

THE DISCOVERY SOCIETY

England & Wales · Charity number 1186512

Details

Status Registered

Legal form CIO

Registered 2019-11-21

Register [View on the Charity Commission register](#)

Contact

Address The Bewdley School
Stourport Road
Bewdley
DY12 1BL

Phone 01299403277

Email DHP@bewdley.worcs.sch.uk

Activities

Objects: THE OBJECT OF THE CIO IS TO ADVANCE THE EDUCATION OF THE STUDENTS AT THE BEWDLEY SCHOOL BY PROVIDING AND ASSISTING IN THE PROVISION OF FACILITIES [NOT REQUIRED TO BE PROVIDED BY THE LOCAL EDUCATION AUTHORITY] FOR UNDERSTANDING OF AND ENGAGEMENT IN EXPLORATION AND RESEARCH.

Activities: The Discovery Society is a Charitable Organisation attached to an 11-18 comprehensive Secondary School with the purpose of encouraging exploration and research. This includes supporting Duke of Edinburgh Award activities, Crest Award activities, participation in Operation Wallacea and organising programmes of visiting lecturers. Relevant opportunities and research partners are continually sought.

Classification

- **How:** Provides Advocacy/advice/information, Sponsors Or Undertakes Research, Acts As An Umbrella Or Resource Body
- **What:** Education/training, Arts/culture/heritage/science, Environment/conservation/heritage
- **Who:** Children/young People, People With Disabilities

Geography

- Worcestershire

Finances

Period end	Income	Expenditure	Assets	Employees
2025-03-31	£1,680	£42	-	-
2024-03-31	£40	£60	-	-
2023-03-31	£59	£5,560	-	-
2022-03-31	£72	£15	-	-
2021-03-31	£5,540	£0	-	-

Trustees

Name	Role	Appointed
DAVID HADLEY-PRYCE	Chair	2020-02-26
Catherine McDougall		2020-02-26
Christopher James Beech		2023-01-11

THE DISCOVERY SOCIETY

England & Wales - Charity number 1186512

Accounts



THE DISCOVERY SOCIETY

We fly with our own wings

The Discovery Society Annual Report 2025

Report of the Trustees for the year ending 31st December 2025.

The Discovery Society was registered as a charity (Charitable Incorporated Organisation – CIO) on 21st November 2019. As such its first full year of operation should have been the year ending 31st December 2020. There was however no report for the year 2020, as this was not required by Charities Commission rules, and the majority of the society’s activities were severely disrupted by lockdown measures related to the global COVID-19 pandemic. These restrictions commenced just 4 months after the charity’s registration date. The first reporting year was therefore 2021, this being the fifth annual report

Our Aims

The charitable aims were amended by the charity commission on 28th November 2022 following a resolution at the meeting of 25th November 2022. The word ‘scientific’ was removed from the charitable aim, to broaden the scope and reach of potential charitable activities.

“The charitable object of The Discovery Society is to advance the education of the students at The Bewdley School by providing and assisting in the provision of facilities [not required to be provided by the local education authority] for understanding of and engagement in exploration and research.”

Our Research Strategy

The Discovery Society is a Charitable Organisation attached to an 11-18 comprehensive Secondary School with the purpose of encouraging scientific exploration and research. We live in an era where the popular view is that the world is ‘discovered’ and the only ‘new knowledge’ is based around technologies that we create. The world for school age children is so technologically oriented that the fundamental principle which has driven the creation of this charity, is that children need to be encouraged to interact with the natural world and to view finding out how it works as a central component of their learning. Without such an impetus, we will always struggle, for example, to understand both the concept of climate change and the impact of human activity on the other species we share the planet with.

Research Interests

Students at the school follow the National Curriculum for Science for year 7 to 11 (age 11-16). In our Sixth Form students study Advanced Levels in Biology, Computer Science, Chemistry, Geology and Physics. The curriculum for all of these subjects is prescribed by the examination bodies under the regulation of the Joint Council for Qualifications (JCQ). The core elements of study are therefore determined beyond the institution:

- Learning materials are determined by these externally driven curriculum arrangements
 - Research interests are drawn from these materials and the themes from which they arise
- We are also partnered with the University of Birmingham Earth Sciences Department (School of Geography, Earth and Environmental Sciences) who will support us with our research, and many of the research interests will draw from the research areas they are currently focussing on. These will include postgraduate and postdoctoral researchers. In the event that any of our sixth form students

become co-authors in research papers, the drafting and publication processes will be carried out by the professional scientists at the University. This also includes the potential for students to engage in research through Operation Wallacea.

Member Benefits

Aside from the benefits offered by involvement in exploration and research, members will potentially have access to the following accreditations:

- Bronze, Silver and Gold Duke of Edinburgh Awards
- Bronze, Silver and Gold Crest Awards
- Involvement biannually in Operation Wallacea which offers PADI registration
- Kidderminster Beekeepers Society
- Tree people

It is anticipated that this initial menu will expand as the charity matures and hones its expertise.

Review of Activities

The principal activities planned for 2025 were:

1. Operation Wallacea – planning Operation Wallacea expedition to Mexico for a two weeks expedition 6/7/26 to 19/7/26 for 2 staff and 6 students
2. Duke of Edinburgh – planned offer of Bronze, Silver and Gold Awards. Current numbers enrolled in the various awards –
 - a. Bronze 84 (48% of Y10)
 - b. Silver 26 (15% of Y11)
 - c. Gold 15 (37% of Y13)
3. Development of Science Garden and links with local community to develop regular visitors to environmental club

Operation Wallacea Report – Plan for Mexico 2026

Calakmul Biosphere Reserve Forest Site

Research is completed at a series of forest camps across the Calakmul Biosphere Reserve. Arrivals on this programme first complete an introduction to the Ancient Maya and Mayan jungle ecology course alongside practicals in survey techniques. Following this you will be helping teams of field biologists completing standardised surveys on a series of key taxa. These surveys are aimed at assessing the importance of the unique aguada habitats for fauna (aguadas are the only water bodies in the reserve) and understanding the relationship between Ancient Mayan manipulation of the forest and current biodiversity. There are several thousand Ancient Mayan ruin sites in the reserve and the forest adjacent to these areas contains the remnants of 7th century agroforestry resulting in very high abundance and diversity of fauna. If you stay on site for multiple weeks you can travel to different forest camps to see how the forest changes and to assist with biodiversity surveys.

Key Activities:

- Bats: Mist netting long into the night for bats, where morphometric measurements and measurements relating to body condition and reproductive status of captured bats are taken and species identified. Additional data for insectivorous bats that cannot be caught in mist nets will be collecting using acoustic recorders at mist net locations

- Birds: Mist netting is also conducted early in the morning for birds to capture individuals so that morphological measurements and measurements relating to body condition can be taken and individuals marked for population studies. Student can also help collect bird recordings for development of the Calakmul bird vocalization library
- Large mammal surveys involve recording primate sightings (distance sampling) and terrestrial mammal tracks (patch occupancy sampling) encountered along forest transects during morning surveys accompanied by an afternoon session analysing camera trap data.
- Herpetofauna are surveyed using diurnal and nocturnal visual encounters surveys along line transect. As many herpetofauna aggregate around aguadas (the only water bodies in the forest) diurnal and nocturnal timed searches of for herpetofauna will be conducted at aguada habitats.
- Frugivorous butterflies are surveyed using baited traps in the canopy and understory of different forest types. Forest structure is an essential dataset for the project and you will also assist with carrying out quadrat samples.
- Habitat: Habitat plots will be carried out at set intervals along each survey transect to enable a better understanding of the forest structure and tree species composition across different locations in the reserve and to complement the data collected for all other taxonomic groups.
- Guided tour of the Calakmul archaeological site
- Maya forest ecology lecture series covering: Biodiversity monitoring in the Calakmul Biosphere Reserve, Forests of the Maya and their importance for primates, Aguadas and their importance for herpetofauna, Birds, bats and butterflies as indicators of ecosystem health in the Neotropics, Felids and ungulates of Calakmul, and Conservation Management.

Marine Site

The marine site is in Akumal, part of the Mexican Caribbean Biosphere Reserve. If you are not already dive trained, you can spend your first week at this site completing a PADI Open Water dive training course, before moving onto the Caribbean reef ecology course in your next week. This course consists of lectures, morning and afternoon in-water practicals, and trains you in some of the survey techniques used in the marine environment to assess the status of reefs and their associated fish communities. If you are already dive trained or are instead wanting to snorkel, your first week is on the Caribbean reef ecology course and the second would be spent working with different research projects on site. Projects you will join include monitoring of sea turtle abundance, sea turtle grazing of seagrasses and seagrass biomass in Akumal Bay and coral reef restoration and coral monitoring.

Key Activities

- PADI Open Water dive training course: This course involves a combination of theory lessons, confined water dives and Open Water divers to gain an official SCUBA qualification.
- Caribbean marine ecology course: This course consists of lectures and in water practicals either by diving (if a qualified diver) or snorkelling. The lectures cover an introduction to the Akumal and the Mexican Caribbean Biosphere Reserve, marine survey techniques, diversity of coral reefs, threats to coral reefs, mangroves and seagrasses, and the future of coral reefs
- PADI Open Water referral course; For this option, students need to arrive having already completed their theory and pool training components with PADI.
- Seagrass quadrat surveys: 1m quadrats are used to assess the coverage of the three different species of seagrass in Akumal Bay, assess turtle grazing and coverage of epiphytes growing on the seagrasses (indicators of water quality)
- Turtle and tourist abundance transects: a series of belt transects are used to assess the distribution of sea turtles in Akumal Bay in relation to tourists
- Reef monitoring: skills learned during the reef ecology course are used to monitor reef ecosystem health using transect surveys for coral, fish and invertebrates. For this option students need to be dive trained and have completed the Caribbean reef ecology course

Duke of Edinburgh Report

The Duke of Edinburgh Award is offered to:

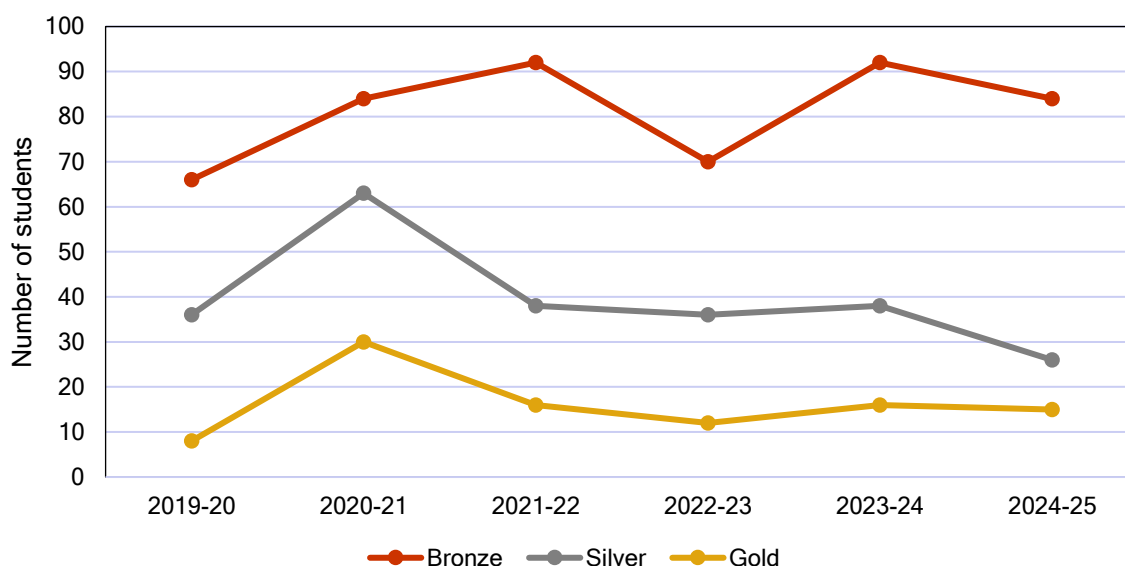
Year 10	– Bronze Award
Year 11	– Silver Award
Years 12/13	– Gold Award

Supported by a mixture of after school and weekend sessions, with some expeditions taking place during school time. For example, a typical Bronze expedition will mean 2 large groups each having a 2 day expedition on Friday/Saturday and Sunday/Monday.

Engagement with The Duke of Edinburgh Award scheme remain very high, with 697 students participating since 21/11/19:

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Bronze	66	84	92	70	92	84
Silver	36	63	38	36	38	26
Gold	8	30	16	12	16	15

Duke of Edinburgh uptake over time



Environmental Club Report

As part of our extra curricular offer in Science Anne Morgan (Second in Science) has spent the year running an environmental club. This has been centred around the Science department garden outside D block, where the space has been transformed with the introduction of raised beds where students have grown and harvested a variety of vegetables. The planting of fruit trees in the aim of developing a small productive orchard, and the planting of a small wildflower area around the pond to encourage a greater diversity of wildlife.

The development of this area has also provided the opportunity for us to offer students an 'in house' voluntary placement during their 'community action' days in Y10 with a three groups of students working as landscape gardeners for three days to make the raised beds, produce paths and manage the pond wildlife.

Our Finances

See our annual return, available online:

<https://register-of-charities.charitycommission.gov.uk/charity-search/-/charity-details/5148105/accounts-and-annual-returns>

The Discovery Society Accounts Year ending 31.03.25	Prepared by: Date prepared:	P Gillett, Finance Manager, The Bewdley School 15.01.26	
	Income	Expenditure	£46.81
Opening balance (01.04.24)			£46.81
Domain charges in school fund for last 3 years		30	
Mexico funds	1679.98		
Domain - square space		12	
TOTAL	1679.98	42	£1,637.98
Closing balance (31.03.25)			£1,684.79

Policy Framework

As all of our trustees and activities fall within the operating environment of The Bewdley School – A Foundation School, all of our operations work within the policy framework of the school. The statutory policies which apply to our activities can be found at:

<https://www.bewdley.worcs.sch.uk/statutory-policies/>

Our Trustees

We currently have 3 trustees:

Name	Date first held	Term	Term Ends	Relationship to School
David Hadley-Pryce*	21/11/2019	4 years	20/11/2027	Head Teacher
Catherine McDougall	26/02/2020	3 years	25/02/2029	Deputy Head Teacher
Christopher Beech	11/1/2023	3 years	10/1/2029	Head of Science/DofE lead

* Chair of Trustees

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- Tree people

It is anticipated that this initial menu will expand as the charity matures and hones its expertise.

Review of Activities

The principal activities planned for 2024 were:

1. Operation Wallacea – 2 Staff and 9 students from Year 11,12 & 13 students to visit Honduras for a two-week expedition from 3/7/24 to 17/7/24
2. Duke of Edinburgh – planned offer of Bronze, Silver and Gold Awards
 - a. Current numbers enrolled in the various awards – Bronze 71(40% of Y10), Silver 27 (17% of Y11), Gold 21 (42% of Y13)
3. Planning Operation Wallacea trip to Mexico for a two week expedition 3/7/25 to 18/7/25 2 staff, 10 students
4. Submission of Royal Society project outcomes
5. Development of Science Garden and links with local community to develop regular visitors to environmental club

Operation Wallacea Report - Honduras

Operation Wallacea Report

In July 24 the Bewdley school took 9 students and 2 staff to Honduras in Central America with Operation Wallacea. The aim of the trip was to assist the Operation Wallacea team in terms of Biodiversity surveys but also to enhance the scientific experience of the students. Travel such as this also helped the students develop resilience, team building and being able to see the world from a wider perspective.

Week 1 - Cusuco National Park

The staff consisted of two biology specialists to help support the science work, Sarah Leach and William Morris. The students consisted of six year 11 students, one year 12 and two year 13 students and was a mix of boys and girls, some with aspirations to study Biology related degrees, others just with the drive to travel and experience the world.



The first week was spent staying with local villagers in Buenos Aires village in the Cusuco National Park. Students and staff were immersed in family homes and were made very welcome by local families. We spent the days surveying vegetation, mist netting for birds and night time bat surveys. During the evening the staff and students were involved in lectures about local flora and fauna.

6 of the students and one staff member also took part in a canopy access course and saw the rain

forest from a different angle.



The second part of the week was spent in tents at the satellite camp which had a rustic feel with basic facilities including accommodation in tents and hammocks with very basic trench toilet systems. Each satellite camp has a camp fire which becomes the central point for socialising and swapping stories between surveys and in the evenings. We also had the opportunity of enjoy the luxury of a "jungle shower" in a nearby stream. Here the staff and

students worked with Opwall staff to continue survey work deep in Cusuco cloud rainforest. They took part in night time herpetavore surveys, mammal surveys, mist netting for birds and invertebrate surveys. The surveys consisted of a 2 km transect that led out into the rainforest from the satellite camp. Both students and staff were pushed to their limits physically and mentally. The terrain in Honduras is extremely mountainous with over 82% of the land mass being classed a mountain. All staff and students coped with the challenges well and took each say in their stride.



Week 2 - Dive Site Bay Island Utila



The second week of the expedition consisted of a week at the Dive site on the Bay Island of Utila, students and staff stayed in dive accommodation at Bay Islands College of Diving (BICD) for the week.

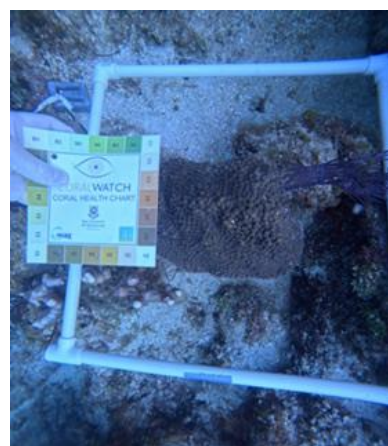
Conservation Initiatives

at the site are focused on restoring populations of a keystone sea urchin species, and managing threats from the invasive lionfish. People living on the Bay Islands are economically reliant on dive tourism, therefore protecting the reefs is a conservation priority. Opwall work closely with the local community to assist with this.



Students and staff who had completed their open water dive training in the UK took part in coral reef surveys with Opwall scientists. A small group of students and one member of staff trained at the dive site and completed the PADI open water diver certification. One student also went on to complete their advance dive training.

At the end of the two weeks staff and students return home with a wealth of science and travel experiences, with students using these experiences to enhance their next steps at college and further education.



Duke of Edinburgh Report

Engagement with The Duke of Edinburgh Award scheme remain very high, with 697 students participating since 21/11/19:

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Royal Society Project Report

“Tomorrow’s climate scientists: Can aerial mapping and imagery be used to identify the areas of greatest flood risk on our school site?”

Environment Conservation Through The Use of Technology

The Bewdley School
The University Of Birmingham



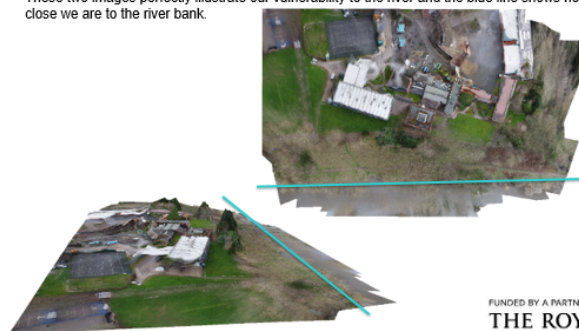
UNIVERSITY OF
BIRMINGHAM

Overview and aims

Our project aims to survey The Bewdley School site, using drones to visually map the grounds. We are currently collating this data via 3D mapping software, to allow us to form a visual model of the site. We aim to use this model to allow us to figure out which parts of the site are at risk of flooding (from the river Severn) and then use this data to help prevent flooding in these areas in the future.

Summary of investigations and key findings

- The project provided some key findings into just how vulnerable our site is from potential flood damage.
- Students gained valuable skills in computing and data gathering.
- Due to the towns (Bewdley) flood defenses we have seen the issue of flooding pushed further down the river, towards the school.
- Students have discovered that technology is an essential part of modern life in many sectors and vital to allow our rivers to thrive.
- When undertaking the survey we gained valuable communication from the local community who were surprisingly quite defensive of the project and worried that the school were acting with the view to make the flooding worse further down the river to try and lessen the impact on the school site. This communication was key to ensure better education and understanding with the local community.
- Students developed more people skills when challenging members of parliament in a select committee.
- People skills have been key to this project running smoothly.
- These two images perfectly illustrate our vulnerability to the river and the blue line shows how close we are to the river bank.



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Evaluative project summary

Success of the project

- Students gained an understanding into data gathering.
- That data was then used by students to produce images of the schools site using photogrammetry.
- High quality images of the schools site were produced and showed the weak parts of our site and gave students a deeper understanding of the destructive side of the river and having a school site susceptible to flooding.
- The project gave students the chance to use technology they would not normally be exposed to.

Engagement of STEM partner and its impact

- Our STEM partner, University of Birmingham, has been a valuable relationship to the school, skills using the drones and how to analyse the data were gained from our partner and provided skills the students wouldn't normally be exposed to.
- Further development was planned to visit a local site for a shared trip to expose students to university trips and what to expect in future, unfortunately this didn't happen due to time constraints in the curriculum and ensuring courses can still run as normal.
- Our STEM partner is still actively engaged with the school and willing to help develop our legacy projects further.

Legacy projects and further development into the curriculum

- There are several plans in development for the next academic year to engage students further with STEM, one directly linked to the project and the other not:
 - The drones will be used next year to engage students in biodiversity, with direct links to computing, biology and geography. Student will go to Wyre Forrest, use the drones to map the growth patterns of different species of tree from the air taking 4K images, students will then map which species thrive in the Wyre Forrest and which are present but struggle, we will then grow those species on site to promote biodiversity in the area.
 - During the academic year, students in the lower school will engage with STEM subjects by coding self driving cars which will be 3D printed and assembled by the students, the cars will need to traverse increasingly difficult assault courses with the aim to be, who can produce the most affect algorithm/s to complete the assault courses in the least amount of steps taken, empathising code efficiency, subjects links being computing and design technology primarily.

Budget

- All budget has been spent on the hardware for the project (4 DJI drones) and the software (Agisoft software for data analysis).

Environment Conservation Through The Use of Technology

The Bewdley School
The University Of Birmingham



Overview and aims

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Background information

- The Bewdley School site is located by the river Severn, which frequently floods its banks
- This poses a significant risk to flooding the school both now, and even more in the future (due to the increases risk of flooding due to climate change)
- In the past, during times when the Bewdley town has been flooded (at location such as Beales Corner), the school and leisure centre have been with mere meters of being flooded
- Access to the leisure centre has also been impeded due to a stream flooding the access path
- We have used drones, to visually map the site by capturing a sequence of images
- We are currently collating this data via 3-dimensional mapping software
- This will allow us to find the parts of the site prone to flooding by the River Severn
- We will use this to prevent flooding in the future



An image of one of our team members flying a drone



An image taken from a drone, during the survey, showing the school, town and the river Severn

Research and investigations undertaken

- We used the DJI mini 2 drones to capture a multitude of images of the parts of the Bewdley School site, which board the river Severn
- We are currently collating this data to form our 3D model of the site
- We are then going to use this model to allow us to find the areas of the site most vulnerable to flooding
- Once the areas have been identified, we aim to put in defensive measures to prevent flooding in the future

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THE ROYAL SOCIETY

An image showing two members of our team flying one of the drones used in the survey

Results and conclusion

- We currently only have the images we have captured via our drone (an example of some of these are below)



An image taken from our drone showing the school and the river Severn



An image taken from our drone, showing one site where we carried out our drone survey from



An image taken from our drone, showing the Leisure Centre field



An image taken from our drone, showing a stream that is fed of the river, which, during times of flood, overflows its banks – preventing access to the Leisure Centre

Evaluation or next steps

- We will soon have our 3D model completed and expect to find that a majority of the school, which is located along the riverbank, is at risk of flooding
- We will find out the areas at risk of flooding by using the model and data about the heights the river has, and could get to when it floods, to find out which buildings are at risk of flooding
- We will then use the model and predictions about how high the river could get to put in place suitable defensive measures to protect the site from flooding



Environment Conservation Through The Use of Technology

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The University Of Birmingham



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- This will allow us to find the parts of the site prone to flooding by the River Severn
- We will use this to prevent flooding in the future



Some images of our preliminary 3D model



Research and investigations undertaken

- We used the DJI mini 2 drones to capture a multitude of images of the parts of the Bewdley School site, which boarder the river Severn
- We have now collated this data via 3D mapping software and formed two preliminary 3D models

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Results and conclusion

- The preliminary 3D models have some issues, such as some incorrect depth aspects – leading to the heightened distorted patches seen



Some more images of our preliminary 3D model



Evaluation or next steps

- We intend to attempt to create a final set of 3D models, which are optimised to remove the distortion
- To do this we intend to capture a second set of improved images – with a higher and standardised frequency, as well as a standardised exposure and capture height
- We then intend to build a final and much more accurate 3D model to help identify the areas at risk of flooding

Co Headteacher Catherine McDougall

The Bewdley School, Stourport Road, Bewdley, Worcestershire DY12 1BL

Telephone: 01299 403277

Email: office@bewdley.worcs.sch.uk - Web: www.bewdley.worcs.sch.uk

Registered charity number: 1186512

Environmental Club Report

Our Environmental Science Club began in May 2023. It grew out of interest from the students in Science Week, it is run by the Deputy Head of Science, Anne Morgan, with the help of Shelia Lawes of the Kidderminster Bee Society. Over the past year and a half, the Club has carried out a number of activities, primarily based in the Science Garden. These include:

- Creating a wildflower garden.
- Creating a grass compost heap from the grass removed
- Building and installing Solitary Bee Houses (for Mason bees).
- Planting an apple orchard.
- Planting a fruit garden.
- Making and installing 4 large planters. In November 2024, these beds were filled with soil. Two beds were planted; with winter vegetables such as carrots, mint, chard, onions and garlic; and herbs such as mint, thyme and rosemary.
- In December, tulips were planted in the garden (in preparation for spring).
- Laying a path into the garden with woodchips.
- Making bird feeders using pinecones found on the school site.
- Germinating seeds such as tomatoes and basil.

When it was too cold to work outside, we continued to emphasise our recycling efforts by:

- Making paper pots and paper logs; the paper used was from old exercise books.
- Making bird scarers from plastic water bottles and coke bottles.

Two workshops were also held for the members. They were:

- A workshop on 'From where does our food come?' highlighting the relationship between bees, edible fruits and honey, led by Shelia Lawes of the Kidderminster Bee Society.
- A workshop on 'Making eco-friendly Christmas decorations from recycled materials', led by Dr Laura Hobbs, the parent of one of our members.

The Club continues to flourish – with additional plans for more planting of flowers, vegetables and trees, trips and many more activities

Duke of Edinburgh Plans

The Duke of Edinburgh Award is offered to:	Year 10	– Bronze Award
	Year 11	– Silver Award
	Years 12/13	– Gold Award

Supported by a mixture of after school and weekend sessions, with some expeditions taking place during school time. For example, a typical Bronze expedition will mean 2 large groups each having a 2 day expedition on Friday/Saturday and Sunday/Monday.

Operation Wallacea Plans

Preparation for Operation Wallacea in Mexico for July 2026 is well underway with 2 staff member and 9 students again students will complete the PADI Open Water Diver Training with our local provider.

Our Finances

See our annual return, available online:

<https://register-of-charities.charitycommission.gov.uk/charity-search/-/charity-details/5148105/accounts-and-annual-returns>

The Discovery Society' Accounts Prepared by: P Gillett, Finance Manager, The Bewdley School
Year ending 31.03.24 Date prepared: 16.01.25

Opening balance (01.04.23)	£66.83	
Expenditure (01.04.23-31.03.24)	-£60.00	Monthly bank fees HSBC
Income (01.04.23-31.03.24)	£39.98	Amazon Smile donations
Closing balance (31.03.24)	£46.81	

NB HSBC account was closed on 22.04.24 and balance (£46.81) transferred to new Lloyds bank account.

Policy Framework

As all of our trustees and activities fall within the operating environment of The Bewdley School – A Foundation School, all of our operations work within the policy framework of the school. The statutory policies which apply to our activities can be found at:

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Our Trustees

We currently have 3 trustees:

Name	Date first held	Term	Term Ends	Relationship to School
David Hadley-Pryce*	21/11/2019	4 years	20/11/2027	Head Teacher
Catherine McDougall	26/02/2020	3 years	25/02/2026	Deputy Head Teacher
Christopher Beech	11/1/2023	3 years	10/1/2026	Head of Science/DofE lead

* Chair of Trustees

THE DISCOVERY SOCIETY

England & Wales - Charity number 1186512

Accounts



The Discovery Society Annual Report 2023

Report of the Trustees for the year ending 31st December 2023.

The Discovery Society was registered as a charity (Charitable Incorporated Organisation – CIO) on 21st November 2019. As such its first full year of operation should have been the year ending 31st December 2020. There was however no report for the year 2020, as this was not required by Charities Commission rules, and the majority of the society's activities were severely disrupted by lockdown measures related to the global COVID-19 pandemic. These restrictions commenced just 4 months after the charity's registration date. The first reporting year was therefore 2021, this being the third annual report

Our Aims

The charitable aims were amended by the charity commission on 28th November 2022 following a resolution at the meeting of 25th November 2022. The word 'scientific' was removed from the charitable aim, to broaden the scope and reach of potential charitable activities.

“The charitable object of The Discovery Society is to advance the education of the students at The Bewdley School by providing and assisting in the provision of facilities [not required to be provided by the local education authority] for understanding of and engagement in exploration and research.”

Our Research Strategy

The Discovery Society is a Charitable Organisation attached to an 11-18 comprehensive Secondary School with the purpose of encouraging scientific exploration and research. We live in an era where the popular view is that the world is 'discovered' and the only 'new knowledge' is based around technologies that we create. The world for school age children is so technologically oriented that the fundamental principle which has driven the creation of this charity, is that children need to be encouraged to interact with the natural world and to view finding out how it works as a central component of their learning. Without such an impetus, we will always struggle, for example, to understand both the concept of climate change and the impact of human activity on the other species we share the planet with.

Research Interests

Students at the school follow the National Curriculum for Science for year 7 to 11 (age 11-16). In our Sixth Form students study Advanced Levels in Biology, Computer Science, Chemistry, Geology and Physics. The curriculum for all of these subjects is prescribed by the examination bodies under the regulation of the Joint Council for Qualifications (JCQ). The core elements of study are therefore determined beyond the institution:

- Learning materials are determined by these externally driven curriculum arrangements
- Research interests are drawn from these materials and the themes from which they arise

We are also partnered with the University of Birmingham Earth Sciences Department (School of Geography, Earth and Environmental Sciences) who will support us with our research, and many of the research interests will draw from the research areas they are currently focussing on. These will include postgraduate and postdoctoral researchers. In the event that any of our sixth form students become co-authors in research papers, the drafting and publication processes will be carried out by the professional scientists at the University. This also includes the potential for students to engage in research through Operation Wallacea.

Member Benefits

Aside from the benefits offered by involvement in exploration and research, members will potentially have access to the following accreditations:

- Bronze, Silver and Gold Duke of Edinburgh Awards
- Bronze, Silver and Gold Crest Awards
- Involvement biannually in Operation Wallacea which offers PADI registration

It is anticipated that this initial menu will expand as the charity matures and hones its expertise.

Review of Activities

The principal activities planned for 2023 were:

1. Operation Wallacea – planning for 2 staff and 9 students to go to Honduras for a two-week expedition from 3/7/24 to 17/7/24
2. Duke of Edinburgh – planned offer of Bronze, Silver and Gold Awards
 - a. Current numbers enrolled in the various awards – Bronze 92 (55% of Y10), Silver 38 (22% of Y11), Gold 16 (30% of Y13)
3. Royal Society Project – “Tomorrow’s climate scientists: Can aerial mapping and imagery be used to identify the areas of greatest flood risk on our school site?”

Operation Wallacea Plan

Schedule

3/7/24	Fly to Honduras via Miami and stay overnight at Hotel Bambou (dinner & breakfast)
4/7/24	Expedition details to be confirmed, but typically would be:
4 – 9/7/24	Week 1 - Forest Camp & terrestrial cloud forest ecology course
10/7/24	Travel to marine site
11 – 15/7/24	Week 2 - Learn to dive and/or complete Caribbean reef ecology course
16/7/24	Travel back to San Pedro Sula & Ramón Villeda Morales International Airport
17/7/24	Flight back to UK via Miami

Two staff and nine students travelled as above, with fundraising by students and a sponsored 40km swim by the Head Teacher.

Duke of Edinburgh Plans

The Duke of Edinburgh Award is offered to:	Year 10	– Bronze Award
	Year 11	– Silver Award
	Years 12/13	– Gold Award

Supported by a mixture of after school and weekend sessions, with some expeditions taking place during school time. For example, a typical Bronze expedition will mean 2 large groups each having a 2 day expedition on Friday/Saturday and Sunday/Monday.

Royal Society Project Plans

Project Aim

To embed the school into the local community through active involvement in the community's flood monitoring activity

Objectives

1. To build a new skill set in the school in using drone technology as a 3D mapping tool.
2. To build on our already strong partnership with the University of Birmingham.
3. To create a 3D map of the school grounds which can be used as a basis for our wider understanding of flood risk across the school site.
4. To use the newly acquired skills to support the Abberley and Malvern Hills Geopark Forum in 3D mapping its routes and member sites.
5. To offer students the opportunity to learn beyond the formal curriculum, including from adults who are not their teachers

Student benefit and learning mapped onto project aims

1. Students will learn about drone technology, its uses, and the software that can be used with its imaging technology to create 3D maps.
2. Students will learn about the central importance of University Research in building our understanding of the world around us.
3. Students will learn how to apply their newly acquired skills to map the school grounds in detail, helping them to utilise environment agency data to evaluate flood risk.
4. Students will benefit from their experience of using scientific methods to analyse the world around them, in understanding how real-world knowledge is built and used.
5. Students will benefit from working with adults who are not their teachers, in building their own understanding of how their own strengths and skills sets position them for involvement in wider project work. In addition to our project partner, Dr Carl Stevenson at the University of Birmingham, we are also very grateful for the support and advice of Ian Jones, of the Environment Agency.

Scientific Method

By working with the University of Birmingham and with support and advice from the Environment Agency, the activity and outcome of this project will be firmly rooted in cutting edge academic and scientific methods and real-world applications. Students will use their training to design and implement independent and group projects. Through this the process of identifying a question, framing this as a hypothesis through researching the scientific context, designing a test for this hypothesis that allows falsification and evaluate the results.

In this project we are asking the question, can drone/UAV surveying methods be used effectively in flood monitoring? Our starting point is that the school site is prone to flooding and we want to know which parts are lowest lying and therefore at most risk. Essentially, we will create a 3D topographic model of the school campus. River levels can be modelled to simulate flood risk zones. We then propose to use the same method to survey the river level from safe distances during high flow conditions. These models can be compared to river level and flow data from the EA's Bewdley station and used to evaluate how effective drone/UAV models capture actual river levels. With our data and support and advice from the EA we can examine where variations in the modelled and measured levels are meaningful. Students will also need to understand the link between hydrology and geology of the local river section and the regional weather patterns and climate.

Engagement Levels

Operation Wallacea

Preparation for Operation Wallacea in Honduras for July 2024 is well underway with 1 staff member and 8 out of 9 students undertaking PADI Open Water Diver Training with our local provider.

Duke of Edinburgh

The Duke of Edinburgh Awards were able to proceed in modified format, with engagement levels being very high, with 551 participated in DofE since 21/11/19:

<u>2019-20</u>	<u>2020-21</u>	<u>2021-22</u>	<u>2022-23</u>
Bronze - 66	Bronze - 84	Bronze - 92	Bronze - 70
Silver - 36	Silver - 63	Silver - 38	Silver - 36
Gold - 8	Gold - 30	Gold - 16	Gold - 12

Royal Society Project

There are 8 students involved in the drone training and created a 3D map of the school, with the support of Dr Carl Stevenson.

Our Finances

See our annual return, available online:

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The Discovery Society' Accounts Year ending 31.03.23	Prepared by: Date prepared:	P Gillett, Finance Manager, The Bewdley School 22.03.24
Opening balance (01.04.22)	£5,568.04	
Expenditure (01.04.22-31.03.23)	-£5,560.00	Bank charges and £5500 transfer for Dominica trip
Income (01.04.22-31.03.23)	£58.79	Amazon Smile donations
Closing balance (31.03.23)	£66.83	

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Operation Wallacea Plan

Schedule

3/7/22	Fly to Martinique via Paris and stay overnight at Hotel Bambou (dinner & breakfast)
4/7/22	Travel to Dominica via L’Express Ferry and travel/walk to 3 Rivers Eco-Lodge
4 – 9/7/22	Week 1 - Forest Camp & terrestrial rainforest ecology course
6/7/22	Ecology course includes Volcanology Day with Rob Watts (Volcanologist)
10/7/22	Walk/travel to Rosalie, then whale watching transfer to Fort Shirley
11 – 15/7/22	Week 2 - Learn to dive and/or complete Caribbean reef ecology course
16 – 18/7/22	Travel back to Rosalie; Ferry to Martinique; flight back to UK via Paris

Two staff and seven students travelled as above, with donations of £5,000 from the Bewdley Old Grammar School charity and £500 from Bewdley Town Council towards costs.

Duke of Edinburgh Plans

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Supported by a mixture of after school and weekend sessions, with some expeditions taking place during school time. For example, a typical Bronze expedition will mean 2 large groups each having a 2 day expedition on Friday/Saturday and Sunday/Monday.

Voluntary and skill activities are now being suggested/guided towards pupils to reflect the society’s aims of furthering exploration and research, with a number of pupils now contributing regularly to research run through the Zooniverse organisation.

Royal Society Project Plans

Project Aim

To embed the school into the local community through active involvement in the community's flood monitoring activity

Objectives

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Engagement Levels

Operation Wallacea

Following advice from the Opwall Team about COVID-19 restrictions in the Caribbean area, the expedition was postponed until 3rd July – 18th July 2022. We therefore lost 3 of the 7 students as they have left and started university courses. We were able to recruit 2 more year 13 students and 1 from year 12. The group who travelled were largely a replacement for the original planned group due to the delay. The male Head Teacher and female Head of maths took 5 year 13 girls, a year 13 boy and a year 12 boy. In advance of the expedition 1 of the girls, the 2 boys and the Head Teacher undertook PADI open water diving training, so that they could engage in the reef ecology course as qualified divers.



The first week was spent on a variety of ecological surveys, including 'fishing' for indigenous and invasive (from Costa Rica) Anoles (small lizards); mist netting for bats and for birds: collecting insects and surveying aquatic wildlife. A day was also spent in measuring tree density and size in the rainforest as part of a longitudinal survey. One day was taken out for a volcano study of the whole island, and the party can be seen on the left climbing Trafalgar Falls, to spend some time in a geothermal pool at the foot of the left hand of the two waterfalls.



Head Teacher Dave Hadley-Pryce BSc MSc FRSA

The Bewdley School, Stourport Road, Bewdley, Worcestershire DY12 1BL

Telephone: 01299 403277

Email: office@bewdley.worcs.sch.uk - Web: www.bewdley.worcs.sch.uk

Registered charity number: 1186512

The second week was spent at Fort Shirley, with transport via Whale watching boat. The group spent an enchanting 15 minutes in the company of a small pod of Sperm Whales, consisting of 3 mothers and 2 calves. These live permanently off the coast of Dominica with the males migrating, and we had the privilege of witnessing the group coming to the surface for the calves to be fed.



Fort Shirley sits on a hill overlooking Prince Rupert's Bay, with JC Ocean Adventures on the waterfront providing the scuba diving training and equipment. Students and staff had 3 options from a week snorkelling, a 3 day intensive PADI open water course followed by 2 days of diving or a full week of diving on the coral reef.



Whichever option was chosen, the 2 dives per day in mid-morning and early afternoon, were followed by an intensive reef ecology course. As with the first week in the rainforest, this consisted of a thoroughly prepared and comprehensive series of lectures which covered the habitat, ecology and species of the reef ecosystem. There was also a clear explanation of the ongoing threats human activity poses to these ecosystems, and the kinds of mitigations required to protect them.



Two independent schools were also present, and working as mixed groups gave students useful opportunities to work with new people. The combination of intensive ecological survey work and well-structured lectures was very demanding, with excellent student engagement. Rob Watts, volcanologist, gave students a thorough overview of the geology of the island. As an introduction to earth systems, the course was exceptional, and we plan to return in 2024.



Duke of Edinburgh

The Duke of Edinburgh Awards were able to proceed in modified format, with engagement levels being very high, with 433 participated in DofE since 21/11/19:

<u>2019-20</u>	<u>2020-21</u>	<u>2021-22</u>
Bronze - 66	Bronze - 84	Bronze - 92
Silver - 36	Silver - 63	Silver - 38
Gold – 8	Gold - 30	Gold - 16 (Y13)

Royal Society Project

There are 8 students involved in the drone training to create a 3D map of the school, with the support of Dr Carl Stevenson, with training underway. Please see final page for project update.

A further 3 sixth form students accompanied 2 staff to the Houses of Parliament on 14 November 2022, to question a mock select committee. They questioned 3 Members of Parliament alongside 4 other schools. The event was recorded by the BBC and broadcast on BBC radio 4.

Future Plans

As members of Abberley and Malvern Hills Geopark Forum, we are also undertaking to lead our partners in a 'Heritage Lottery' bid, to develop a peripatetic 'time capsule' with a programme to visit all Geopark visitor centres on an on-going basis. This is planned to run for 5 years in the first instance, with legacy plans built into the project.

Our Finances

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Policy Framework

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David Hadley-Pryce*	21/11/2019	4 years	20/11/2023	Head Teacher
Derek Haskins	21/11/2019	3 years	20/11/2022	Chair of Governors
Catherine McDougall	21/11/2021	3 years	20/11/2024	Deputy Head Teacher
Christopher Beech	11/1/2023	3 years	10/1/2026	Second in Science/DofE lead

* Chair of Trustees

Environment Conservation through the Use of Technology

The Bewdley School

STEM partner organisation: University of Birmingham



Overview and aims

- Our project aims to survey The Bewdley School site, using drones to visually map the grounds, and then we plan to collate this data via 3D mapping software, to allow us to form a visual model of the site. We aim to use this model to allow us to figure out which parts of the site are at risk of flooding (from the river Severn) and then use this data to help prevent flooding in these areas in the future.

Background information

- The Bewdley School site is located by the river Severn, which frequently floods its banks
- This poses a significant risk to flooding the school both now, and even more in the future (due to the increases risk of flooding due to climate change)
- We will be using drones, to visually map the site in 3 dimensions
- We will then collate this data via 3-dimensional mapping software
- This will allow us to find the parts of the site prone to flooding by the River Severn
- We will use this to prevent flooding in the future

Research and investigations undertaken



- We are only a few hundred metres down the river from Bewdley town, which has been flooded recently and has flood defences
- We face the same risk of flooding at our school, as the town, especially, as the defences cause the flood waters to be pumped down the river, where they cause flooding – which could pose a flood risk for our school



- Example of the drones we are going to use to map the site

Results and conclusion

- We hope to find the areas that are prone to flooding, via 3D modelling of the site
- We intend to use this data to prevent the risk of flooding

Next steps

- After October half term, we plan to get the drones up in the air and begin mapping the site
- Soon after, we will use this data to build a model of the site, via the 3D mapping software
- Finally, we will use this data to highlight the areas at risk of flooding and use this data to place appropriate preventative measures in place

FUNDED BY A PARTNERSHIP GRANT FROM
THE ROYAL SOCIETY

Guidance, checklist and permissions

Permissions and checklist

Before you submit your poster, please check the following:

- You have sought all necessary permissions for identifiable individuals in photos (please fill out the photo consent below in this case).
- You have checked the copyright for any images used that are from external sources, such as the internet or photo libraries, and have credited any individuals as needed.
- You have ensured no personal information has been shared (i.e. students names etc.).
- You have checked for scientific accuracy (i.e. no unfounded claims or theories have been presented).
- You have proofed the poster thoroughly.

Poster guidance:

Your poster must be submitted as a PowerPoint file no larger than 5MB. No other file format will be accepted.
Contact education@royalsociety.org with any questions

Format:

- Please ensure your poster is kept in landscape layout.
- Please do **not** change the format, positioning or size of the header (where the project title, names, school logo and STEM partner logo are) and the footer (scheme logo).
- How you arrange the body of the poster is up to you but please align topics vertically or horizontally; diagonal movement can look messy. The information within the poster needs to fit between the header and the bottom of the page.
- The font and type size in this poster should be kept consistent throughout. The text is Arial and size 18pt (black) for the body section should be used. Smaller text can be used for annotating pictures and diagrams as appropriate but should still be legible (size 14pt is a minimum).
- Please be mindful of how small your images and text may appear on a standard screen and ensure you leave some blank space (gaps) between sections to make your poster easier to read.

Photography for use by the Royal Society

Permission for third party images used within Partnership Grants project posters, provided during grant reporting.
Date: 18th October 2022

Schools may provide the Royal Society with pre-prepared photography as part of the posters submitted as part of their mandatory reporting through the Partnership Grants scheme. These photographs, as part of the presentation documents, will be shared on the Society's website, at Royal Society events and may be used in the media*. These photographs as part of the presentation documents could also be used in the following ways:

- In printed or online material promoting the programme of activities run by the Royal Society, including (but not limited to):
 - the Society's website or social media sites, including Facebook, Twitter, LinkedIn and YouTube
 - promotional flyers and banners
 - in the media – newspapers, magazines, websites, broadcast outlets*
 - in marketing and public engagement email campaigns e.g. newsletters
 - in formal or public reports about the work of the Royal Society

It is the school's responsibility to ensure that all third parties (including but not limited to: children, parents, staff) represented in the photographs have given their permission for the images to be distributed and used as detailed above. Please ensure you have checked your own schools' photo permission policy, particularly with regards to children in local authority care (LAC).

It is the school's responsibility to ensure that third parties who do not wish to be photographed, or have limitations of the photography's use that exclude them from being used as above, are not included in any photography passed to the Royal Society.

The photographs as part of the presentation documents will be held in perpetuity for online, digital or print usage, while the content remains relevant. For any queries about permission relating to ongoing use, or to revoke permission for an individual, please email education@royalsociety.org

* Once a film/audio/story/photography has been used by an external media outlet, we are no longer able to control if it is used again by the same media outlet or potentially elsewhere.

I confirm that all people depicted in the photography provided from
(Please insert school/college name above) have given all required permission or consent for the photography provided to be used for these purposes by the Royal Society.

Description of photography provided (brief description of picture – what is depicted and who is included)

Teacher / school representative's details:

Name:	David Hadley-Pryce	Position in school:	Head Teacher
Signature:		Date:	18 th October 2022

The Discovery Society' Accounts
Year ending 31.03.22

Prepared by: P Gillett, Finance Manager, The Bewdley School
Date prepared: 26.01.23

Opening balance (01.04.21)	£5,510.55
Expenditure (01.04.21-31.03.22)	-£15.00
Income (01.04.21-31.03.22)	£72.49
Closing balance (31.03.22)	£5,568.04

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England & Wales - Charity number 1186512

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The Discovery Society Annual Report 2021

Report of the Trustees for the year ending 31st December 2021.

The Discovery Society was registered as a charity (Charitable Incorporated Organisation – CIO) on 21st November 2019. As such its first full year of operation should have been the year ending 31st December 2020. There was however no report for the year 2020, as this was not required by Charities Commission rules, and the majority of the society’s activities were severely disrupted by lockdown measures related to the global COVID-19 pandemic. These restrictions commenced just 4 months after the charity’s registration date.

Our Aims

The charitable object of The Discovery Society is to advance the education of the students at The Bewdley School by providing and assisting in the provision of facilities [not required to be provided by the local education authority] for understanding of and engagement in exploration and scientific research.

Our Research Strategy

The Discovery Society is a Charitable Organisation attached to an 11-18 comprehensive Secondary School with the purpose of encouraging scientific exploration and research. We live in an era where the popular view is that the world is ‘discovered’ and the only ‘new knowledge’ is based around technologies that we create. The world for school age children is so technologically oriented that the fundamental principle which has driven the creation of this charity, is that children need to be encouraged to interact with the natural world and to view finding out how it works as a central component of their learning about science. Without such an impetus we will always struggle to understand both the concept of climate change and the impact of human activity on the other species we share the planet with.

Research Interests

Students at the school follow the National Curriculum for Science for year 7 to 11 (age 11-16). In our Sixth Form students study Advanced Levels in Biology, Computer Science, Chemistry and Physics with Geology on offer but as yet not studied. The curriculum for all of these subjects is prescribed by the examination bodies under the regulation of the Joint Council for Qualifications (JQC). The core elements of study are therefore determined beyond the institution:

Head Teacher Dave Hadley-Pryce BSc MSc FRSA

Registered charity number:

1186512 Learning materials are determined by these externally driven curriculum

arrangements
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- Research interests are drawn from these learning materials and the themes from which they arise

We are also partnered with the University of Birmingham Earth Sciences Department (School of Geography, Earth and Environmental Sciences) who will support us with our research, and many of the research interests will draw from the research areas they are currently focussing on. These will include postgraduate and postdoctoral researchers. In the event that any of our sixth form students become co-authors in research papers, the drafting and publication processes will be carried out by the professional scientists at the University. This also includes the potential for students to engage in research through Operation Wallacea.

Member Benefits

Aside from the benefits offered by involvement in exploration and research, members will potentially have access to the following accreditations:

- Bronze, Silver and Gold Duke of Edinburgh Awards
- Bronze, Silver and Gold Crest Awards
- Involvement in Operation Wallacea which offers PADI registration

It is anticipated that this initial menu will expand as the charity matures and hones its expertise.

Review of Activities

The principle activities planned for 2020 were:

1. Science week - comprehensive programme of activities planned for 9-13/3/2020
2. Spring lecture series - series of 4 after school lectures planned commencing 5/3/2020
3. Operation Wallacea - planned for 2 staff and 7 students from 11/7/21 to 24/7/21
4. Duke of Edinburgh - planned offer of Bronze, Silver and Gold Awards
5. Crest Award - planned offer of Bronze, Silver and Gold Awards

Science Week Plan

British Science Week 9th - 13th March

Theme: Our Diverse Planet

All week

- Year 7 making DNA necklaces in one of their 3 lessons
- Year 8 Bronze Crest Award in 3 lessons and continue at home to make up the required 10 hours
- Photography competition set by form tutors on Monday 9th March. Deadline Friday 13th March.
- Poster competition (optional) Teachers can use in lessons or set as homework as they wish. School deadline Friday 13th March and the best 4 entered into the national competition.

Optional activities (students sign up using online form)

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- Tuesday 10th March 3:30-4:30 in D3: Mission to Mars for year 7 students. Students set the task of creating a mars lander to safely land an egg on the surface of Mars
- Wednesday 11th March 9am-12: Big Science Quiz in the Hall for years 7-10
- Wednesday 11th March 3:30-4:30 in D6: Dissection class for year 9 students
- Thursday 12th March 3:30-4:30 in D4: Whizz, Bang, Pop 'The diversity of Elements' for year 8 students

Trip

Friday 13th March: Big Bang Science Fair for 45 year 9 students.

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Spring Lecture Series Plan

5 March Georgia Jacobs Abberley and Malvern Hills Geopark

4-5pm

Geological Inspirations in Textile Art

Lecturer Bio

Georgia Jacobs

Representing Abberley and Malvern Hills Geopark

Georgia was a Further Education lecturer in Geography and Geology, then a Senior Lecturer and Guidance Manager for Student Services, for a total of 19 years at Halesowen College, from 1983 until 2002. For the first 8 years of her career she taught Geography and Geology to 'A' level in secondary school 6th forms. Now retired, Georgia still has a keen interest in these subjects. She is a member and registered speaker on Recreational Geology and Textile Art for the Worcestershire Federation of Womens' Institutes and also belongs to Geologists in the Geopark as a volunteer.

Lecture Abstract

To show how the geology of AMH Geopark can be used as inspiration for Textile Art: to produce painted and stitched panels, mixed media art boards and sampling sketchbooks. The textiles were created for displays at Bewdley Museum, Wyre Forest Visitor Centre and Severn Valley Country Park, as part of the annual Geofest programme of events.

12 March Dr Karen Cameron

Aberystwyth University

4-5pm & 6-7pm

Living Ice (glacial microbial ecology)

Lecturer Bio

Dr Karen Cameron Ser Cymru II COFUND Research Fellow at Aberystwyth University

Karen has been studying the microbial ecology of Arctic and Antarctic environments for almost 15 years. In this time, she has amassed over 16 months of field experience in some of the most remote and extreme places on earth. Through her research, she aims to better understand the form and function of microbial communities within glacial environments. She is driven to use this knowledge to predict the impact of climate warming on these rapidly changing, globally important glacial ecosystems, and to investigate the implications of increased glacial melt and periglacial warming on downstream environments. Karen has been awarded a prestigious Marie Skłodowska-Curie Actions Research Fellowship to pursue her research at Aberystwyth University, and she looks forward to starting a new position at the University of Glasgow in the Spring.

Lecture Abstract

In this lecture we will explore the life that lives on, in, under and out of glaciers. We will look at the challenges that organisms within these environments face; from the extreme cold and lack of nutrients and liquid water, to months of darkness followed by intense UV radiation. We will consider some of the mechanisms that these organisms use to not only survive, but thrive within these

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environments. With climate warming casting its shadow over these fragile, fast-changing frozen habitats, it is now more important than ever to understand their current state, so that we can predict how they might change, and what impact that might have in a warming world. Through looking at various research studies that Karen has led, we will get a sense of what it means to explore and work in these magnificent, yet vulnerable polar environments.

19 March Kate Unwin

University of Worcester

4-5pm & 6-7pm

Forensic Biology behind the scenes

Lecturer Bio

Kate Unwin Principal Lecturer in Forensic and Applied Biology at the University of Worcester

Since February 2002 Kate has been a Forensic Biologist and has worked in this area and role since that time, first with the Forensic Science Service as a Reporting Officer and then with Cellmark Forensic Services. She has worked on hundreds of criminal cases, examining evidence, both within a laboratory environment and at scenes of crimes. She has been classified as an expert witness and her areas of expertise include body fluid evidence, damage assessment and DNA profiling and has given evidence in both Crown and Magistrates courts, her first court appearance being at the Old Bailey!

Lecture Abstract

Covering elements of "a day in the life of" as well as some case examples to demonstrate how biological evidence can be used to help the Crown Prosecution Service and the wider community.

2 April Dr Chris Brown

University of Worcester

4-5pm & 6-7pm

In the company of penguins

Lecturer Bio

Dr Chris Brown Principal Lecturer in Animal Biology/Biology at the University of Worcester

Chris studied at the University of Cape Town in South Africa and spent a number of years working for the Percy FitzPatrick Institute of African Ornithology where he worked on their sub-Antarctic programme. This included over two years carrying out research on the energetics and ecology of penguins, albatrosses and petrels on Marion Island in the sub-Antarctic.

Lecture Abstract

Marion Island is a small, remote island in the sub-Antarctic that is home to large numbers of penguins, albatrosses and other seabirds as well as fur seals and elephant seals. This talk will describe the island, its wildlife and some of the research I was involved with during my time on the island.

Operation Wallacea Plan

Head Teacher ~~Dave Hadley-Pryce~~ BSc MSc FRSA
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11/7/20	Travel to Dominica
12 - 16/7/20	Week 1 - Forest campsite and Caribbean Island Ecology course
17/7/20	Volcanology day
18/7/20	Whale research and transfer to Fort Shirley
19 - 23/7/20	Week 2 - Learn to dive or complete Caribbean reef ecology course
24/7/20	Travel back to UK

Two staff and seven students were scheduled to travel as above, with donations of £5,000 from the Bewdley Old Grammar School charity and £500 from Bewdley Town Council towards costs.

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Duke of Edinburgh Plans

The Duke of Edinburgh Award is offered to: Year 10 - Bronze Award

Year 11 - Silver Award

Years 12/13 - Gold Award

Supported by a mixture of after school and weekend sessions, with some expeditions taking place during school time. For example, a typical Bronze expedition will mean 2 large groups each having a 2 day expedition on Friday/Saturday and Sunday/Monday.

Crest Award Plans

The Crest Award was new in 2020 and offered to: Year 8 - Bronze Award

Year 9 - Silver Award

Years 12/13 - Gold Award

This was launched during science week 9th - 13th March 2020.

Engagement Levels

The level of engagement with all of these opportunities was severely curtailed by the pandemic lockdown restrictions, so was not the launch that the Society had hoped for.

Science Week

The timing meant that this occurred just prior to the first lockdown, meaning that students were fully engaged throughout the week, and it was an excellent launch for the Society.

Spring Lecture Series

Although lockdown did not happen until 23/3/2020, the timing of these lectures meant that the host institutions were beginning to apply their own restrictions during March. As such we were able to offer the first lecture only and then had to cancel all that followed. There were 22 staff, students and visitors present at this first lecture. There was also a summer lecture series in planning which also had to be abandoned.

Operation Wallacea

Following advice from the Opwall Team about restrictions in the Caribbean area, the expedition was postponed until 4th July - 16th July 2022. We have lost 3 of the 7 students as they have left and started university courses. We are currently recruiting from years 11 and 12.

Duke of Edinburgh

The Duke of Edinburgh Awards were able to proceed in modified format, with engagement levels being very high, with 287 participated in DofE since 21/11/19:

2019-20

Bronze - 66

Silver - 36

Gold - 8

2020-21

Bronze - 84

Silver - 63

Gold - 30

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Registered charity number:

Crest Award

Lockdown prevented lower school students engaging with Crest beyond science week, with 2 sixth form students completing the gold award.

Future Plans

When restrictions have been fully lifted we plan to relaunch all of the activities described above.

As members of Abberley and Malvern Hills Geopark Forum, we are also undertaking to lead our partners in a 'Heritage Lottery' bid, to develop a peripatetic 'time capsule' with a programme to visit all Geopark visitor centres on an on-going basis. This is planned to run for 5 years in the first instance, with legacy plans built into the project.

Our Finances

To be added following meeting with DRB.

Policy Framework

As all of our trustees and activities fall within the operating environment of The Bewdley School - A Foundation School, all of our operations work within the policy framework of the school. The statutory policies which apply to our activities can be found at:

<https://www.bewdley.worcs.sch.uk/statutory-policies/>

Our Trustees

We currently have 3 trustees, which we intend to expand as momentum builds:

Name	Date first	Term	Term	Relationship to
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	held		Ends	School
David Hadley-Pryce*	21/11/2019	4 years	20/11/2023	Head Teacher
Derek Haskins	21/11/2019	3 years	20/11/2022	Chair of Governors
Catherine McDougall	21/11/2021	3 years	20/11/2024	Deputy Head Teacher

* Chair of Trustees