

Cat 4 Resource Development

4-058

Project AoSB

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Abstract

Project AoSB is a project designed to promote Sungei Buloh Wetland Reserve and allow people to appreciate the beauty of nature and wildlife in Singapore. Project AoSB aims to draw more attention to Sungei Buloh and allow viewers to know more about the various types of animals and plants found in the forests of Singapore. Although Singapore is a small country, it is home to 28,000 species of animals, and many of them can be found in Sungei Buloh. We have set up an Instagram page where we post interesting facts about the flora and fauna found in Sungei Buloh every week. We also have a website, which gives visitors a guide for what to do there, as well as some information about the flora and fauna found at Sungei Buloh. We also created some fun worksheets, which can be found on our website. These worksheets include interesting activities and fun games such as crossword puzzles that are targeted at the younger ones, to increase their knowledge of Sungei Buloh. Some of these activities can also be done at Sungei Buloh itself, and will certainly improve one's experience at Sungei Buloh.

Introduction

Rationale: Sungei Buloh Wetland Reserve is one of the four nature reserves found in Singapore. It is one of the rare places in Singapore where migratory birds stopover and is also home to a wide many other plants and animals, including a wide variety of mangrove wildlife.

Objectives: Our project aims to increase the number of visitors at Sungei Buloh and also offer a solution for the younger generation to unplug and go outdoors. We also aim to provide educational and entertaining activities for reserve-goers to enhance their experience in Sungei Buloh.

Target Audience: Our project is targeted at the younger generation(6-16 years old) , but is generally suitable for people of all ages.

Resource: Website, Instagram Account, Worksheets and Activities

Literature review

There are many benefits to spending time outdoors, such as: it benefits our vision, boosts our immune system, casual exposure to sunlight provides us with our daily dose of vitamin D and helps to relieve stress. According to an article published by The Straits

Times, “Kids today only spend 4-7 minutes of their time outdoors while spending 7½ hours on electronics”, showing that children indeed do not spend much time outdoors despite the many benefits of doing so.

We also did research on existing resources and found out that 2 websites that provided information about Sungei Buloh. They were the NParks website and another website called MMM@Kranji.

The NParks website provides basic information about Sungei Buloh Wetland Reserve such as an introduction and the do’s and don’ts in Sungei Buloh. It also includes worksheets for the public to do while at Sungei Buloh. However, they were not very educational and were mostly colouring worksheets. The NParks websites were good in providing basic information about Sungei Buloh but it did not have detailed information about the flora and fauna there.

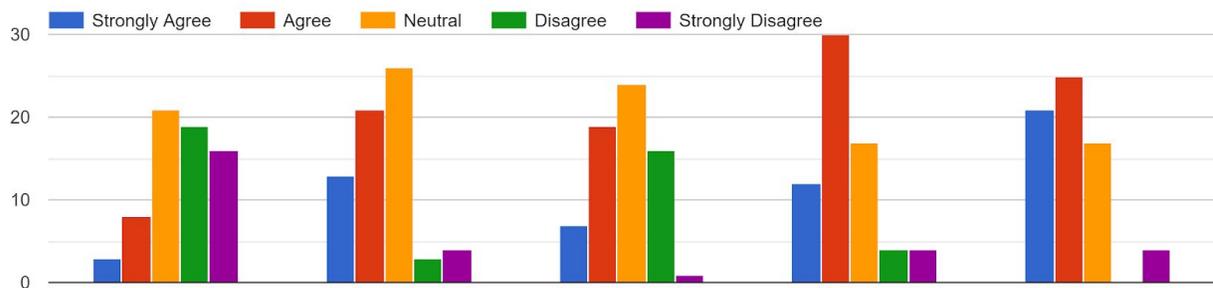
MMM@Kranji website is a collaboration of 3 schools and focuses on the mudflats of Sungei Buloh Wetland Reserve. The information provided by the website was very limited and narrow, focusing on horseshoe crabs and mangroves only. It lacks thorough information on other plants and animals.

Methodology

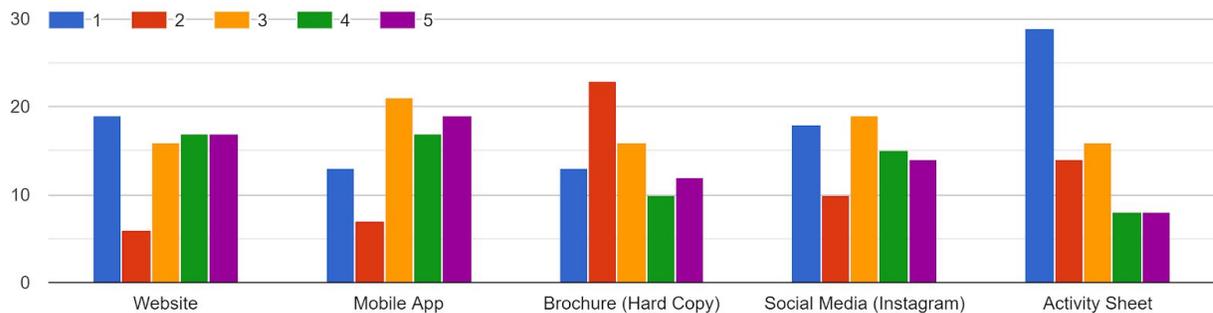
We conducted surveys at the start of the year to get the people’s general impression of Sungei Buloh. We surveyed mainly teenagers and adults. Overall, our survey shows that many people do not know much about Sungei Buloh and have not visited Sungei Buloh due to it being unpopular and its far location. However, many expressed interest to know more about Sungei Buloh and would like to visit Sungei Buloh if there were activities for them to do there.

We also surveyed them on what resources would be the most suitable to use when at Sungei Buloh. Many felt that the most appealing resources are websites, mobile apps, and social media platforms such as Instagram.

Addressing the survey results, we created a website, an Instagram page as well as worksheets for those visiting Sungei Buloh. For our Instagram page, we started posting weekly facts on the flora and fauna in Sungei Buloh since March. The worksheets that we planned to create are mainly targeting younger children. We created word puzzles, mix-and-match and word searches for our worksheets’ activities. For our website, we



On a scale of 1-5, 1 being the LEAST appealing, 5 being the MOST appealing, which of the following resources would you like to use when at Sungei Buloh.



Outcome and Discussion

We uploaded a total of 21 posts on the fun facts of the flora and fauna in Sungei Buloh on our Instagram page. Moreover, we created 2 worksheets, including word puzzles, mix-and-match, word searches and mazes which have relation with the flora and fauna there.

We created a website to promote Sungei Buloh. Our website contains information including a list of things to do, the flora and fauna that visitors can look out for, how to travel there and some do's and don'ts at Sungei Buloh. Our worksheets and Instagram page are also found on the website, making everything very accessible and convenient for the users.

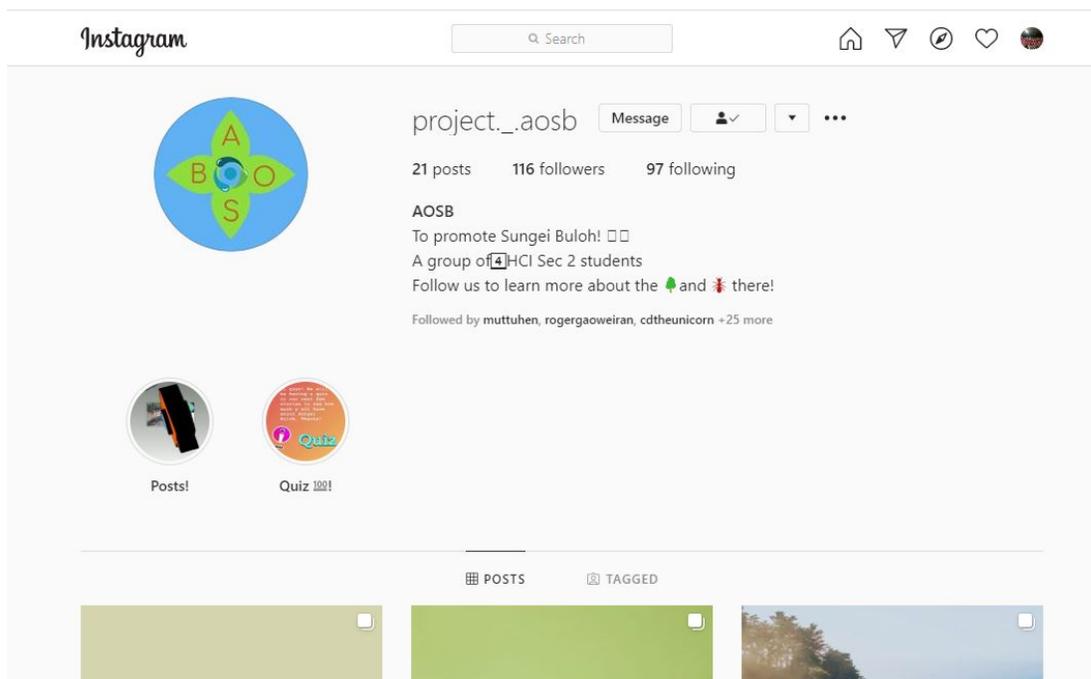
We created a survey for feedback on our resources and there were recommendations for us to turn the worksheets we created into a mobile game instead. However, one of the limitations was that there was limited signal at Sungei Buloh. Thus, they will not be able to access the mobile game when in Sungei Buloh.

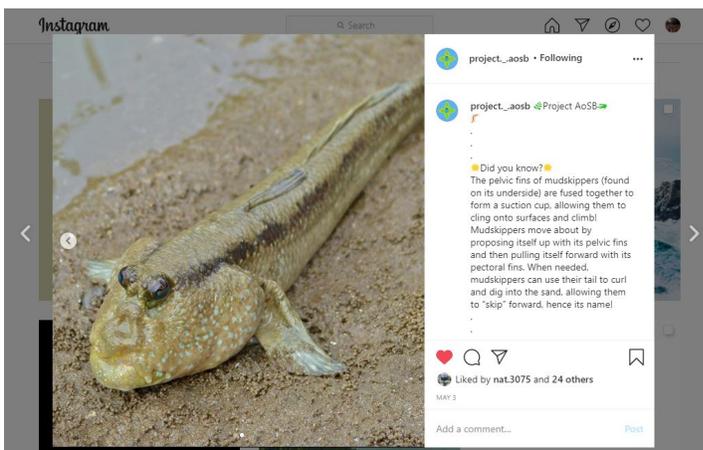
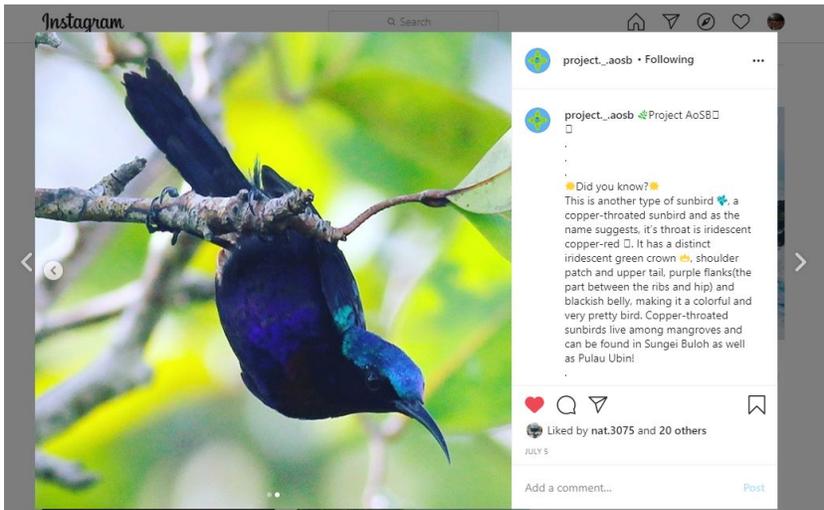
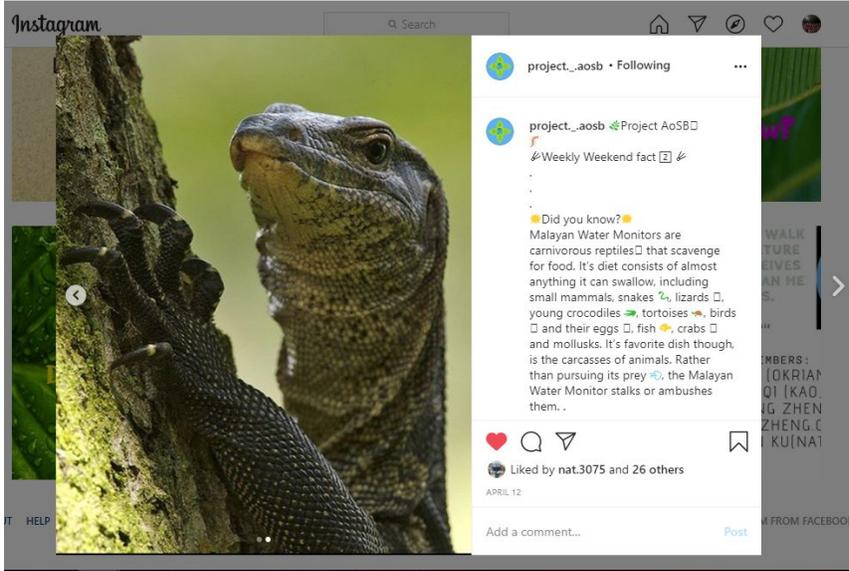
Many enjoyed the weekly facts on our Instagram page, though there were suggestions for us to make it less wordy. Instead of leaving the fun facts in the captions of the post, we could put it in the pictures of the Instagram post and in turn shortening our caption

Regarding the website for visitors, there was feedback that the information could be more organised. Using the feedback given, we decided to split the information on the website into 3 distinct sections instead of having them all in one page. This way, the information was more accessible and organised.

Our resources

Instagram page:





Website:

<https://sites.google.com/student.hci.edu.sg/aosb/home>



Hello there, we are a group of Secondary 2 Students from Hwa Chong Institution hoping to raise awareness about Sungei Buloh Wetland Reserve.

We hope to provide more interesting facts about the flora and fauna in Sungei Buloh and create activities for the reserve-goers so they can have a more enjoyable and meaningful time. We also hope to spread awareness of the less known Sungei Buloh so that more people will make an effort to preserve this rare mangrove area in Singapore.



Animals that can be found in Sungei Buloh



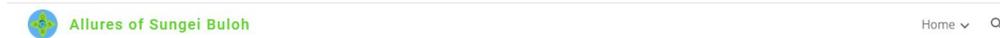
Malayan Water Monitor

The Malayan Water Monitor, a common reptile found in Sungei Buloh, is a great swimmer, both in freshwater and saline water, and can remain underwater for as long as 30 minutes. Monitor lizards are also able to move quickly on land and even climb trees! These Malayan Water Monitors are carnivorous reptiles that scavenge for food. Its diet consists of almost everything that it can swallow, including small mammals, snakes, lizards, young crocodiles, tortoises, birds and their eggs, fish, crabs and molluscs. However, it prefers decaying flesh of dead animals. The lizard hunts by pursuing its prey, rather than stalking or ambushing. It also regularly raids bird's nests.



Saltwater Crocodile

The Estuarine Crocodile, also known as the Saltwater Crocodile, is found naturally in the wild in Singapore. It is one of the largest species of crocodiles and can grow up to 5



We will provide you with a guide for things you can do at Sungei Buloh, to have an enriching and fulfilling trip to Sungei Buloh.



1. Visitor Centre

The new Visitor Centre houses a mangrove gallery, which features interactive educational tools such as multimedia games, a live camera feed that transmits and screens live scenes from various areas of the Reserve, and static displays featuring information on the mangrove habitat. This will also be a good place for everyone in the family to empty their bladders or to hydrate themselves courtesy of the water coolers or vending machines before embarking on the nature trails.

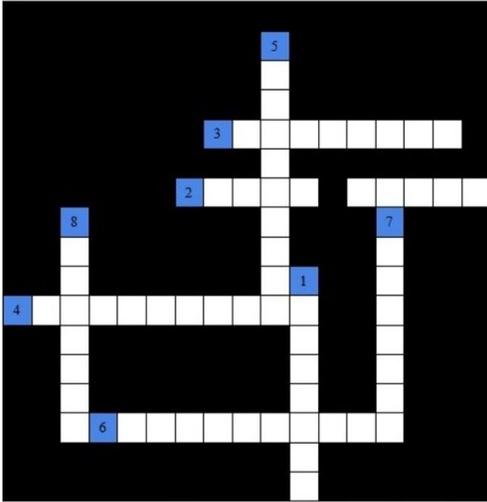


2. Mid-Canopy Walk

The Mid-canopy Walk immerses visitors in the understory of a secondary forest through an elevated, 120m-long boardwalk, where they can spot birds and insects like cicadas that reside in the mid-canopy region and forest floor.

Worksheets:

AOSB Worksheet



Vertical

1. A copper-throated _____ lives among mangroves and can be found in Sungei Buloh as well as Pulau Ubin.
5. The _____ crab swims upside down, using its gills as paddles.
7. Malayan Water Monitors are carnivorous _____ that scavenge for food.
8. Herons are freshwater and _____ birds.

Horizontal

2. There are about 250 _____ in Singapore. They feed on a wide variety of aquatic animals, including fish, reptiles, crustaceans, mollusks and aquatic insects.
3. The tree-climbing crabs often remain motionless to avoid being seen by a _____.
4. Most mudskippers are _____ and prey on worms, flies, beetles and small fish.
6. Saltwater _____ can lay up to 60 eggs at a time and live over 70 years.



● Horseshoe Crab



● Mudskipper



● Sunbird



● Tree-climbing Crab

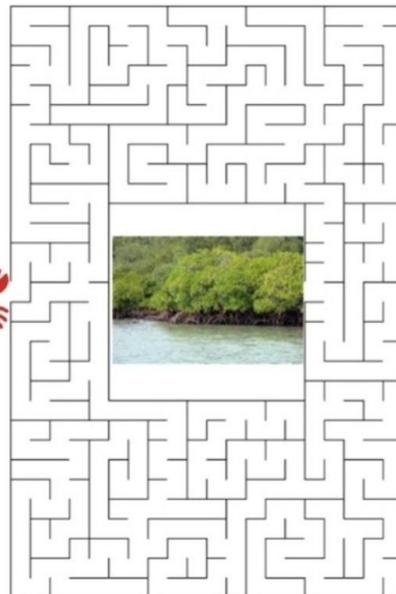


● Kingfisher



● Grey Heron

Tree-climbing crabs can be found around the mudflats of Sungei Buloh, often on the mangroves. Help it find its way back to its home among the mangroves!



Pilot test

Our original plans for project AoSB was to test out our resources through conducting some trails at Sungei Buloh and interviewing reserve goers about our resources, but due to the COVID 19 pandemic, we were unable to do so. Thus, we sent out our resources to our friends and family and created a short survey to find out their thoughts on our resources and what we could have done better in.

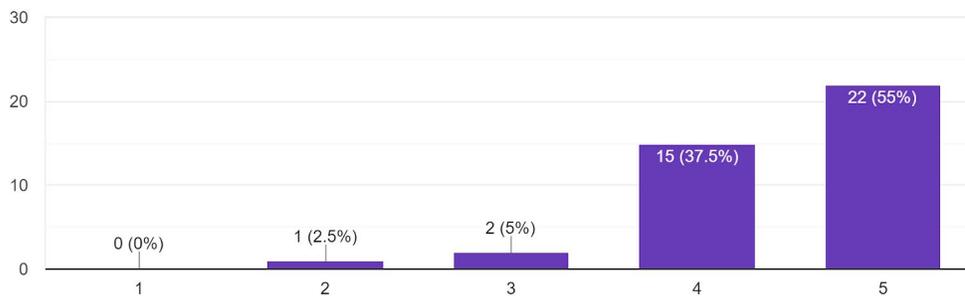
Final Outcome and Discussion

Survey results on resources

Feedback on Instagram page:

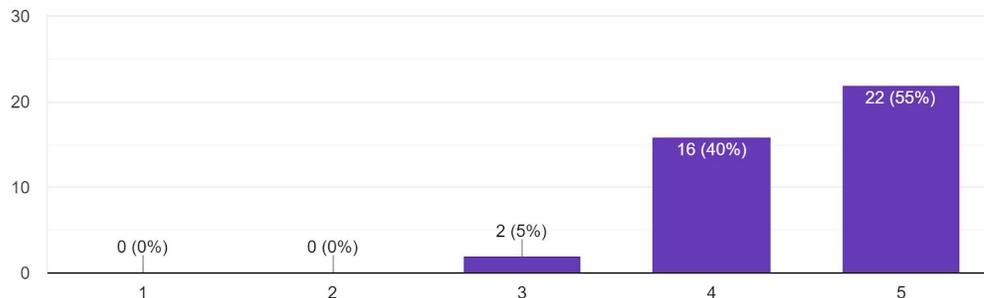
On a scale of 1 to 5, how much have you learnt from our Instagram page?

40 responses



On a scale of 1 to 5, how interesting was our Instagram page?

40 responses



Put the fun fact's animal on the first picture so we know what the fun fact is about

1 response

dun put your facts in comment section. no one reads.

1 response

captions can be less wordy

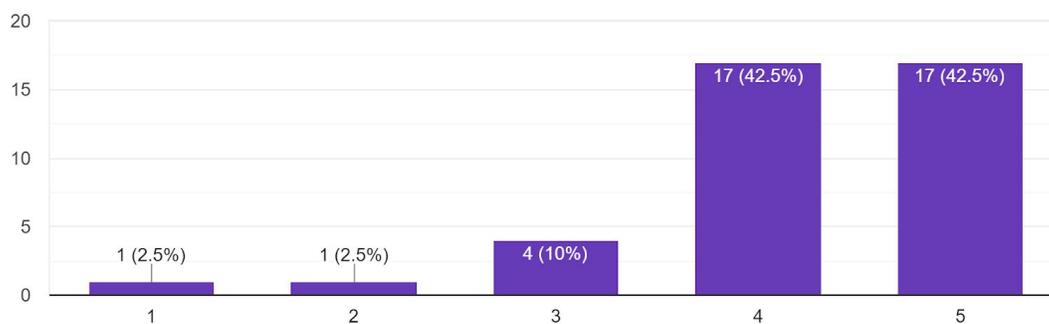
1 response

We found these feedback to be very helpful and we will take note in future posts.

Feedback on website:

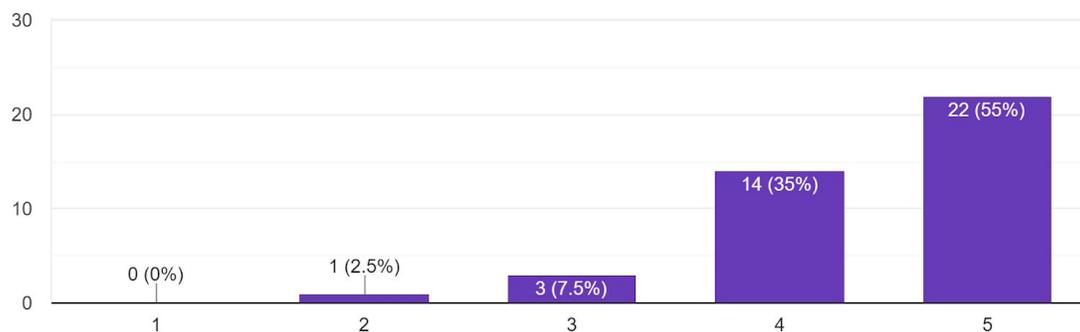
On a scale of 1-5, how useful was our website in promoting Sungei Buloh?

40 responses



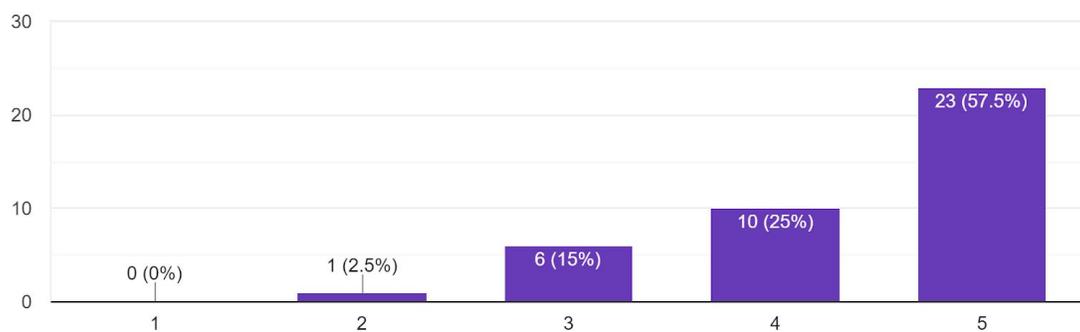
On a scale of 1-5, how user friendly and interactive was our website?

40 responses



On a scale of 1-5, how much did you learn from our website?

40 responses



Information could be better organised in multiple pages compared to one long page of information.

1 response

It was a bit messy you could have put the plants with the plants and the animals with the animals other than just sticking them together

1 response

I think the website is already very good!

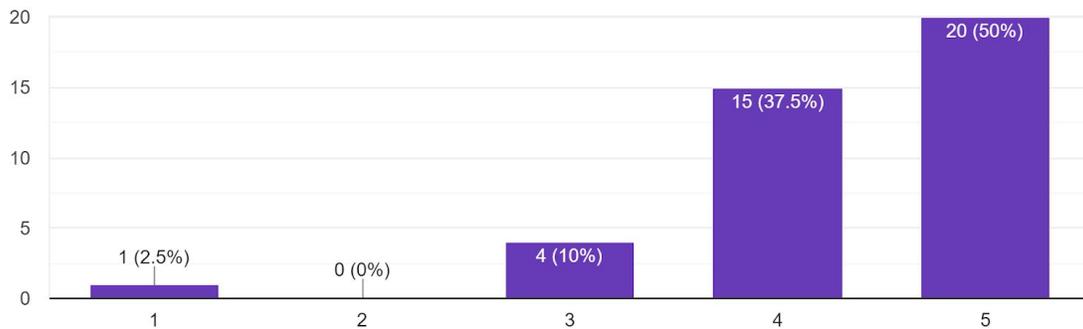
1 response

Majority of the users found our website to be very interactive and user friendly, and also very educational. The website was also very useful in promoting Sungei Buloh. However, there were some who felt that our materials were a bit too clumped up and thus a bit messy. We considered this and thus split our materials under 3 sections, 1 for plants, 1 for migratory birds and the last for animals.

Feedback on worksheets:

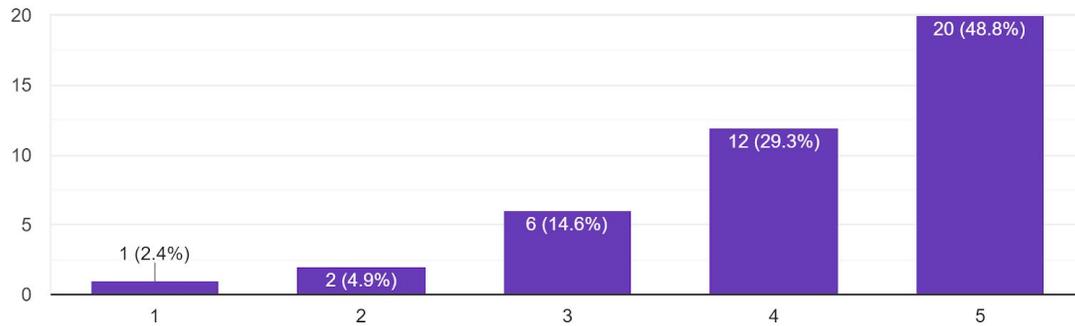
On a scale of 1 to 5, how appealing and fun are these activities?

40 responses



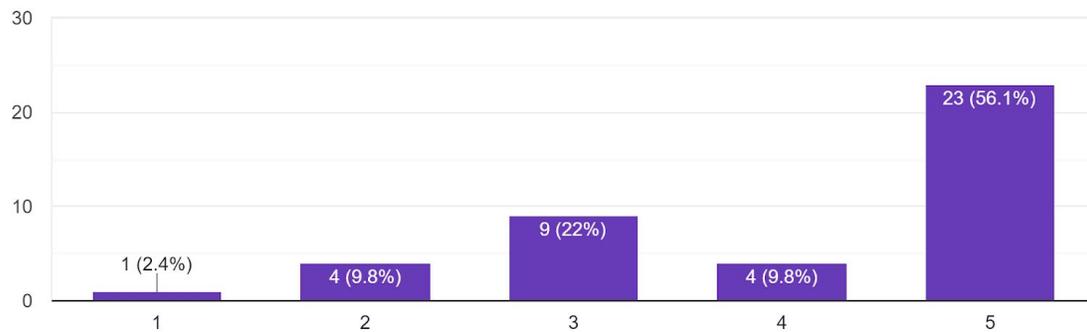
On a scale of 1 to 5, how much do you think you will learn from these worksheets?

41 responses



On a scale of 1 to 5, how likely are you going to do these activities while visiting Sungei Buloh?

41 responses



More variety in games in worksheets

1 response

Make it an online game!

1 response

Although many users found our activities to be fun and appealing whilst being educational, we noticed that a smaller majority of people would do these activities whilst

visiting Sungei Buloh. We have attributed this to the fact that the worksheets were aimed at a younger generation. We had planned initially to partner with Nparks to provide incentives for finishing up the worksheet accurately however our plans were sadly disrupted due to Covid 19. Thus, we had to make do with what we had. Some users wanted an online game but there is no internet connection in Sungei Buloh so we couldn't do so.

Conclusion

Project AOSB had been a challenging project to undertake as it required many hours of rigorous work to design the worksheets as well as create the website. This project has certainly enabled our group to develop many skills. We learned to exercise our creativity while coming up with ideas for activities in the worksheets. We learned that consistency is very important for posting our weekly facts on instagram. Due to Covid-19, we faced many new challenges while working on our project. Firstly, we had fewer face-to-face meetings and interaction not only with group members but also visitors of Sungei Buloh and users of our resources. We had to carry out group discussions through online platforms such as Google Meet, and sometimes we faced technical issues while doing so. Most of the information for the project had to be found online as we only had a few visits to Sungei Buloh and it was difficult to retrieve much information from those few visits. Apart from the challenges posed by the pandemic, we were also met with other constraints. For instance, we originally wanted to create online activities for visitors at Sungei Buloh. However, as mentioned before, there is no WiFi reception in Sungei Buloh, so the online activities were not feasible.

References

- Sungei Buloh Wetland Reserve. (n.d.). Retrieved August 18, 2020, from <https://www.nparks.gov.sg/gardens-parks-and-nature/parks-and-nature-reserves/sungei-buloh-wetland-reserve>
- Sungei Buloh Wetland Reserve. (2015, April 6). Retrieved August 10, 2020, from https://en.wikipedia.org/wiki/Sungei_Buloh_Wetland_Reserve
- Information On Sungei Buloh Nature Reserve - MMM@Kranji. (n.d.). Retrieved August 11, 2020, from <https://sites.google.com/a/moe.edu.sg/mmm-kranji/sungei-buloh-nature-reserve/information-on-sungei-buloh>

Worksheets - Sungei Buloh Wetland Reserve. (n.d). Retrieved August 19, 2020, from <https://www.nparks.gov.sg/gardens-parks-and-nature/parks-and-nature-reserves/sungei-buloh-wetland-reserve/worksheets>