DIGITAL CLIMATE CHANGE MARATHON PROGRAMME REPORT

2020

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1.0 INTRODUCTION

The Digital Climate Change Marathon was organised by Majlis Perbandaran Hang Tuah Jaya and Green Growth Asia Foundation. This programme is one of the initiatives to raise awareness among the youth regarding climate change and carbon footprint issues that are increasingly getting severe as well as to ensure they have a deeper understanding that can allow them to become the agent of change in the future. For your reference, some changes have been made for the programme due to the COVID-19 where it has been conducted online and according to the students spare time. Hence, the purpose of this report is to present the progress and the outcome of the Digital Climate Change Marathon programme.

2.0 PROGRAMME BACKGROUND

The climate change issue is getting severe day by day, and certainly, the severe impacts from it will be faced by our future generations. However, young people in Malaysia are still oblivious of these critical issues. Thus, the Digital Climate Change Marathon programme is conducted to raise the teacher and student awareness about climate change so that changes for the better can be made in the future. It is crucial for us to educate the young people since eventually, they will become agents of change who will save our environment. Below are the objectives of the programme;

❶ The participants are able to learn new topics that are related to climate change in greater detail which are not included in any of their school syllabi.

❷ The participants will learn the measures that can be taken to mitigate climate change issues that are getting severe in Malaysia.

❸ The participants are able to implement the knowledge that they have gained to alleviate climate change issues in their daily life.

The Digital Climate Change Marathon programme will also instil the love for the environment attitude among the teachers and students. This programme has been successfully implemented in Melaka which are participated by several schools under the supervision of the Ministry of Education Malaysia to ensure that the programme is able to integrate effectively.

3.0 DATE AND METHOD OF IMPLEMENTATION

The Digital Climate Change Marathon was conducted on the **23rd of November 2020** until **27th of November 2020**. As we all know, due to the coronavirus Malaysia government has taken measures to mitigate the spread of COVID-19 through social distancing and Movement Control Order (MCO). Therefore, the Digital Climate Change Marathon is conducted online, and the participants are able to do the assignments according to their spare time. Added to this, the modules and the worksheet are also provided online to ensure that the participants are able to comprehend all the information easily.

4.0 PROGRAMME PARTICIPATION

Primary School

NO	SCHOOLS	DISTRICT EDUCATION OFFICE	GENDER		RACES				TOTAL	
			M	F	MALAY	CHINE-SE	INDIAN	OTHERS	STUDENT	TEACHER
1.	SK Bukit Baru	PPD MELAKA TENGAH	5	8	13	0	0	0	10	3
2.	SK Batu Berendam	PPD MELAKA TENGAH	6	11	16	0	1	0	15	2
3.	SK Bukit Beruang	PPD MELAKA TENGAH	6	11	16	0	1	0	15	2
4.	SK Kampung Tun Razak	PPD MELAKA TENGAH	4	12	16	0	0	0	15	1
5.	SK DATO' Demang Hussin	PPD MELAKA TENGAH	7	11	18	0	0	0	15	3
6.	SK Taman Merdeka	PPD MELAKA TENGAH	7	10	17	0	0	0	15	2
7.	SK Ayer Keroh	PPD MELAKA TENGAH	4	13	17	0	0	0	15	2

Secondary School

NO	SCHOOLS	DISTRICT EDUCATION OFFICE	GENDER		RACES				TOTAL	
			M	F	MALAY	CHINE-SE	INDIAN	OTHERS	STUDENT	TEACHER
1.	SMK Munshi Abdullah	PPD DAERAH MELAKA TENGAH	5	10	14	0	1	0	15	1
2.	SMK Tun Mutahir	PPD MELAKA TENGAH	4	0	4	0	0	0	4	2
3.	SMK Durian Tunggal	PPD ALOR GAJAH	6	9	14	1	0	0	15	2
4.	SM Sains Muzaffar Shah	PPD DAERAH MELAKA TENGAH	6	9	14	0	1	0	15	1
5.	Kolej Vokasional Melaka Tengah	PPD DAERAH MELAKA TENGAH	2	13	15	0	0	0	15	2
6.	SMK Ayer Keroh	PPD DAERAH MELAKA TENGAH	0	15	15	0	0	0	15	1

5.0 THE PROGRAMME SCHEDULE

Below is the schedule for the Digital Climate Change Marathon programme.

DATE	DAY	TOPIC	ACTIVITY
23.11.2020	MONDAY	Introduction to Climate Change	• Introduction to Climate Change • Quiz session through Google Form
24.11.2020	TUESDAY	Carbon Calculation – Electric	• Introduction to the topic • Student/ personal Electric Carbon Calculation • Electric Carbon Calculation for School • Quiz session through Google Form
25.11.2020	WEDNES–DAY	Carbon Calculation – Water	• Introduction to the topic • Student/ personal Water Carbon Calculation • Water Carbon Calculation for School • Quiz session through Google Form
26.11.2020	THURS–DAY	Carbon Calculation – Waste	• Introduction to the topic • Student/ personal Waste Carbon Calculation • Waste Carbon Calculation for School • Quiz session through Google Form
27.11.2020	FRIDAY	Carbon Calculation – Food	• Introduction to the topic • Student/ personal Food Carbon Calculation • Food Carbon Calculation for School • Quiz session through Google Form • Action Plan

6.0 BUDGET

There was no financial implication from the Ministry of Education Malaysia or the Melaka State Education Department throughout the process of conducting the Digital Climate Change Marathon programme. The Hang Tuah Jaya Municipal Council had sponsored the Digital Climate Change programme and the implementation of the programme is successful.

7.0 PROGRAMME REWARDS

Prizes for the Primary Schools

1. 1st Place → RM 800.00
2. 2nd Place → RM 300.00
3. 3rd Place → RM 500.00
4. 4th Place and 5th Place → RM 200.00

Prizes for the Secondary Schools

1. 1st Place → RM 800.00
2. 2nd Place → RM 300.00
3. 3rd Place → RM 500.00
4. Consolation Prize → RM 100.00

Winners for Primary Schools

1. SMK Dato' Demang Hussin
2. SK Kampung Razak
3. SK Ayer Keroh
4. SK Bukit Beruang
5. SK Bukit Baru

Consolation Prize → SK Taman Merdeka, SK Batu Berendam

Winners for Secondary Schools

1. SMK Durian Tunggal
2. Kolej Vokasional Melaka Tengah
3. SMK Ayer Keroh

Consolation Prize → SM Sains Muzaffar Syah, SMK Munshi Abdullah, SMK Tun Mutahir

8.0 STRENGTHS AND WEAKNESSES OF THE PROGRAMME

The initial plan for the Digital Climate Change Marathon programme is to conduct a face to face programme with the teachers and students that incorporate a variety of engaging activities under climate change topics. However, due to the COVID-19, we are obligated to take suitable measures to ensure everyone's safety and health during the programme. After careful consideration, we decided to conduct the programme online for the first time, and certainly, this programme will have its own strengths and weaknesses.

STRENGTHS OF THE PROGRAMME

1. Due to the COVID-19, we were able to experiment with a new norm for the Digital Climate Change Marathon programme by utilising technologies these days that are evolving. The students are also able to learn in an environment that they are used to in their daily life.

2. The Digital Climate Change Marathon is conducted during the school day, and for this reason, we ensure that the programme schedule is flexible for the student and the teacher. Thus, we allowed the students to do the assignments during their spare time and submit the assignments at a predetermined time.

3. Through this programme, we also incorporate an engaging learning environment where we carried out Quiz sessions and active learning activities that can take place at their house. Added to this, it will also enhance student understanding and participation.

4. The assignments for this programme are considered challenging because of the carbon calculation and the formulas which the students are not quite familiar with. However, due to the assignments, the students are able to learn new things that can be applied in their daily life to help in mitigating climate change issues.

5. The Digital Climate Change Marathon programme contained various topics under climate change and to ensure the participants are able to comprehend all the information easily; we decided to use the top-down approach. Hence, we decided to integrate general to specific information in the modules.

WEAKNESSES OF THE PROGRAMME

1 One of the main issues that we faced is the participants' technical limitation. This is because there are a few schools from rural areas and some students were not able to receive the learning materials and the worksheets that were being shared online. Therefore, the teachers are obligated to find a solution to those problems.

2 The communication barriers are known as one of the problems that we constantly face when we communicate virtually. This could cause misunderstanding among the participants when the programme instructions or information is being conveyed.

3 For your information, few of the participated schools are not thrilled with the time-constrained assignments. This is because the teachers that are responsible for handling the students have requested to enhance the flexible schedule since they have their own responsibility that needs to be done during the school hours.

4 The Digital Climate Change Marathon programme is participated by several students from various schools. However, the prize allocation was considered unequalled to the amount of the participating students and their efforts.

5 Throughout the programme, we noticed that the learning materials could be improved due to the difficulty of the student to comprehend the information. This is due to the age differences where it will be more difficult for the primary schools to comprehend the information or the formulas.

9.0 SUGGESTION FOR IMPROVEMENTS

The Digital Climate Change Marathon programme was conducted through an online platform for the first time, and it went in accordance with the plan. However, there is still room for improvement that could be made, and we also received some suggestions from the school authorities.

Below are the suggestions to ameliorate the Digital Climate Change Marathon programme;

1 Taking into account the student's age differences, level of understanding and knowledge during the preparation of the learning materials, quizzes or assignments. Hence, there will be no difficulties for the students to carry out the assignments, and it will be easier for the teacher to guide the students as well.

2 Encompass a variety of teaching techniques for the topics that will be learned to attract the student's interest and allow two-way communication between teachers and students so that they can comprehend it easily.

3 Plan comprehensive learning materials and in further details in terms of the carbon calculation formulas, notes for student reference, worksheets and the preparation for teaching aids.

4 Extend and enhance the schedule flexibility where the participants are provided with an appropriate time frame to complete the assignments. This is to ensure that the students and teachers are able to do the assignments thoroughly.

5 Taking into account the student's age differences, level of understanding and knowledge during the preparation of the learning materials, quizzes or assignments. Hence, there will be no difficulties for the students to carry out the assignments, and it will be easier for the teacher to guide the students as well.
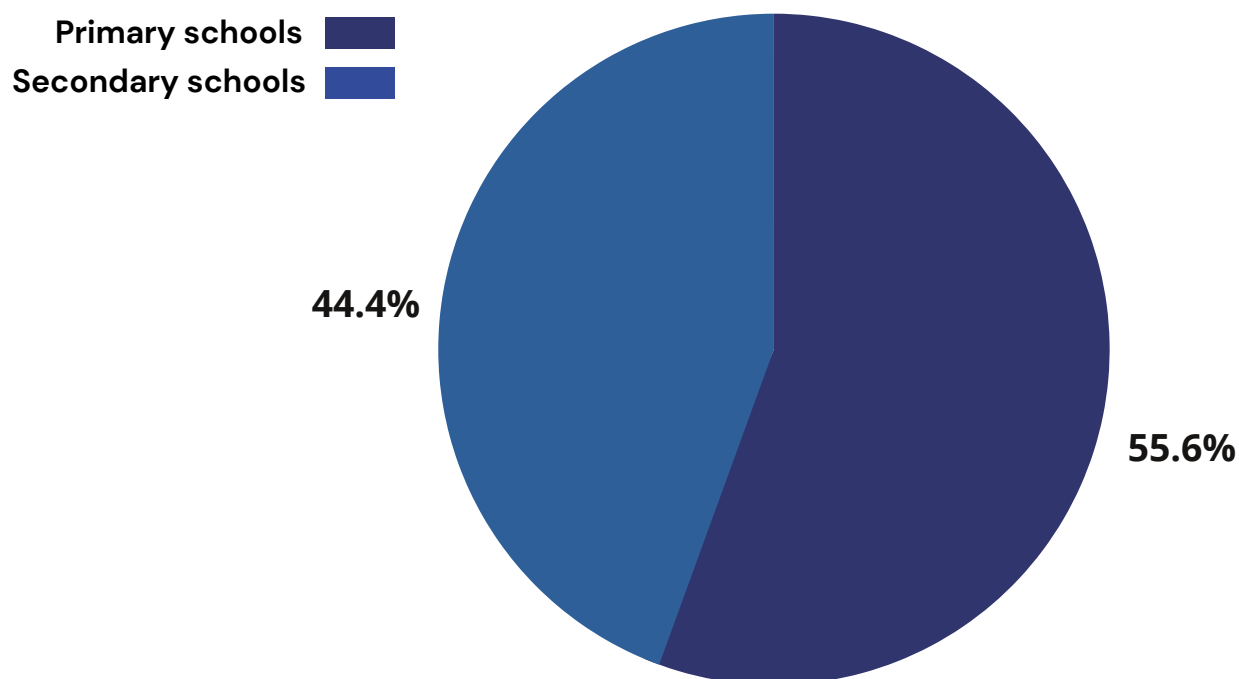
10.0 PROGRAMME ACHIEVEMENTS

Below are the list of schools and the amount of students and teachers that had participated in the Digital Climate Change Marathon.

SCHOOLS	Number of Students	Number of Teachers
SK Bukit Baru	10	3
SK Batu Berendam	15	2
SK Bukit Beruang	15	2
SK Kampung Tun Razak	15	1
SK Dato' Demang Hussin	15	3
SK Taman Merdeka	15	2
SK Ayer Keroh	15	2
SMK Munshi Abdullah	15	1
SMK Tun Mutahir	4	2
SMK Durian Tunggal	15	2
SM Sains Muzaffar Syah	15	1
Kolej Vokasional Melaka Tengah	15	2
SMK Ayer Keroh	15	1

The Digital Climate Change Marathon programme is participated by **13 schools** with **179 students** and **24 teachers**.

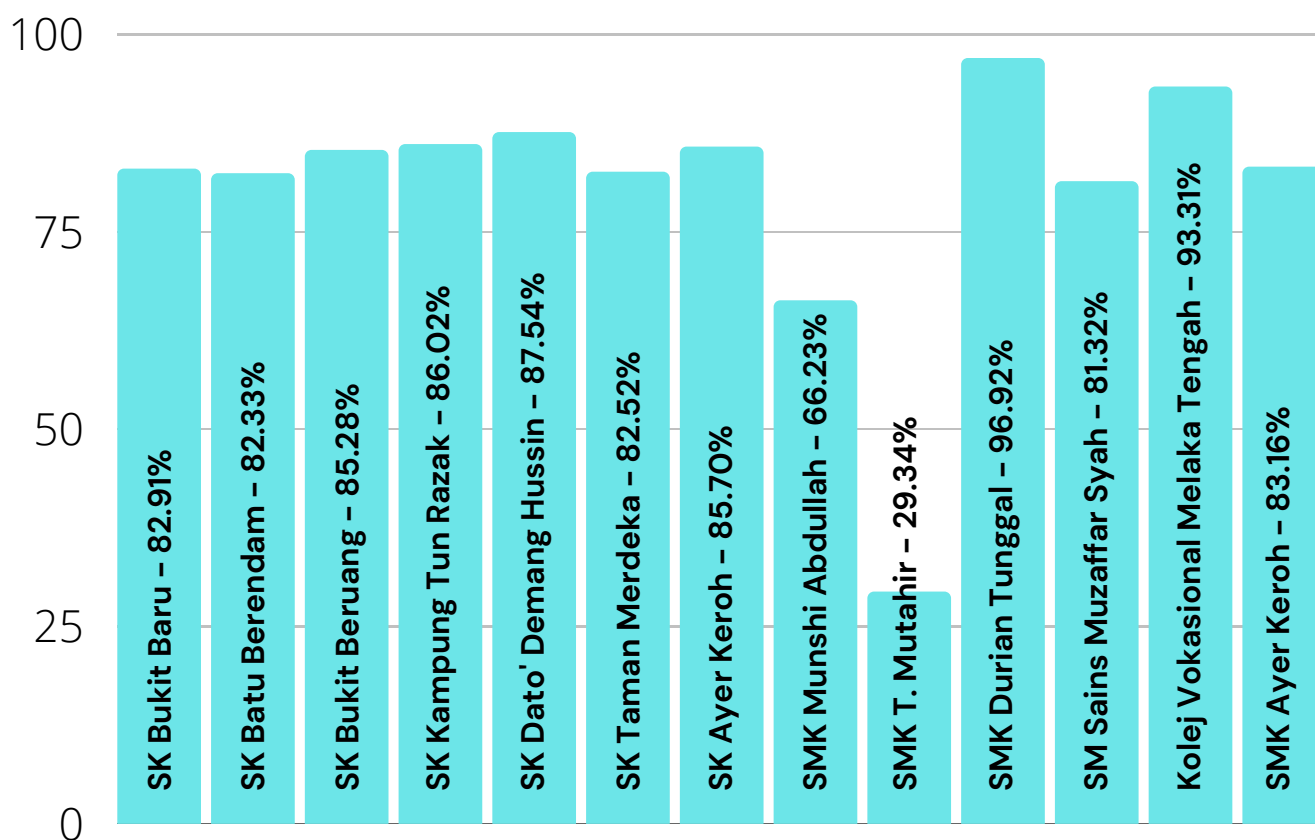## Figure 1: Number of participated schools based on school level

Primary schools
Secondary schools

44.4%

55.6%

SCHOOL DEMOGRAPHIC		TOTAL
Primary School	100	179
Secondary School	79	

The amount of the participating schools from primary and secondary schools are balanced; hence we can ensure that regardless of school level, they are able to gain new knowledge from this programme. Added to this, the maximum number of students participating in the programme are 15 students for one school. However, as you can see, there are still a few schools that were not able to reach the predetermined amount.

Below are the list of schools and their daily scores throughout the five days during the Digital Climate Change Marathon.

SCHOOLS	Day 1	Day 1	Day 1	Day 1	Day 1
SK Bukit Baru	6.58%	8.33%	18%	18%	36%
SK Batu Berendam	7.00%	9.23%	17.70%	9.76%	38.64%
SK Bukit Beruang	6.58%	13.46%	16.72%	17.60%	30.92%
SK Kampung Tun Razak	7.00%	14.90%	16.20%	16.92%	31%
SK Dato' Demang Hussin	5.97%	13.19%	14.58%	17.80%	36%
SK Taman Merdeka	5.41%	10.58%	17.64%	16.65%	32.24%
SK Ayer Keroh	7.00%	8.10%	18%	17.60%	35%
SMK Munshi Abdullah	7.00%	13.86%	13.63%	12.74%	19%
SMK Tun Mutahir	1.89%	1.13%	7.13%	1.19%	18%
SMK Durian Tunggal	7.00%	18%	17.64%	17.28%	37%
SM Sains Muzaffar Syah	7.00%	17.64%	17.08%	17.60%	22%
Kolej Vokasional Melaka Tengah	7.00%	17.19%	17.50%	15.62%	36%
SMK Ayer Keroh	7.00%	9.05%	15.02%	16.09%	36%

The daily scores for both school level are the same; hence, it can be seen that the difficulty of the questions and the assignments are on the same level. However, the school authorities still requested to take into account the suggestions of creating different questions or assignments according to the school level.

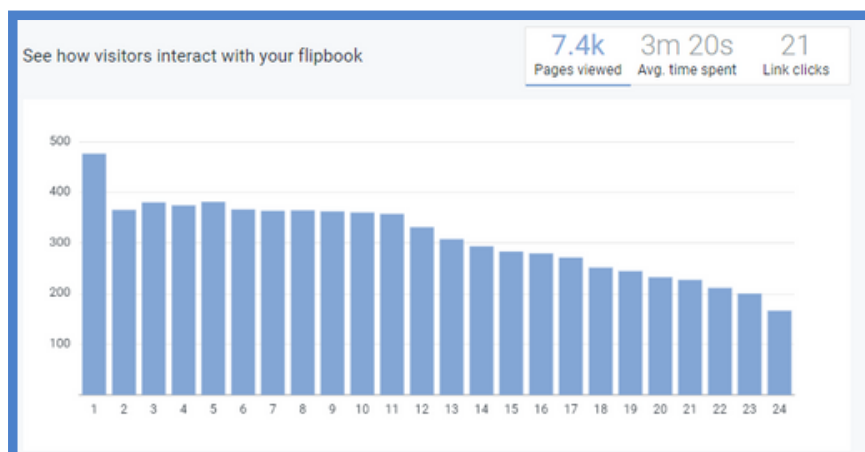## Figure 2: Number of scores for participated schools

The average final score for all schools are similar; hence we can ensure that the level of difficulty for the tasks is similar for both primary and secondary school. However, the school authorities did request to have different assignments or quizzes according to the school level.
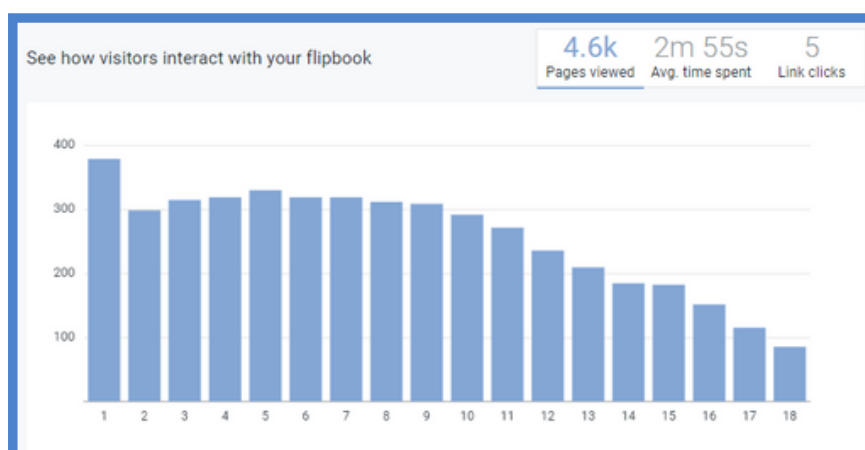
11.0 CONCLUSION

The Digital Climate Change Marathon programme allows us to produce younger generations that are aware of environmental or climate change issues and become one of the effective initiatives to expose the student as well as the teacher regarding these issues. It is crucial for us to take action in changing the future by conducting various environmental programmes or activities to raise awareness among the community and especially the young people since they are the one who will become the agent of change in youth, communities, and individuals to save our environment. It is hoped that this program can be organised in the future with a better improvement and with an increasing number of student and teacher participation.
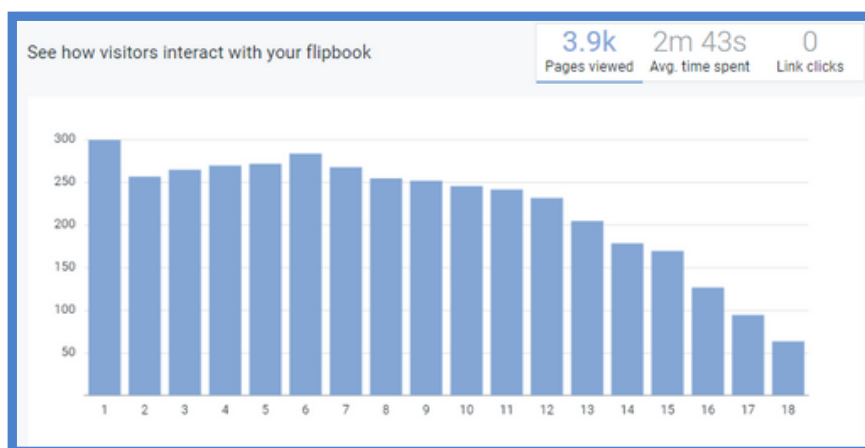
12.0 ATTACHMENT

Below are the data for the usage of the learning materials, which is the flipbook for the Digital Climate Change Marathon Programme.
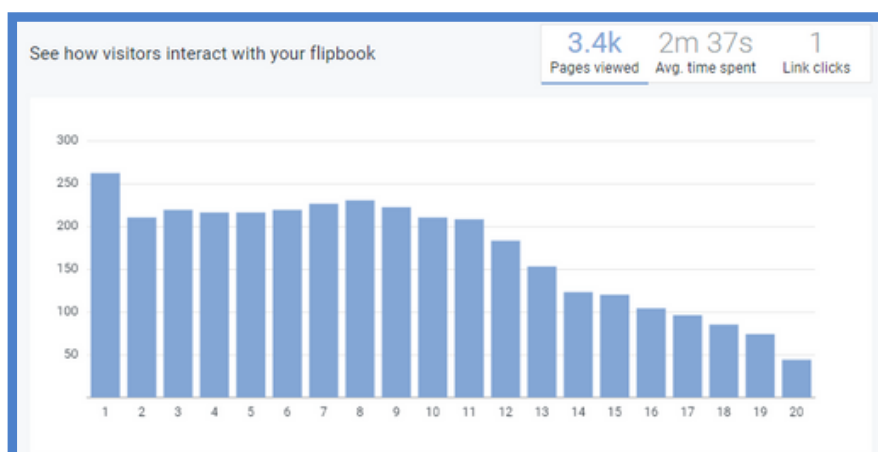

The Flipbook for the Introduction to Climate Change topic was viewed for 549 times.
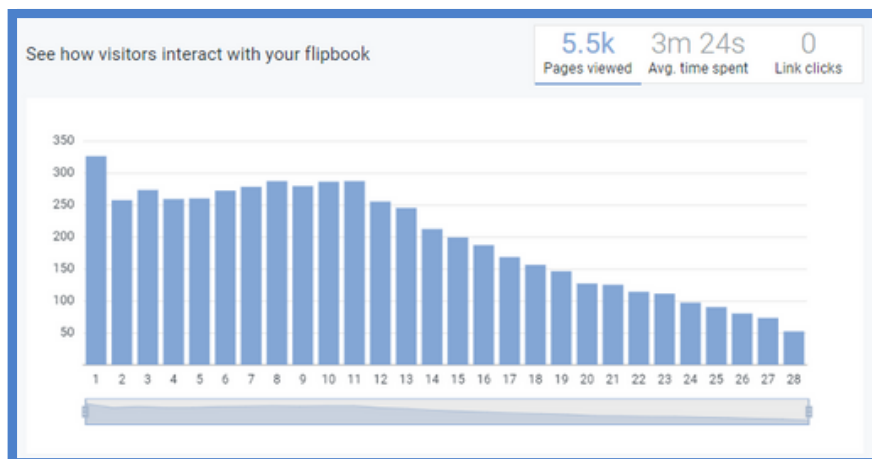

The Flipbook for the Electric Carbon Calculation topic was viewed for 430 times.

The Flipbook for the Water Carbon Calculation topic was viewed for 355 times.

The Flipbook for the Waste Carbon Calculation topic was viewed for 289 times.

The Flipbook for the Food Carbon Calculation topic and Action Plan was viewed for 377 times.

As can be seen in the data, we can ensure that the participated students and teachers are active in this programme by employing the given learning materials in order to be able complete the assignments successfully.

Below are the pictures of the students during the activities.

Below are the pictures during the award ceremony for the Digital Climate Change Marathon Programme.