

United Kingdom Biology

Competitions

Registered charity N° 1191037
53 Alexandra Road, Norwich, Norfolk, NR2 3EA
Also known as UKBC



Annual report

1st September 2021 - 31st August 2022

Trustees

Dr Matthew Johnston

Dr Andrew Treharne MBE

Dr Joshua Hodgson

Neil Richards

Katherine Lister

Kim Ngan Luu Hoang

Jiaqi Chen

Dr Robert Starley

Structure & governance

Governing document

→ Constitution, 25th August 2020

Trustee selection

→ Election by existing trustees

Constitution

→ Charitable incorporated organisation
(CIO)

Objectives & activities

Objects

The objects of the CIO are to advance education for the public benefit of young people in the subject of Biology by:

1. Promoting the study of biology and encouraging and enhancing biology education, particularly in schools
2. Encouraging excellence in biology by organising annual biology competitions for school students



2

3. Selecting, training and organising teams of biology students and leaders to represent the UK at the International Biology Olympiad and at such other international Biology competitions as may be considered appropriate
4. Maintaining membership of International Biology Olympiad e.V. and to contribute to and participate in the affairs of that organisation
5. Providing residential training for post-16 school students.

Activities

Trustees reviewed the Charity Commission [guidance on public benefit](#) upon appointment and also at their annual general meeting. All activities were planned in line with guidance, UKBC's charitable objects and the business plan submitted to the Charity Commission upon incorporation.

Academic olympiads are increasingly prominent as the most rigorous and reputable academic competitions. United Kingdom Biology Competitions (UKBC) runs the British Biology Olympiad (BBO), and takes responsibility for the UK's presence at the International Biology Olympiad (IBO). The IBO is one of the big four Olympiads with >70 participating countries. For younger children, UKBC runs Biology Challenge (BC) and the Intermediate Biology Olympiad (iBO).

The BBO, iBO and BC are three rigorous online competitions which schools arrange for their students to participate in. Students took part within their school (or at home due to coronavirus regulations) under examination conditions. Students were allocated medals based on their performance, and certificates were sent to schools.

UKBC organised training and assessment of practical biology skills for the top performers of the BBO in collaboration with the University of Warwick. This was to select a team of four students to participate in the IBO. UKBC organised for the team to attend the IBO in Yerevan, Armenia. UKBC organised for a jury of two volunteers to accompany the team throughout IBO and act on behalf of the UK at the IBO.

UKBC comprises solely of volunteers. The most active are members of the UKBC committee, who are trustees. The competitions were written and assessed entirely by volunteers. There are approximately twenty volunteers who help write the competitions, or assist with team selection, training or at the IBO. The Royal Society of Biology administered the competitions via a services contract, including managing school registration, organising travel and accommodation,

processing payments, advertising, and providing general administration support to UKBC (e.g. arranging annual general meetings). Practical training and assessment took place at the University of Warwick. Training and assessment was carried out by two academic staff, plus support staff, from the School of Life Science. UKBC provided a mirror of its examination website to the British Physics Olympiad (BPhO, charity number 1146064) for a small fee. UKBC has an agreement to provide the BBO, iBO and BC to ASDAN China (a British educational charity, charity number 1066927) which runs the competitions in China. UKBC holds the UK's membership of IBOe.V, the governing body of the IBO. National members, such as UKBC, have joint sovereignty over IBO e.V.

Achievements & performance

Participation

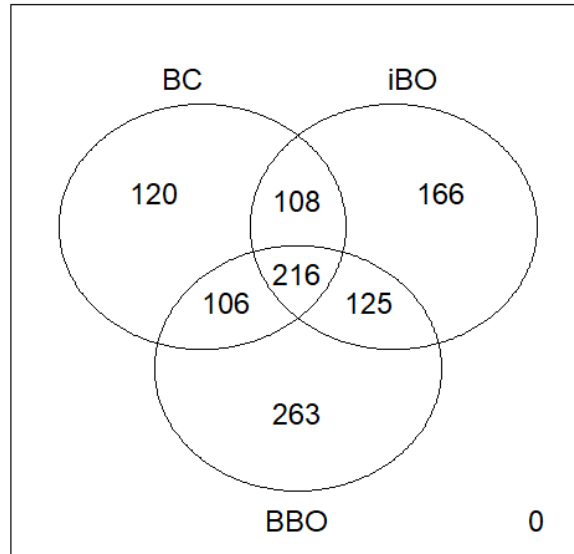
The number of individual students and schools participating in each competition are shown in the tables below. These tables do not include students or schools participating via ASDAN China. Underlined figures indicate competitions which were disrupted by the pandemic.

	Year (number of students participating)					
	2017	2018	2019	2020	2021	2022
BC	NA	48449	47336	<u>23695</u>	<u>26793</u>	41360
iBO	5667	6580	8282	<u>8757</u>	<u>8873</u>	12701
BBO	7500	7818	9465	9520	<u>8462</u>	<u>10897</u>
Total	NA	62847	65083	41972	44128	64958

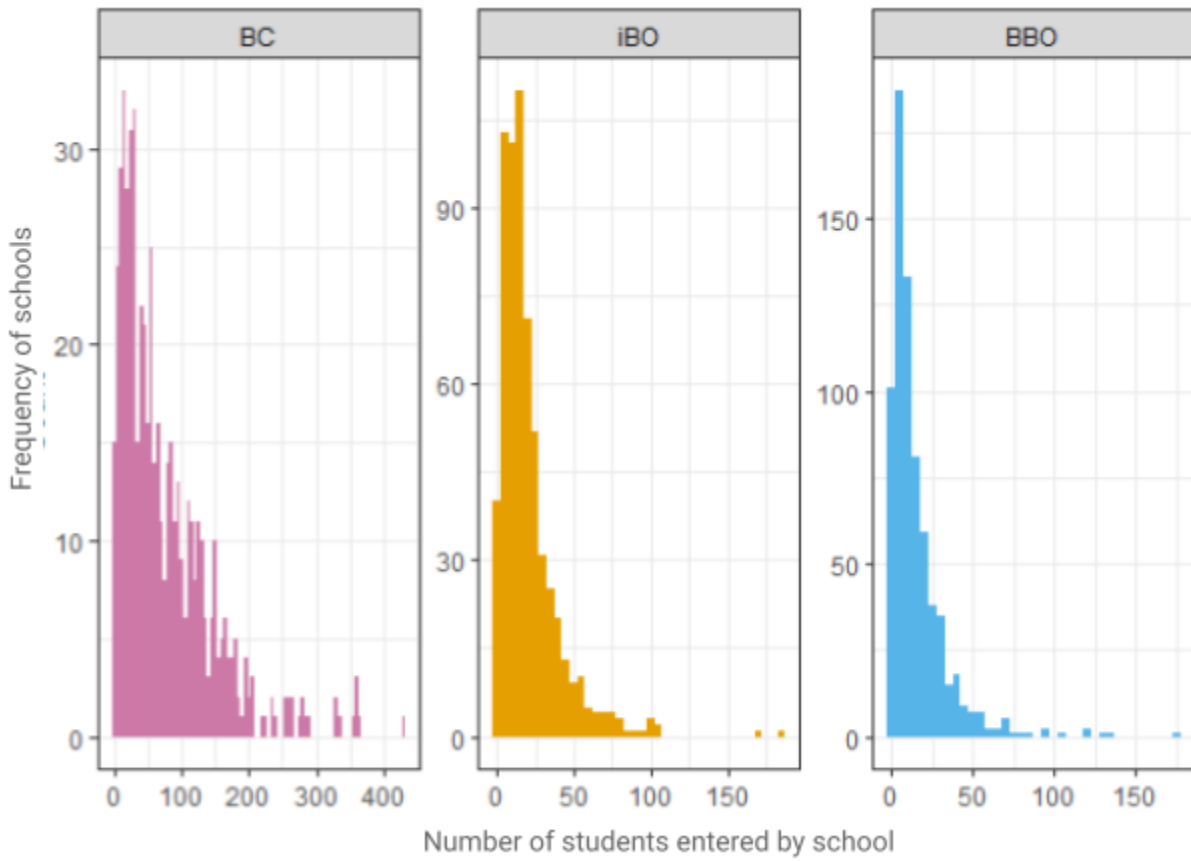
	Year (number of schools)					
	2017	2018	2019	2020	2021	2022
BC	561	583	576	<u>367</u>	<u>346</u>	547
iBO	380	408	465	<u>559</u>	<u>449</u>	614
BBO	675	636	726	669	<u>619</u>	<u>707</u>
Total unique	NA	NA	NA	NA	880	1102



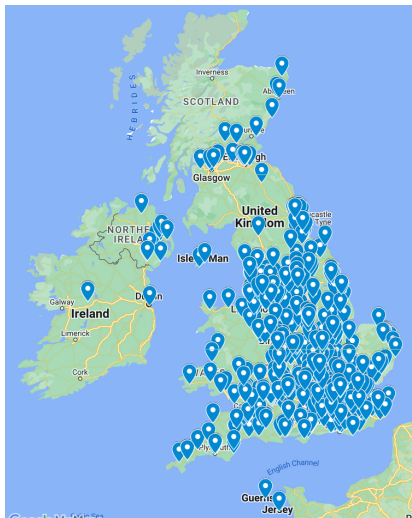
The Venn diagram below shows that most schools took part in two competitions, suggesting scope to recruit the same schools to take part in all three.



Participation rebounded to pre-pandemic levels, despite schools and students being under severe ongoing pandemic-related stress. A new fee regime was in place this year, after competitions falling during lockdowns being made free in recent years. The BBO was made completely free to all UK schools. A £30 flat-fee for unlimited places was charged for BC, the iBO and international schools participating in the BBO. Trustees will assess a fee regime which will maximise participation in 2023. Trustees will take account of the number of students entered from each school (shown below) to do this.



Schools were predominantly based in the UK, although schools from across the world took part in all competitions, as shown in the maps below.





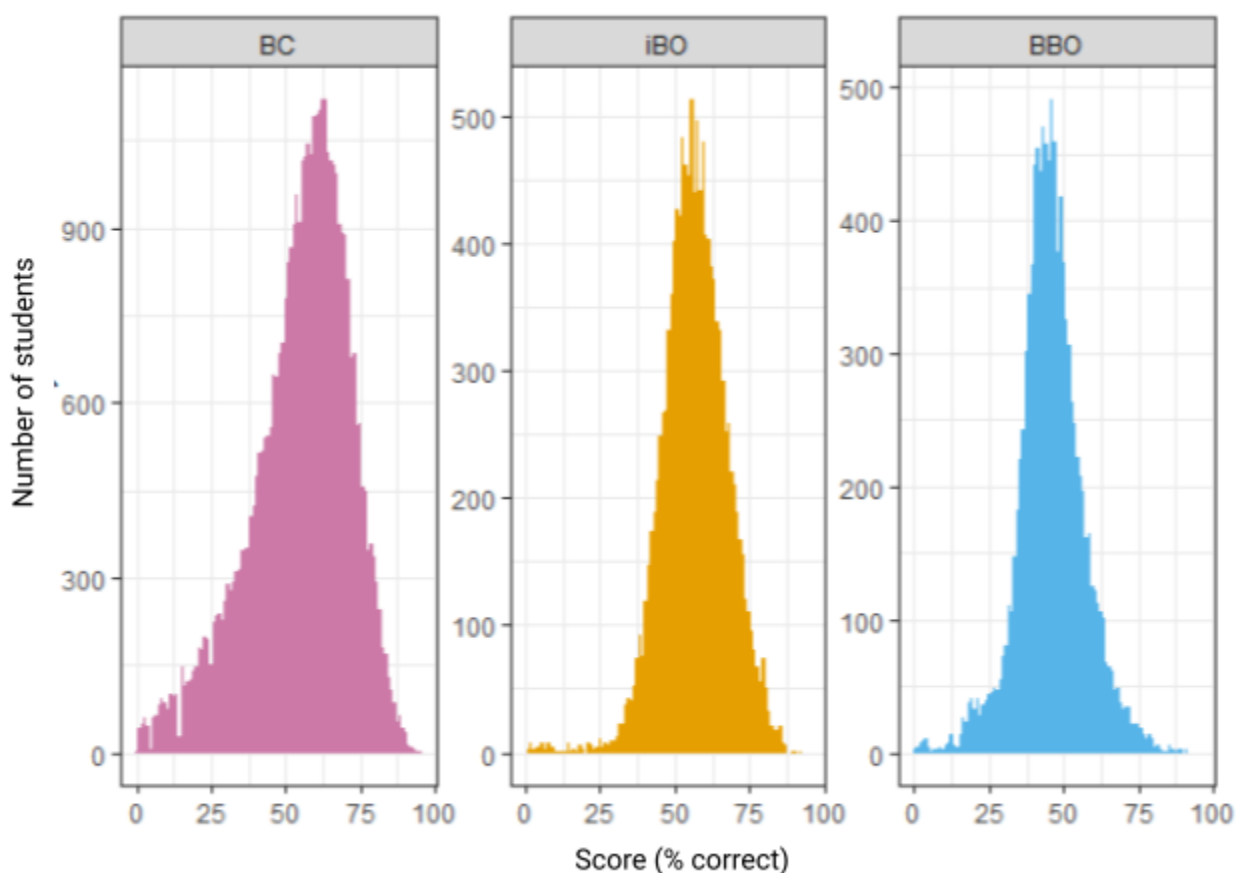
6

Overall, ~20% of participating schools (~10% of students) were overseas.

Grade boundaries were set based on UK schools alone, to protect the competitions from distortions created by growing numbers of overseas schools. Trustees will examine ways to grow overseas participation and examine fair participation fees for them.

Academic rigour

Grade distributions for each competition were excellent, with appropriate difficulty for each age-group, as shown in the figures below. Trustees will continue to work to include questions of a variety of difficulties to stretch the distributions further, while maintaining to engage students at all levels.



The UK team won three silver medals and a merit at the Yerevan IBO 2022. UKBC will look to improve and expand training for the team selected to attend the next IBO. The assessments run by the University of Warwick for the winners of the BBO were outstanding. The attending students underwent a day of intensive training before being examined on the material the



7

following day. The winners of the iBO will attend a residential trip run by the Field Studies Council.

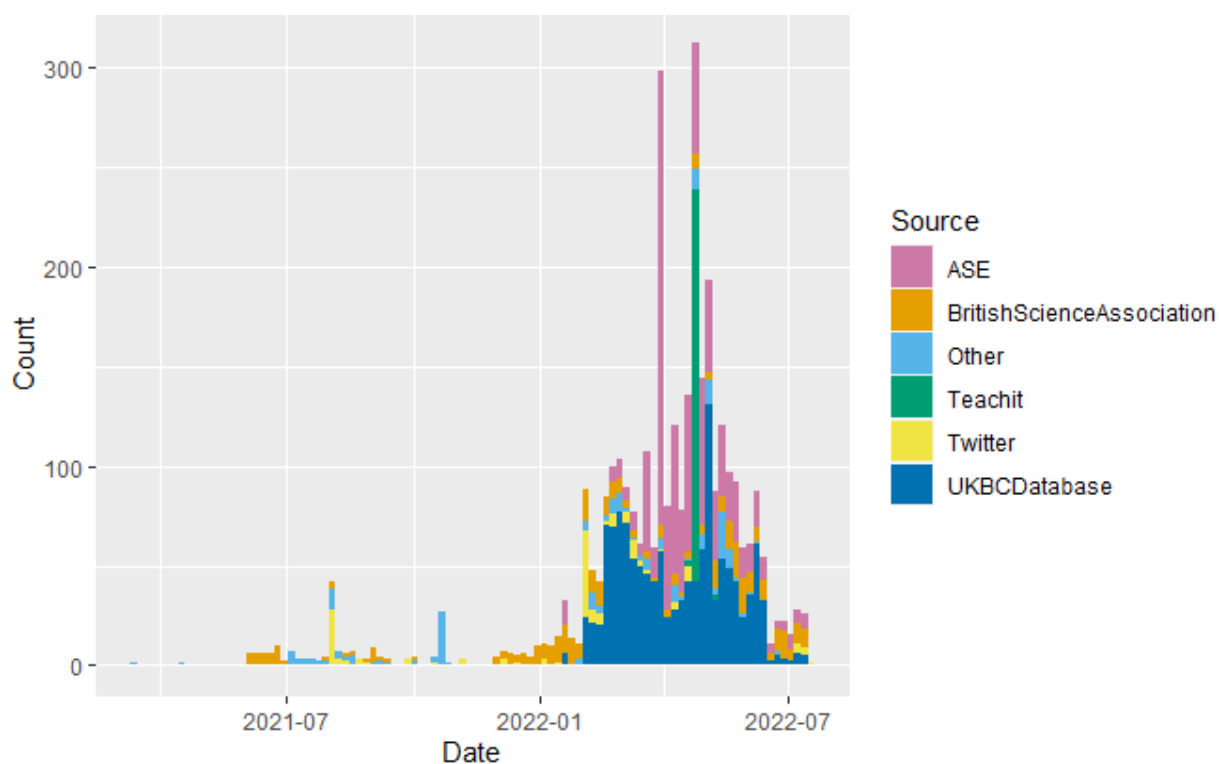
New website

UKBC made a significant investment in a new online examination system in 2021. This year, more minor upgrades were carried out to add new functionalities. There is some evidence of improved participation by allowing better leverage of school data (see next section).

UKBC stopped distributing paper certificates as they came with high financial costs, were environmentally wasteful, and there was often a long lead time for schools to receive them. Instead, the UKBC website is now able to automatically generate e-certificates instantaneously for teachers to download and distribute. Trustees will investigate purchasing and distributing more durable medals as a memento in future years.

Advertising

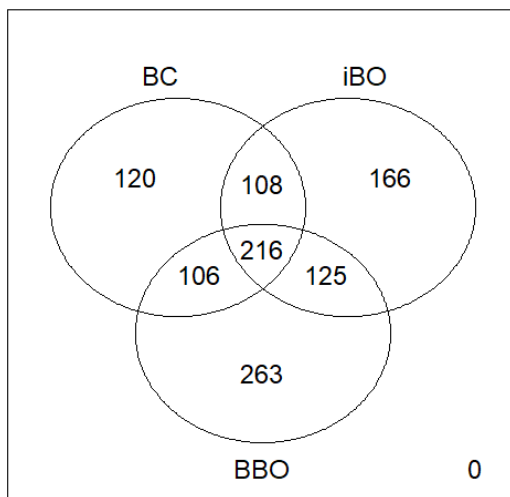
UKBC tracked interaction with digital adverts through the use of unique URLs. Emails to the UKBC website database of teachers generated the most interactions, but paid-for adverts placed with the Association of Science Educators, amongst others, also drive website traffic.





8

Surprisingly, half of the schools only took part in a single competition, so there is great scope to use the UKBC database to encourage teachers to sign up to our other competitions.



ASDAN China

UKBC provided the BC, iBO and BBO competitions to ASDAN China. Participation rates in all three competitions grew strongly.

Volunteers

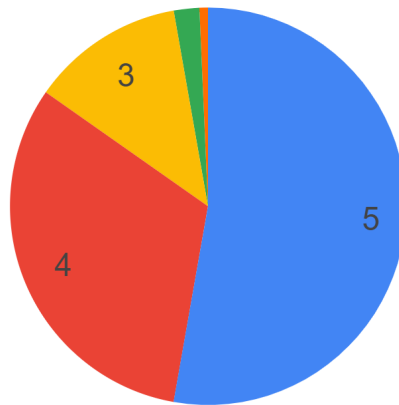
UKBC appointed new trustees to replace those ending their term. New volunteers attended team selection and the IBO in Yerevan. These were past participants in the IBO, and have relevant expertise for running the senior programs. UKBC will attempt to recruit more current or retired school teachers.

Feedback from participating schools

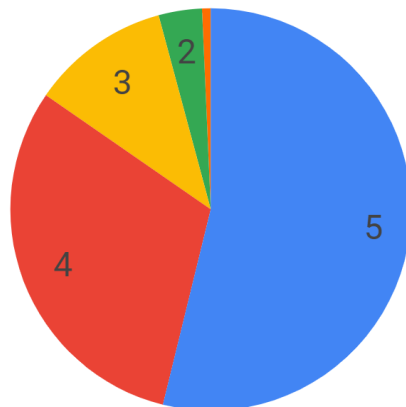
UKBC carried out a survey of participating teachers. Key results and testimonials are shown below. Trustees will monitor this feedback, and use it to inform decisions.



Rate the general support provided before, during and after the competitions?

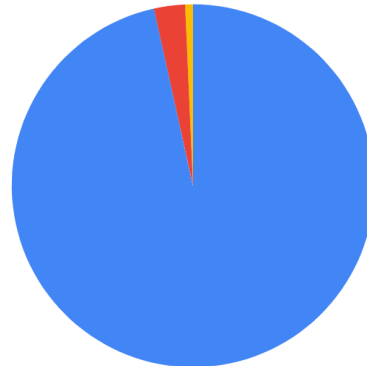


How would you rate running our biology competitions on the competition website?



Would you recommend our school biology competitions to others?

● Yes ● Maybe ● Prefer not to say



*They are, and have been for many years, regular fixtures in our Biology calendar for Years 9, 10, 12 & 13.
Thank you for offering them.*

Being part of this program I was able to motivate my students to take interest in Biology and pursue it professionally.

These competitions are a great opportunity for all students to show what they can do (particularly the top academic students) It's a challenge and an interesting academic experience. It gives them an opportunity to test their understanding in an unfamiliar assessment format, with stretching questions. It's also likely to be their first formally invigilated online exam.



The Biology Olympiad suite provides a challenge for all our GCSE/A level Biology groups from yr9 to yr13 and take up is excellent in this school. Results are very good and students appreciate merit awards and the opportunity to add this experience to UCAS statements if appropriate. Good value for students and school alike.

The beauty of the competitions is they inspire interest, reward wider reading and while the advantages of doing well are numerous there is no downside to doing badly. This encourages students to have a go and while they are challenging this mode is also highly supportive.

Personally, I am just grateful that you have allowed us to run this challenge for our students. We are an online school, based in London but with students all over the World. We have a number of highly able students that have had to make the difficult decision to transfer into an online education due to a variety of health problems, including anxiety. Allowing us to run a competition and including them via a remote setting not only meant that they are able to have the same opportunities as their peers in a "normal" education setting, but also further fuelled their interest in this fascinating science.

An opportunity to participate, refresh, renew, benchmark student's knowledge of biology on a global platform instils confidence in the learner and ignites interest in the subject.

The BBO is a great competition for the more able and gifted students of biology who want to challenge themselves on their depth and breadth of knowledge as well as their application of skills and acumen in this subject. Highly recommended.

The biology competitions are an excellent way to challenge and promote interest in this wonderful subject.

Excellent opportunity for students to further their interests in Biology. Very good range of questions that students found engaging. Well run competition with ease of access online before and after the competition. Results are delivered promptly and students are very happy to obtain their certificates. Highly recommended.

Used the competitions for many years now. They are an excellent opportunity for Biology students to show their ability outside of the curriculum.

The pupils had never heard of it, but I hope that by word of mouth younger pupils might want to do it and see the value in doing something harder than AS. Especially those that want to try for Oxbridge. Quite good for the clever clogs to realise they are not geniuses

Really worth doing, even for the less able students, although I have a lot of foreign students and some of the language was difficult for them, after the exam a number asked what a blue tit was!

Financial review

Summary accounts are provided in a separate document.

Reserves policy

The trustees set a target reserve level of 1.5 years expenditure (approximately £100,000). The reserves grew to £183,004, from £164,135 at the start of the year. This was due to unexpectedly low expenditure due to not hosting an awards dinner or team training. The trustees will review the reserves policy and strategies to reduce them to the target level at their next meeting. The UK is being asked to bid to host the IBO again, in 2027, which may warrant running surpluses to cover upfront costs.

Major expenditure

The major part of UKBC expenditure (£42,000 inc. VAT) is the cost of a services agreement with RSB to provide an administrator for the competitions. This price is valid until November 2023, and must be met by UKBC unless a 12-month termination clause is triggered. Trustees have, and will continue to, streamline UKBC operations to reduce administrative workload, and evaluate the performance of the service provider at their meetings.

Expenses paid to trustees

The table below details all money transferred from UKBC to its trustees.

Trustee	Sub total	Total	Description
Joshua Hodgson	£251.81	£2,151.81	<i>IBOe.v. (international body) annual membership</i>
	£1,900.00		<i>Participation fee for IBO (Yerevan State University)</i>
Matthew Johnston	£1,399.47	£1,825.67	<i>Website hosting (1)</i>
	£426.20		<i>Refreshments and venues for students and volunteers at International Biology Olympiad</i>
Rebecca Peel	£19.65		<i>Refreshments during UKBC meetings</i>
Kim Ngan Luu Hoang	£598.72	£598.72	<i>Team accommodation and refreshments in Yerevan</i>
Grand total		£4,576.20	

Foot notes

(1) Includes third party costs for servers etc and a £50 per quarter retainer for continued support, upgrading, bug-fixing.



Declaration

The trustees declare that they have approved the trustees' report above at a vote held on the 25th February 2023.

Dr Matthew Johnston

Chair

25th February 2023

Dr Andrew Treharne, MBE

Secretary

25th February 2023

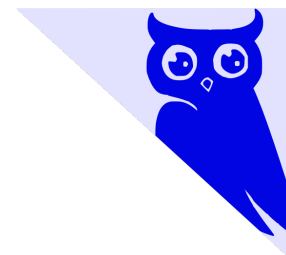
Dr Joshua Hodgson

Treasurer

25th February 2023

United Kingdom Biology Competitions

Registered charity № 1191037



Annual accounts

1st September 2021 - 31st August 2022

Receipts

	2021/22			2020/21
Item	Unrestricted funds	Notes		
Biology Challenge participation fees	£16,335			£9,720
Intermediate Biology Olympiad participation fees	£17,979	Made free in 2020 due to pandemic		£11,760
British Biology Olympiad participation fees	£4,679	Made free in 2021 due to pandemic		£0
Selling papers to other charities	£40,136	To ASDAN China		£26,460
Selling examination system to other charities	£1,000	To British Physics Olympiad		£0
Misc. inc. collection of arrears				£656
Sponsorship	£0			£0
Total receipts	£80,129			£237,596 (Including 189000 grant)

Payments

Administration	£42,000	To Royal Society of Biology		£42,000
Participation in the IBO	£8,558	All inclusive		£1,025
University residential course	£6,674	To University of Warwick		£0
Certificates	£0			£4,489
Advertising	£720			
Awards ceremony /dinner	£0			£1,434
Committee/volunteer expenses	£790	Including insurance, DBS checks		£1,097
Professional fees	£400			£1,800
Website maintenance	£1,399			£1,293
Payment processing fees	£421	To Stripe		£218
Account fees	£159	To CAF bank		£105
Return of incorrect payments	£137	To sender		
Sub total	£61,260			£53,461

Asset purchases

	£0	New website built in 2021		£20,000
Total payments	£61,260			£73,461

Net

Receipts less payments	£18,869			£164,135
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Assets at year end

	2021/22		2020/21
Item	Unrestricted funds	Notes	
Cash at end last year	£164,135		
Cash at end this year	£183,004		
Outstanding invoices	£7,440		
Total assets	£190,444		

Liabilities at year end

Deferred income (2020-21)	£330		£420
Deferred income (2021-22)	£2,388		
Outstanding invoices	£0		
Total liabilities	£2,718		

Declaration

The trustees declare that they have approved the accounts above.



Dr Matthew Johnston
Chair
25th February 2023



Dr Andrew Treharne MBE
Secretary
25th February 2023



Dr Joshua Hodgson
Treasurer
25th February 2023





Section A Independent Examiner's Report

Report to the trustees/ members of Charity Name UNITED KINGDOM BIOLOGY COMPETITIONS

On accounts for the year ended 31/08/2022 Charity no (if any) 1191037

Set out on pages 1 & 2 OF THE ANNUAL ACCOUNTS (remember to include the page numbers of additional sheets)

I report to the trustees on my examination of the accounts of the above charity ("the Trust") for the year ended DD / MM / YYYY.

Responsibilities and basis of report As the charity trustees of the Trust, you are responsible for the preparation of the accounts in accordance with the requirements of the Charities Act 2011 ("the Act").

I report in respect of my examination of the Trust's accounts carried out under section 145 of the 2011 Act and in carrying out my examination, I have followed the applicable Directions given by the Charity Commission under section 145(5)(b) of the Act.

Independent examiner's statement

I have completed my examination. I confirm that no material matters have come to my attention (other than that disclosed below *) in connection with the examination which gives me cause to believe that in, any material respect:

- accounting records were not kept in accordance with section 130 of the Act or
the accounts do not accord with the accounting records

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in order to enable a proper understanding of the accounts to be reached.

* Please delete the words in the brackets if they do not apply.

Signed: [Signature] Date: 14/04/2023

Name: SAM CLARKE

Relevant professional qualification(s) or body (if any): ACA (ICAEW)

Address: 11 HORNBEAM CLOSE
DURHAM
DH1 1EN