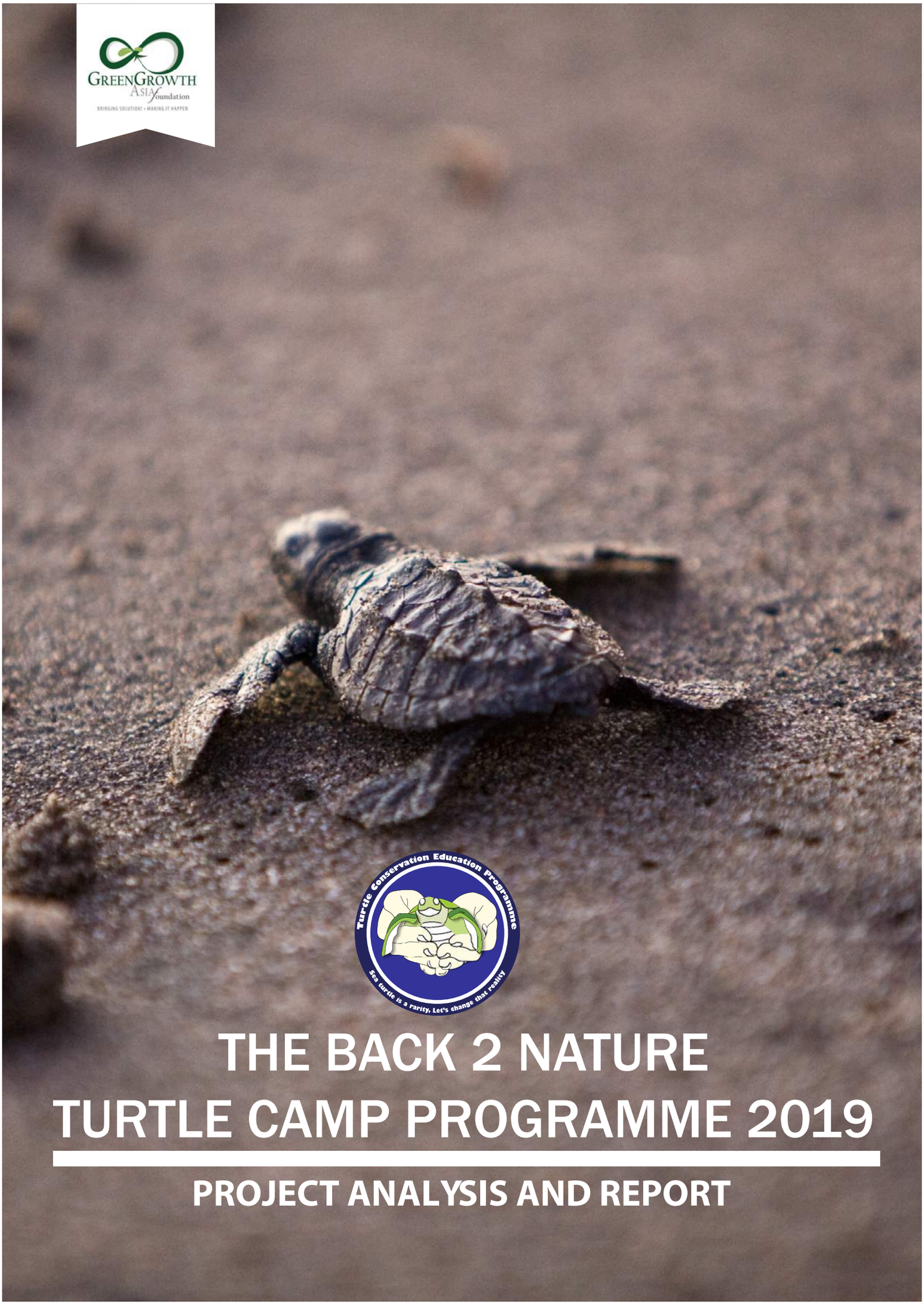

THE BACK 2 NATURE TURTLE CAMP PROGRAMME 2019

PROJECT ANALYSIS AND REPORT

Table of contents

Executive summary

Dato' Dr. Dionysius S.K. Sharma who is the The executive director for GGAF is signing the book that has been recently launch by the organization.

A book launching ceremony by GGAF with partnership with WWF

The Back 2 Nature - Turtle Camp Programme 2019 is organized by Green Growth Asia Foundation's (GGAF) in partnership with WWF-Malaysia and the Department of Fisheries, with more than 330 individuals involved to raise awareness on sea turtle conservation efforts in Melaka; particularly to to instil awareness among the younger generation on the importance of turtle species conservation, especially the endangered hawksbill turtle species which come to nest along the shores of the state of Malacca. The programmes also aim to raise awareness on plastic pollution on its effects on turtles and marine ecosystems.

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The project is held on selected dates as mentioned in Table 1 above throughout the period from February 2019 until June 2019 at The Turtle Conservation and Information Centre of Padang Kemunting and the Padang Kemunting Beach; which involved a total of 304 students and 33 teachers from 15 primary and secondary schools across the state of Melaka; which is on average, 20 students and 2 teachers from each school.

Eventually, the project produced outcomes such as the enhancement of STEM skills, self capability and self-esteem among the participating students. Besides that, the project also facilitated the development of critical, analysing skills; as well as creative skills in conveying scientific information in an interactive way. Moreover, fostering of team building and cooperative efforts among students, as well as between students and teachers is also facilitated.

In conclusion, project impact includes participants being more keen in studying and venturing into the field of biology, preaching sea turtle conservation awareness to the public, as well as being adapt in working together with each other and people from different backgrounds of life. Besides that, students are more aware in usage of environmentally friendly products and public littering etiquettes. Students are also more aspired in venturing into sea turtle awareness and conservation related fields as career options such as marine biology, marine ecosystem health, sea turtle necropsy, and marine debris management.

Next, the schools are allocated 5 minutes for putting on a performance for the Turtle Appreciation session, where schools are to come up with creative performances in expressing their care and awareness for sea turtles. Performances can be in any creative forms such as sketches, dramas, visual art, poem recital, and singing, and choir performances. Representative teachers are to guide their students from behind the scenes during the performance whereas the facilitators are to observe, take note or record the performances. Recorded or photographed performances are then to be uploaded on GGAF's social media by the organising team so as to gain public reception.

Finally, a photograph session is held at the end of the programme for social media posting and reporting purposes. Before the schools depart, a briefing on the post comprehension test is given. The questions in the post test are similar to that of the pre-test. With that, students are given 1 day time allocation to complete the post-tests. Again, teachers are advised to supervise the students during process so as to avoid confusion and to ensure the programme management receives enough responses for each test section, which is to tally with the number of students participating from each school.

▲ A group photo of the high school participant in the turtle education programme.

▲ A group photo of the primary school student with their teacher and the member of GGAF organizer for the turtle education programme.

Introduction

Green Growth Asia Foundation (GGAF) is an independent, non-profit organization; aiming to support and promote strong inclusive and sustainable growth in developing countries and emerging economies. Whilst based in Malaysia, the organization works with other like-minded bodies regionally and internationally; both directly and through many strategic partnerships. For the Back 2 Nature - Turtle Camp Programme 2019, GGAF has partnered with World Wide Fund for Nature (WWF) - Malaysia and The Department of Fisheries (DOF) Malaysia.

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GGAF bases its own strategies on the guidance and direction provided by the UN's Sustainable Development Goals (SDG); where the projects and programmes held are to achieve selected SDG indicators. In order to reinforce the link between said work and these indicators, the programmes and projects establish their own indicators that are linked to the SDGs and therefore, aim to establish the contribution that to be secured towards the SDG indicators, as well as broader goals and vision. This projects focuses on impacting participants and stakeholders through the following SDGs, that is:

WWF

Project Goal

GOAL 4: Quality Education

GOAL 11: Sustainable Cities and Communities

GOAL 14: Life Below Water

▲ 2 student conducting turtle nest excavation activity.

▲ The students are undergoing a group activity together.

▲ The student and their teacher is measuring the turtle's growth.

Prior to this project, GGAF has ventured into turtle conservation and community outreach programme(s) before such as the Turtle Camp 2017 Programme for 140 students and 16 teachers from 5 schools, which includes special education students. By date, the Back 2 Nature - Turtle Camp Programme 2019 has received participation from 304 students and 33 teachers from 15 schools; which has been ongoing on selected dates from the month of February until June. All mentioned programmes and activities are held along the Padang Kemunting Beach in Masjid Tanah, Melaka; where the Turtle Conservation and Information Centre (TCIC) is situated.

Ultimately, all the programmes are to instil awareness among the younger generation on the importance of turtle species conservation, particularly the endangered hawksbill turtle species which come to nest along the shores of the state of Malacca. The programmes also aim to raise awareness on plastic pollution on its effects on turtles and marine ecosystems.

▲ Group of student participating in turtle excavation activites

▲ The students participating in snake and ladder - turtle theme group activities.

RATIONALE

Sea turtles are one of the most ancient creatures to have ever lived until present day, where all 7 contemporary species have been around for about 110 million years, which is since the time of the dinosaurs. Sea turtles are also known as keystone species, where they play an important role in keeping the overall ecosystems they live in healthy, namely the beach and reef ecosystems.

In Malaysia, 4 turtle species are present; including the hawksbill turtle species where nesting activity in Malacca are among the highest in Malaysia. Globally however, this species is considered critically endangered by the International Union for Conservation of Nature (IUCN), meaning they are already on the verge of extinction. In Malacca, the species is suffering serious threats from extensive coastal land reclamation. An example is the decrease of hawksbill visits to Pulau Upeh, which used to be the spot with highest nesting activity in Melaka. This due to the proximal reclamation projects on the mainland along the shores of Klebang Beach, causing coastal erosion and change in surrounding marine topography. The number of landings on the island has dropped 30% from 36 sites in 2017 to only 20 in 2018, with about 130 eggs laid in each nest.

Furthermore, the sustenance of the species is also adversely affected by unsustainable/ irresponsible coastal tourism, as well as the environmental pollution that follows. As measures to promote conservation awareness among the public, the stretches of beaches from Padang Kemunting to Air Hitam Darat is to be gazetted as a turtle sanctuary. In short, public turtle awareness is important in ensuring the survival and population health of not only the local turtle species, but also the health marine and beach ecosystems present in the region indirectly.

Hence, the programme was meant to be a platform for schools to work towards understanding not only sea turtle conservation-awareness, but also to address bigger conservation and environmental-sustainability issues, especially within their vicinity. Moreover, the programme also offered engaging educational sessions, showcasing of scientific studies, hands-on activities and talks from the contemporary sea turtle and environmental health experts, hence granting students an enriching learning environment - all visions in making a positive difference in our children's futures.

- Students and teachers from participating schools are more keen to study fields of biology such as biodiversity, taxonomy, anatomy and evolution of living organisms; both in schooling environment and outside of school .
- Students and teachers from participating schools are more passionate in preaching sea turtle awareness and conservation to the general society through verbal and non-verbal means such as through direct conversations and postings on social media.
- Students and educators from participating schools are more adapt working with each other as well as people from different backgrounds in life.
- Participants are more prone in purchasing and using of environmentally-friendly or biodegradable products; as well being more aware in their individual littering etiquette both at home and in public spaces.
- Participants, particularly students feel more aspired in venturing into sea turtle awareness and conservation related fields as career options such as marine biology, marine ecosystem health, sea turtle necropsy, marine debris management and so on.

Objective

- To establish a tangible, positive, and effective culture where children spend more time outdoors for physical and mental well-being through inculcating healthy outdoor excursions, habits and practices; thus fostering a sustainable green lifestyle.
- To expose youths to the importance of conservation, rehabilitation and management of turtle species that are found in Malaysia.
- To spark awareness among the youths on the marine ecosystem issues in Malaysia due to human activities which are detrimental and not sustainable
- To establish 'life-long learning' mindset among youths and to emphasize on the vast amounts of knowledge that cannot be bound by an indoor environment.

Output

- Number of participating primary and secondary schools
- Number of participating students and teachers
- Average pre-and-post comprehension test scores of participating schools
- Amount of trash collected by schools during beach clean-up
- Percentage of types of trash collected from the beach clean-up
- Number of performance videos submitted for the Turtle Appreciation session

Outcome

- Enhancement of STEM skills among participating students
- Development of critical and analytical skills of participating students
- Development of creative skills in presenting and conveying scientific information in an interactive way
- Fostering of team building and cooperative efforts among students, as well as between students and teachers
- Enhancement of self-capability and self-esteem in participating students

Programme tentative

The programme includes 3 key activities, that is the Turtle Talk, Beach Clean-Up and Turtle Appreciation Session. Firstly, school trips are to arrive at the Turtle Conservation and Information Centre 30 minutes prior to the beginning of the programme, which commences with the ice-breaking and Turtle Talk Session. School trips are advised to arrange their own trasnport and leave their schools early on the day of programme. Prior to programme session commencement, students are to complete the online pre-tests using the links provided to the teachers. Teachers are advised to supervise their students during the completion of the test so as to avoid confusion and to ensure the programme management receives enough responses for each test section, which is to tally with the number of students participating from each school.

Primary student conducting turtle excavation activities with the guidance of GGAF member.

Primary student participating is Turtle theme colouring activities.

Once the programme session commences, ice-breaking is done in order to familiarize the schools and the organizing team/ facilitators with each other. Next, facilitators of WWF-Malaysia are to conduct sea Turtle Talks to introduce the students to sea turtle awareness and conservation, particularly the hawksbill turtle conservation efforts in Melaka. 1 hour is allocated for this session. Next, schools are brought to the Padang Kemunting beach to carry out the beach clean-up activity. Schools are divided into 2 teams to collect as many litter as possible that is found on the beach as the location is a very active hotspot for sea turtle nesting. After the clean-up, teams are to make a tally on the types of litter found and weigh the trash collected. Subsequently, the data of the 2 teams are consolidated to form a beach clean-up data summary of the respective school. A time interval of 45 minutes is allocated for this activity.

Activity schedule

Morning Session

Time	Activity	Venue	Responsibility
09:00 - 09:30	Arrival	TCIC	School trip
09:30 - 10:30	Ice breaking and turtle talk	TCIC	TCIC
10:30 - 11:15	Beach clean-up	Padang Kemunting Beach	GGAF
11:15 - 11:25	Walk back to TCIC	TCIC	GGAF
11:25 - 11:30	Refreshment break	TCIC	GGAF
11:30 - 11:55	Visit to turtle captivity	TCIC	GGAF & TCIC
11:55 - 12:00	Turtle appreciation session	TCIC	GGAF
12:00 - 12:15	Lunch and dismissal	TCIC	GGAF

Afternoon session

Time	Activity	Venue	Responsibility
14:00 - 14:15	Arrival	TCIC	School trip
14:15 - 14;45	Ice breaking and turtle talk	TCIC	TCIC
14:45 - 15:30	Beach clean-up	Padang Kemunting Beach	GGAF
15:30 - 15:40	Walk back to TCIC	TCIC	GGAF
15:40 - 15:45	Refreshment break	TCIC	GGAF
11:30 - 11:55	Visit to turtle captivity	TCIC	GGAF & TCIC
11:55 - 12:00	Turtle appreciation session	TCIC	GGAF
12:00 - 12:15	Tea time and dismissal	TCIC	GGAF

Key activities of the programme

The project is held on selected dates as mentioned in Table 1 above throughout the period from February 2019 until June 2019 at The Turtle Conservation and Information Centre of Padang Kemunting and the Padang Kemunting Beach; which involved a total of 304 students and 33 teachers from 15 primary and secondary schools across the state of Melaka; which is on average, 20 students and 2 teachers from each school. A pre-and-post comprehension test for each school is held before and after each school session to gauge the understanding of the participants on the camp. During the camp, among the activities that took place were:-

Primary student perfoming a song for the eco school programme.

Secondary student participatiing and observing turtle excavation procedure.

Group photo of primary student using the Eco school instagram prop.

Turtle Talk: An introductory talk is given by the staffs of WWF-Malaysia to the schools trips to enrich their knowledge on interesting turtle facts and figures, particularly on the resident hawksbill turtle species of Malacca, the issues faced by sea turtles around the world, particularly in Malaysia, as well as the mitigation and conservation efforts to ensure the survival of sea turtle species. The session includes multimedia presentation to further engage the students' attention. Although very much theoretical, this activity plays an important role in enriching the students with valuable turtle facts and conservation knowledge that will be helpful not only in their comprehension test performance, but also in playing various roles in turtle conservation in the future.

Beach Clean-Up: A beach clean-up is done along the shores of Padang Kemunting Beach - the most frequented nesting ground of the hawksbill turtle in Malacca. In Peninsular Malaysia, the shores of Malacca is the most frequented nesting ground for said species and one of the highest in South East Asia, with Padang Kemunting as the top hotspot. This activity is important in not only raising awareness of the students on the importance of this beaches to the survival and population health of these hawksbill sea turtles, but also to instil proper litter etiquettes and on how human litter can harm marine life. Each school trip are split into 2 teams of eleven, where a teacher is to supervise their respective group of students during the beach clean up. Groups are provided with gloves and trash bags. At the end of the session, groups made tallies on the type of trash they have collected and recorded the total weight collected. These data are then pooled and uploaded onto the Clean Swell database prepared by The Ocean Conservancy. This initiative is a "global community" movement to monitor the trash collected in beaches around the world and to formulate mitigation methods to further conserve the cleanliness of the respective beaches.

METHODOLOGY OF THE PRE-AND-POST COMPREHENSION TEST AND BEACH

After the completion of all school Turtle Camp sessions, programme effectiveness and integrity is gauged by analysing participant demographics, as well as carrying out analysis on the comprehension tests held and the beach clean-up data amassed throughout the programme.

The pre-and-post comprehension tests are published online using the Survey Monkey survey design and publishing programme, in order to gauge the participants understanding on primarily on sea turtles and their conservation issues in Malaysia; before and after the session of each school. Each test is divided into 3 sections, namely:-

Section A (General Knowledge),
Section B (Etiquettes That Reduces Harm Towards Sea Turtles),
Section C (Attitudes and Awareness of Students on Plastic Pollution).

All sections of all tests are set on 'random-shuffling' logic to encourage the students complete them more independently. Students are to answer the pre-tests and post-tests before and after their respective school session, respectively. Each test consists of about 88 % objective questions and 12% subjective questions (with the sections combined).The sample size of the respondents was 244, with respondents being both male and female; with different racial and educational background within the academic society.

As for the beach clean-up analysis, parameters such as total weight of trash collected, distance covered during the clean-up and the percentages of the types of trash are gauged based on the tallies made by the beach-clean up teams. Tallies are made with help of Clean Swell Tally Form provided by the WWF-Malaysia Team.

OUTPUT OF THE PROJECT

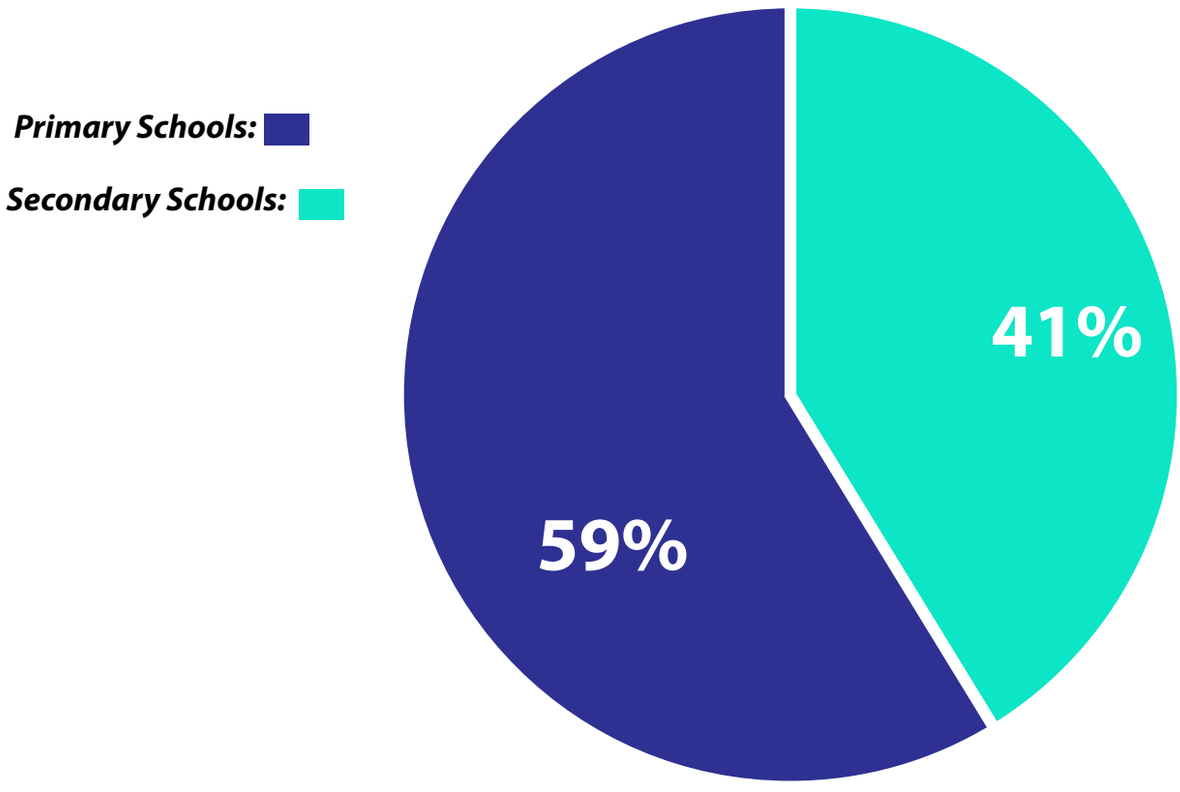
Designated session for participatiing schools

Schools	Session	Number of student	Number of teachers
SK Bukit Lintang	14 February (Morning)	20	4
MRSM Alor Gajah	19 February (Afternoon)	20	2
SK Convent Infant gajah	26 February (Morning)	20	2
SK Cheng	5 March (Morning)	20	2
SK Datuk Tamibichik Karim	5 March (Afternoon)	20	2
SMK Air Molek	19 March (Afternoon)	20	2
SMK Bukit Katil	2 April (Morning)	20	2
SMKA Sultan Muhammad	2 April (Afternoon)	20	2
SMK Ayer Keroh	23 April (Morning)	20	2
SK Sri Laksamana	23 April (Afternoon)	25	3
SMK Iskandar Shah	30 April (Afternoon)	20	3
SMK Paya Rumput	25 June (Morning)	20	2
SMK Tun Tuah	25 June (Afternoon)	20	1
SMK Selandar	26 June (Morning)	20	2
SMK Sri Duyong	26 June (Afternoon)	19	2

Visit to the Turtle Captivity: This activity is carried out as a supplementary activity to the prior turtle talk, to further increase the understanding of students on sea turtle themes such as its life cycle, survival threats, human intervention issues, ecology, behaviour and anatomy. Question-and-answer (Q&A) session is included to facilitate information exchange and enhance the learning experience.

Turtle Appreciation Session: This will be the last activity of the camp session, where the schools trip are to come up with a presentation to express their appreciation and awareness on sea turtles, their beauty, as well as their importance of their conservation. A maximum of 5 minutes is allocated for each presentation. Presentation are to be as simple, but also as artistic and creative as possible, in forms such as poem, sketch, singing, choral speaking, drama, visual art and many more. Videos of these performances are then posted online on GGAF's social media accounts at the end of each session

Figure 1: School level affliation of the participation of the Back 2 Nature - Turtle Camp Programme 2019

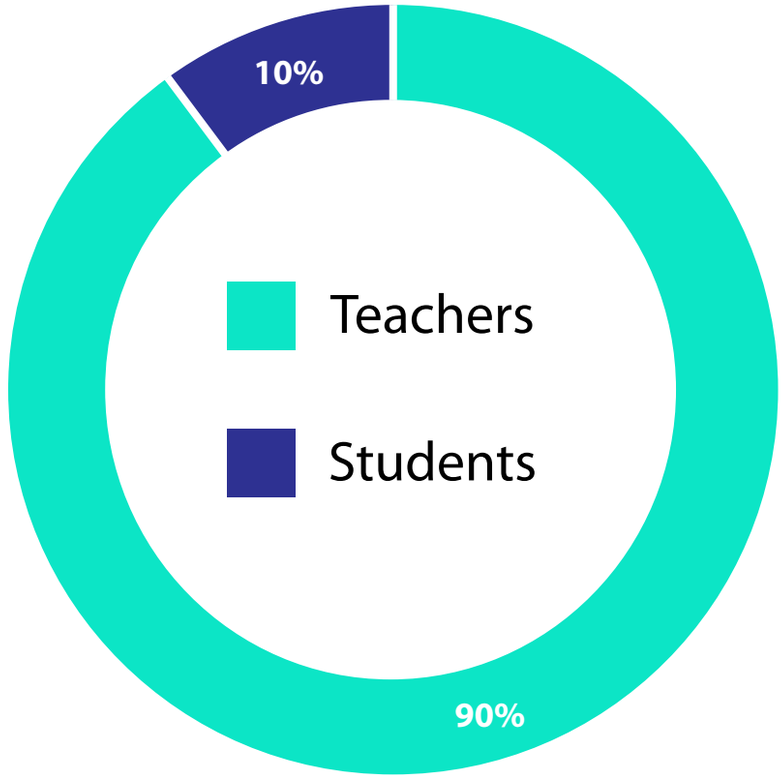


Participation Demographic		Total
Primary level	139	139
Secondary level	198	

Based on the figure above, 41% of the programme participants are of primary schools whereas 59% are of secondary schools. Usually in programmes involving schools, students make up the bulk of the trips. In this case, about 89% of the participants of primary school origin are students, whereas in the case of the participants of secondary school origin; students make up about 91%.

As a conclusion, primary schools should participate more in the future to balance out and facilitate more 'leveled' knowledge horizons and the information gained from similar programmes among the younger generation, regardless of school affiliation level. This is to promote collaborations and information exchange in the future between different affiliations of school level.

Figure 2: Occupation demographics of the participants of the Back 2 Nature - Turtle Camp Programme 2019

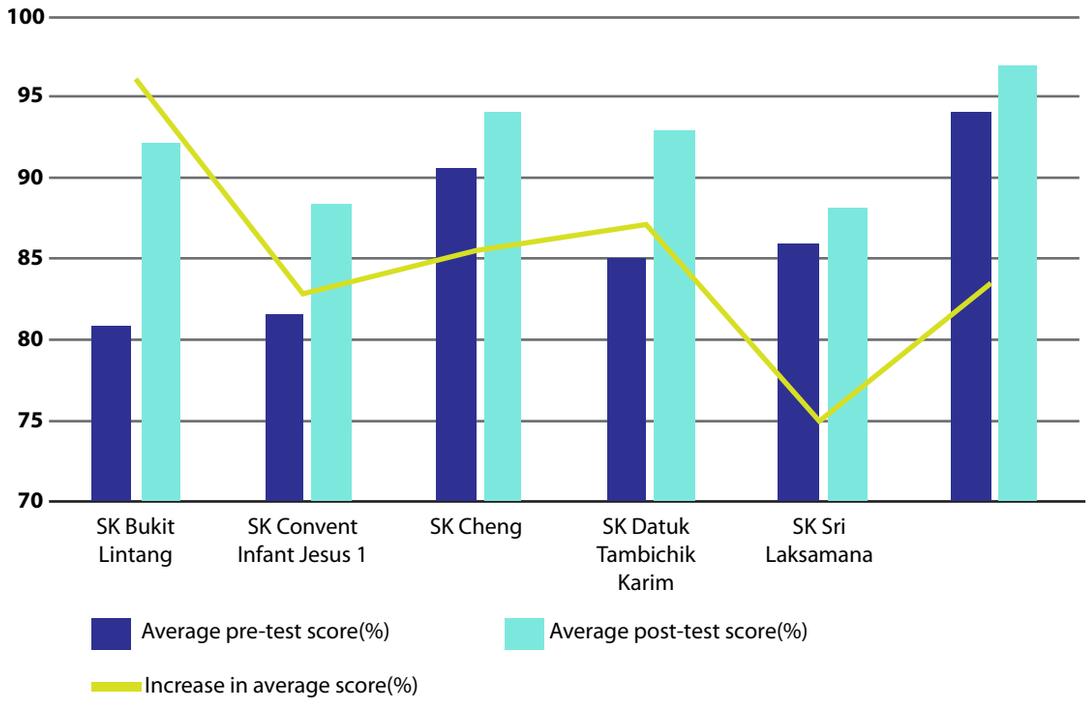


Student Demographic		Total
Primary level	124	304
Secondary level	180	
Teachers Demographic		**Total**
Primary level	15	33
Secondary level	18	

The figure above demonstrates that about 10% of the participants are teachers whereas 90% are students. Parallel to the explanation for the Figure1, students usually make up the bulk of school trips.

Hence, more teachers should be involved in order to directly monitor gauge their respective schools' performance, foster a stronger student-teacher bonding and to also have opportunities for networking with important stakeholders during similar programmes in the future.

Figure 3: Composite chart of average pre and post test score (%) and increase in average scores (%) of primary schools



The figure above demonstrates that the mean average pre test and post test scores of all the primary schools are 86.4% and 92.9% respectively. This because with elemental education level of scientific subjects in primary schools, primary schools generally find it more difficult to process complex terms and concepts of sea turtle themes such as its 'imprinting', 'niche', and 'the lost years'.

Furthermore, the mean percentage increase in average score is 7.3%, meaning that every school displays a positive magnitude increase or improvement in said scores. This is primarily because of the exposure and knowledge the students have gained from the activities of the programme, particularly the Turtle Talk session by WWF-Malaysia on sea turtles and their conservation efforts.

Thus, the Turtle Talk session is a very effective activity in enriching students on sea turtle knowledge and hence shall be carried out on future similar programmes.

The Back 2 Nature - Turtle camp programme 2019 pre and post comprehension test data tabulation - Primary schools

Primary schools pre and post comprehension test statistic			
Schools	**Pre test average score**	**Post test average score**	**Percentage of increase in average score**
SK Bukit Lintang	80.9	92.2	14.0
SK CIJ1	81.6	88.4	6.9
SK Cheng	90.6	94.1	8.3
SK Datuk Tambichik Karim	85	92.8	9.2
SK Sri Laksamana	85.9	88.1	2.6
SK Seri Duyong	94.1	96.9	3.0
Mean	**86.4**	**92.9**	**7.3**

Figure 4: Composite chart of average pre and post test scores(%) and increase in average scores(%) of secondary student

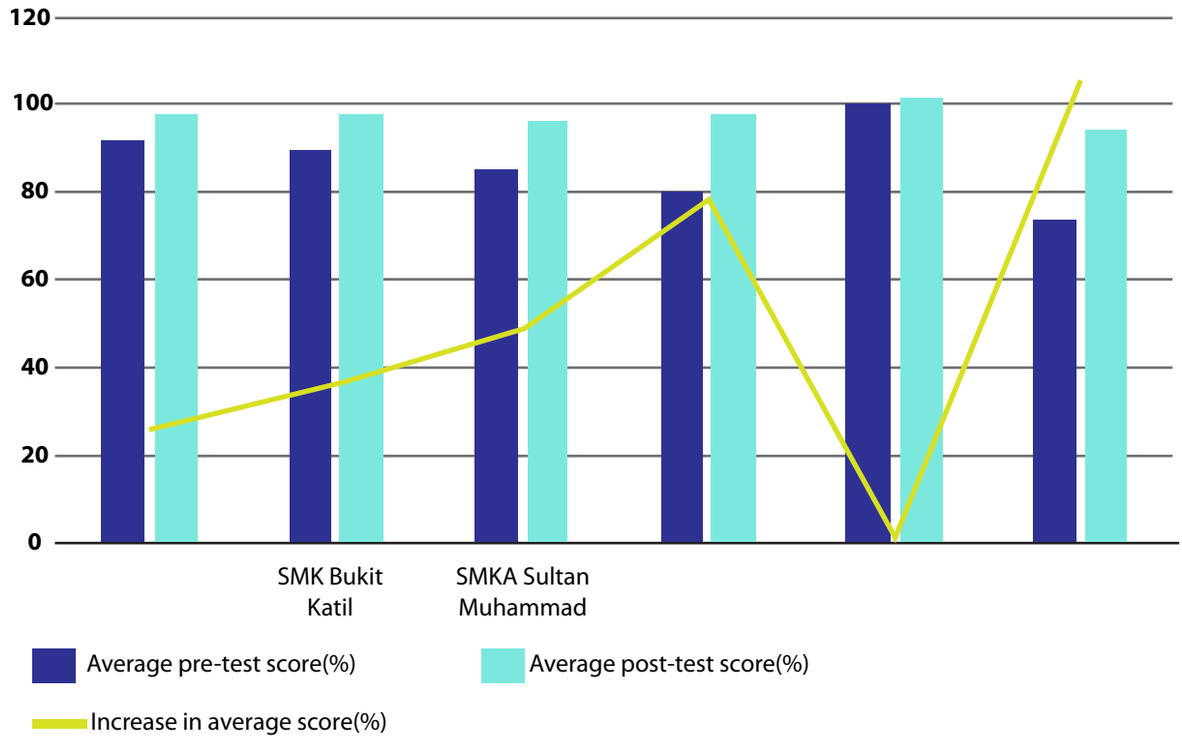


Figure 4 above illustrates that the mean average pre test and post test scores of all the secondary schools are 86.3% and 96.2% respectively. This is because with the deeper scientific, particularly biological concepts learned from science subjects in secondary schools, secondary students are more familiar with the complex sea turtle aspects and terminologies such as 'carapace', 'plastron', 'arribada' and 'evolutionary adaptations'.

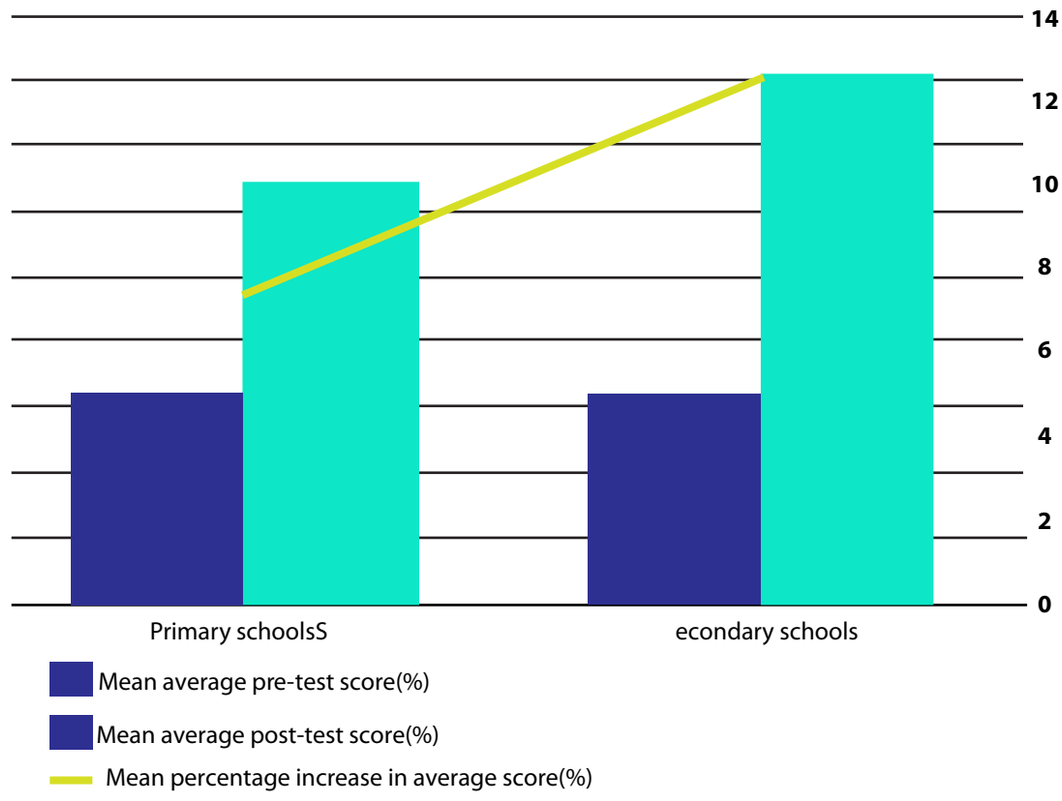
Moreover, the mean percentage increase in average score is 12.3%, meaning all the schools displayed a optimizations their scores. This is also due to the pool of information the students have gained from the activities of the programme, particularly the Turtle Talk session. Topics such as sea turtle geographical distribution, sea turtle anatomy, sea turtle ecology, and sea turtle life cycle were discussed to further engage participant interest and attention.

Thus, more talks and discussions on sea turtles and their conservation shall be held in future similar projects or programmes in order to broaden the knowledge horizons of students and their educators on the importance of sea turtle conservation for general ecosystem health.

The Back 2 Nature - Turtle camp programme 2019 pre and post comprehension test data tabulation - Primary schools

Secondary schools pre and post comprehension test statistic			
Schools	**Pre test average score**	**Post test average score**	**Percentage of increase in average score**
MRSM Alor Gajah	90.6	96.6	14.0
SMK Bukit Katil	89.1	97.2	6.9
SMKA Sultan Muhammad	84.4	94.7	8.3
SMK Ayer Keroh	80.3	95.9	9.2
SMK Paya Rumput	99.7	100	2.6
SMK Selandar	73.4	92.5	3.0
Mean	**86.3**	**96.2**	**7.3**

Figure 5: Compose chart of mean pre and post average scores (%) and mean percentage increase in average scores(%)



	Mean average pre test score	Mean average post test score	Mean average percentage increase in score
Primary schools	86.4	92.97	.3
Secondary schools	86.3	96.2	12.3
Mean	86.4	94.6	7.8

Figure 5 explains that the mean average pre-and-post score and mean percentage increase in average score of all the schools is 86.4%, 94.6% and 7 .8% respectively. To elabourate, all schools show improvement in test scores because students show familiarity towards the new knowledge they have gained to through the activities, as well as as because they questions designed in all sections of the pre-test are equivalent to that of their post-test counterparts. This is to stimulate students mental capability on recalling key information in a short term.

However, there is a surplus of 5% in the mean percentage increase in average scores of secondary schools as compared to that of primary schools. This because the students from the secondary schools are more exposed to more complex scientific concepts provided in the advanced syllabi of scientific

subjects such as science and biology in said schools, hence enabling them to pick up and process information from the talk and the other activities more efficiently compared to primary schools students.

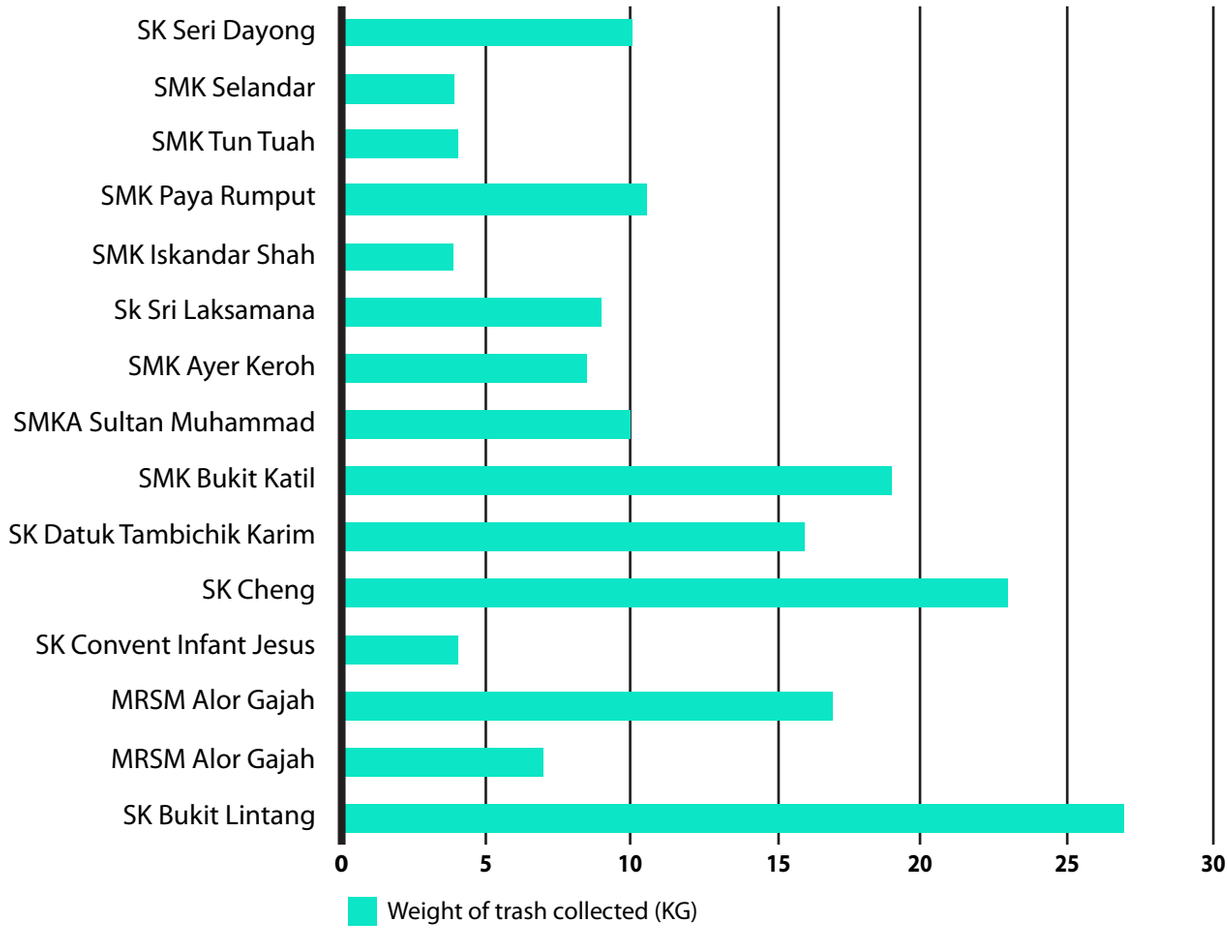
Thus, activities during the primary school sessions shall be held in more fun, engaging and interactive way as cognitive learning increases knowledge reception and memory power among the younger group of students.

Among all the questions in the pre-test, the majority of schools find Question 3 of Section B the easiest and Question 3 of Section A the hardest, with average scores of 99% and 41% respectively among the majority. Question 3 of Section B is as follows: While walking on the beach, you come across a turtle who is digging a nest to lay eggs. What would be the right thing to do in this situation? This is a multiple choice question with 2 answers choices, namely 'Take a selfie while sitting on the turtle.' and 'Report the activity to the Department of Fisheries'. The correct answer is the latter. Question 3 of Section A is as follows: What is the main food source of the sea turtle species that can be found in Melaka? This is also a a multiple choice question with 3 answer choices, namely 'jellyfish', 'sea sponge' and 'algae'. The correct answer is sea sponge.

As for among all the questions in the post-test, the majority of the schools find Question 10 to be the easiest and Question 8 to be the hardest , with average scores of 100% and 71% respectively. Both questions are of Section A. Question 10 is as follows: Out of 1000 turtles released into the sea, scientists estimate that only 1 will survive into adulthood. This is a 'true or false' question, and the correct answer is true. Question 8 is as follows: Turtle eggs take _____ to hatch. This is a multiple choice question, with 4 answer choices, namely '2-3 days', '10-15 days', '25-35 days', and '50-60 days'. The correct answer is 50-60 days.

In conclusion, aspects embedded in the 'difficult' questions shall be discussed and disclosed to the public more by organizations and experts in sea turtle conservation so as to promote more widespread awareness and promote sustainable sea turtle conservation.

Figure 6: Weight of trash collected bt schools during the clean ups along padang kemunting beach(KG)

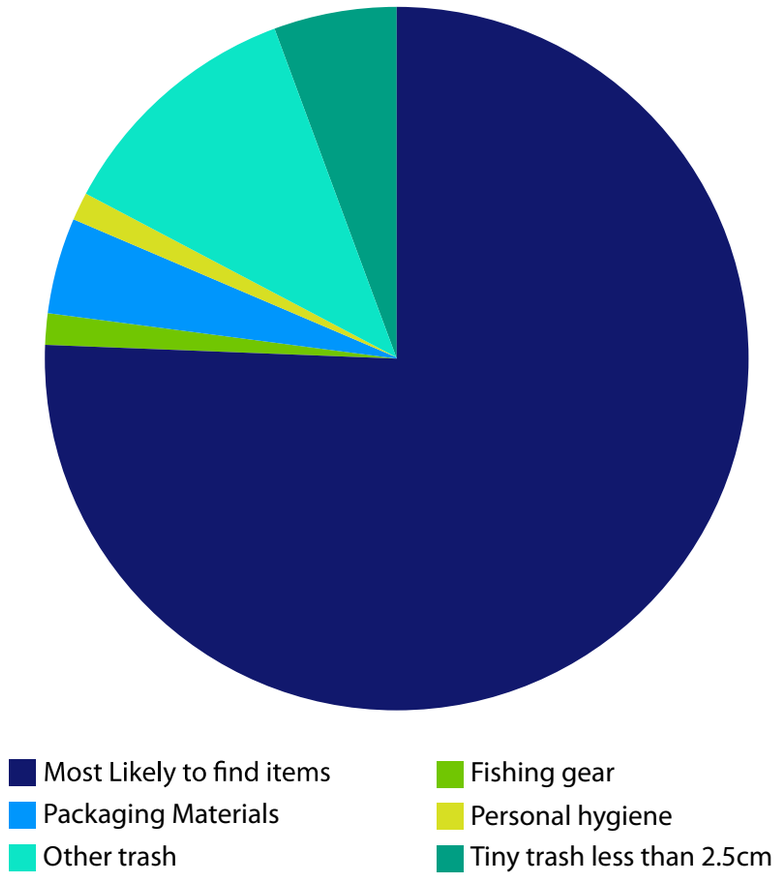


The figure above demonstrates that the total amassed weight of all the trash collected by all the participating schools is 172.80 kg over a total distance covered throughout the project of 3.75 km. The average weight collected is 11.52 kg whereas the average distance of the beach covered by each school is 0.25 km. Padang Kemunting Beach happens to be one of the most frequented beach among the locals for leisure and recreational purposes, especially during the weekends. Hence, more hawker stalls are springing up along the beach, selling food stuffs and leisure items to cater the booming tourism. Ultimately, this contributes to presence of litter along the stretch of beach. Moreover, many people are still unaware that the Padang Kemunting is the top hotspot for turtle nesting in Melaka currently.Thus, the authorities should promote more on turtle conservation efforts in the area and impose more fortified policies so as to deter littering, all to ensure the local ecosystem is not harmed by further anthropological

The Back 2 Nature - Turtle camp programme 2019 beach clean-up data tabulation - Weight of trash collected

Schools	Total weight of trash collected (KG)	DIstance covered during clean-up (KM)
SK Bukit Lintang	27.00	0.25
MRSM Alor Gajah	7.00	0.25
SK Convent Infant Jesus 1	17.00	0.25
SK Cheng	4.00	0.25
SK Datuk Tambichik Karim	23.00	0.25
SMK Air Molek	16.00	0.25
SMK Bukit Katil	19.00	0.25
SMKA Sultan Muhammad	10.00	0.25
SMK Ayer Keroh	8.50	0.25
SK Sri Laksamana	9.00	0.25
SMK Iskandar Shah	3.90	0.25
SMK Paya Rumput	10.50	0.25
SMK Tun Tuah	4.00	0.25
SMK Selandar	3.90	0.25
SMK Seri Duyong	10.00	0.25
Total	**172.80**	**3.75**
Mean	**11.52**	**0.25**

Figure 7: Numer of pieces of trash types collected during the beach clean-ups along Padang Kemunting Beach



The above pie chart illustrates that the trash type with the highest number of pieces collected during the Padang Kemunting Beach Clean-Up is the 'most likely to find items', which is 6652 pieces. This trash type includes cigarette buds, bottle caps, straws, food wrappers and plastic bags. As mentioned earlier, Padang Kemunting Beach is currently an upcoming tourism and leisure hotspot, leading to more usage and consumption of food and beverage as well as leisure items along the beach, ultimately contributing to the amount of trash apparent above. Personal hygiene items on the other hand, scores the lowest number of trash pieces found, that is 104 pieces. These items include diaper, syringes and condoms.

In conclusion, the local authorities should facilitate a more widespread disclosure regarding turtle conservation efforts in the area and impose more strict laws so as to deter littering, all to ensure the local

The Back 2 Nature - Turtle camp programme 2019 beach clean - up data tabulation- Types of trash collected

School	Number of pieces of trash types collected					
	Most likely to find items	Fishing Gear	Packaging Material	Personal Hygiene	Other Trash	Tiny trash less than 2.5cm
SMK Selandar	378	9	20	9	20	23
MRSM Alor Gajah	316	3	2	2	75	19
SK Convent Infant Jesus 1	687	2	26	19	11	41
SK Cheng	596	3	7	1	136	35
SK Datuk Tambichik Karim	927	35	107	10	104	0
SMK Air Molek	700	2	70	4	24	13
SMK Bukit Katil	685	2	18	4	97	9
SMKA Sultan Muhammad	481	0	37	0	77	0
SMK Ayer Keroh	265	6	45	16	149	17
SK Sri Laksamana	154	4	5	3	6	5
SMK Iskandar Shah	577	24	3	6	100	95
SMK Paya Rumput	309	7	39	3	10	56
SMK Tun Tuah	72	3	3	3	3	42
SMK Selandar	577	24	3	6	100	95
SK Seri Duyung	208	0	6	18	6	46
Total	**6652**	**124**	**391**	**104**	**1018**	**496**
Mean	**444**	**8**	**26**	**7**	**68**	**33**

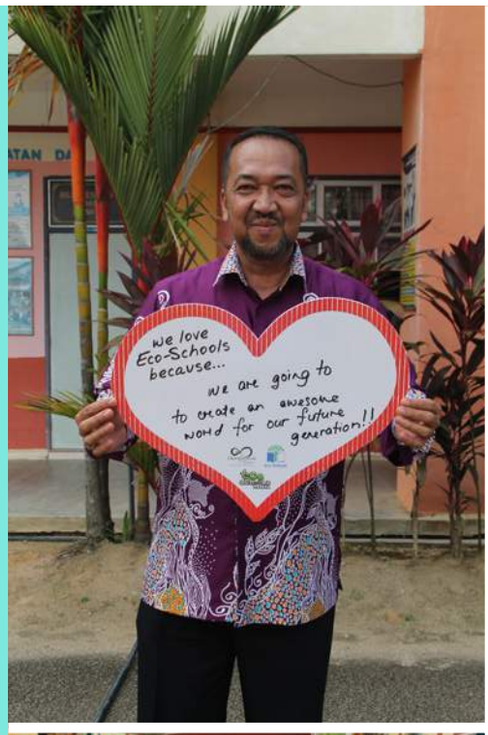
Conclusion and recommendations

Overall, the comprehension tests results has concluded that the Back 2 Nature - Turtle Camp Programme 2019 has been successful and has garnered positive reviews, with only a selected aspects to be optimized and improved for the following programme such as a more cognitive sea turtle-learning activities and the involvement of more special need pupils.

Firstly, it is highly recommended that the protocol management and the programme crew in the future is well acquainted with all participants of the summit before the commencement of the activities so as to ease two-way communication and interaction. Rules and regulations shall also be optimized and finalized prior to each school session.

Furthermore, school grouping according to the education level for each programme is recommended to ensure information retrieval and assimilation efficiency according to their cognitive and comprehension level, without diverting the separate groups away from the main gist of each theme visited - creating an educative environment with unity in diversity.

Moreover, special needs students can be encouraged to join the summit by coming up with relatively simple but compact program modules, and also incorporate more hands-on activity to gain their interest and attention without diverting away from the themes preached to the 'Aliran Perdana' students.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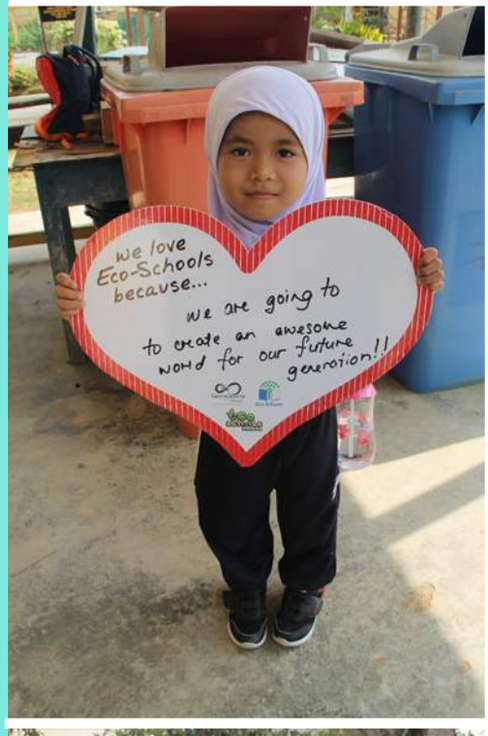
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