

United Kingdom Biology Competitions

Registered charity № 1191037
53 Alexandra Road, Norwich, Norfolk, NR2 3EA
Also known as UKBC



Annual report

1st September 2022 - 31st August 2023

Trustees

Dr Matthew Johnston

Dr Andrew Treharne MBE

Prof Kevin Moffat

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

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. Practical training and assessment was carried out by several academic staff, plus support staff, from the School of Life Science. This was to select a team of four students to participate in the IBO.

UKBC organised for the team to attend the IBO in Al Ain, United Arab Emirates. UKBC organised for a jury of three volunteers to accompany the team throughout IBO and act on behalf of the UK at the IBO. In addition, a third member was a member of the Emirati scientific committee and lead editor of the theory paper. They attended the IBO on behalf of the hosts to help finalise the papers and run the international jury / sub-jury.

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 half-a-dozen 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).

UKBC provided a mirror of its examination website to the British Physics Olympiad (BPhO, charity number 1146064) for a small fee (outstanding). UKBC has an agreement to provide the BBO, iBO and BC to ASDAN China (a British educational charity, charity number 1066927) which translates and runs the competitions in China. UKBC holds the UK's membership of IBO e.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	2023
BC	NA	48449	47336	<u>23695</u>	<u>26793</u>	41360	43641
iBO	5667	6580	8282	<u>8757</u>	<u>8873</u>	12701	14961
BBO	7500	7818	9465	9520	<u>8462</u>	<u>10897</u>	13659
Total	NA	62847	65083	41972	44128	64958	72261

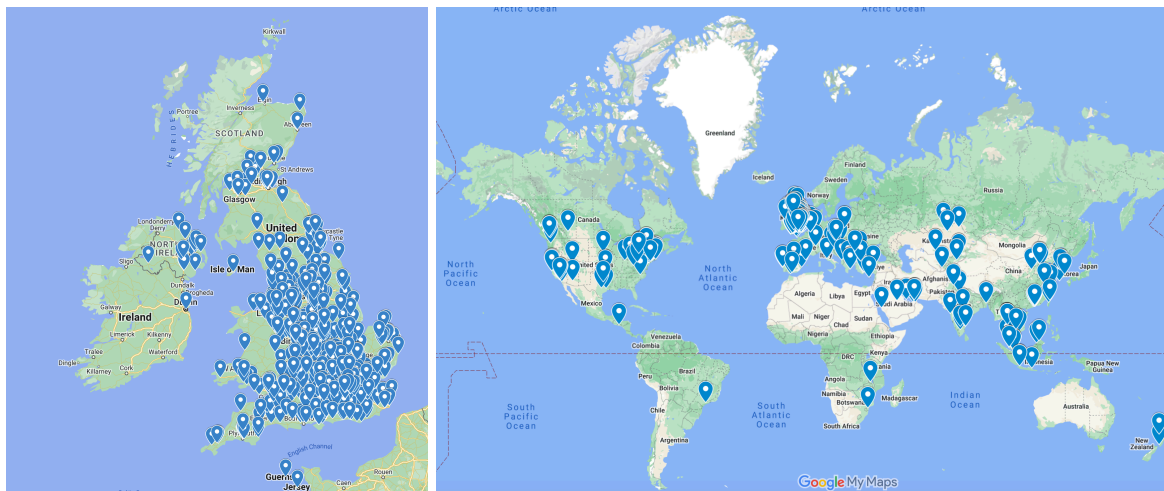


	Year (number of schools)						
	2017	2018	2019	2020	2021	2022	2023
BC	561	583	576	<u>367</u>	<u>346</u>	547	621
iBO	380	408	465	<u>559</u>	<u>449</u>	614	709
BBO	675	636	726	669	<u>619</u>	<u>707</u>	883
Total unique	NA	NA	NA	NA	880	1102	1353

Most schools took part in two competitions, suggesting scope to recruit the same schools to take part in all three.

Participation grew strongly to record levels. The fee structure was maintained from 2022; the BBO was 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 agreed to make all competitions free to all UK schools in 2024.

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



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.

UKBC collects information on the fee-paying status and gender of participating students for monitoring and outreach purposes. Overall, ~60% of students participated from non-fee-paying UK schools. This is lower than the proportion of all students at non-fee-paying schools, suggesting outreach and advertising could be focused on this sector. The gender breakdown of participants mirrors the gender breakdown of students studying biology in each age group in the UK: older years are increasingly dominated by females.



Biology Challenge



Intermediate Biology Olympiad

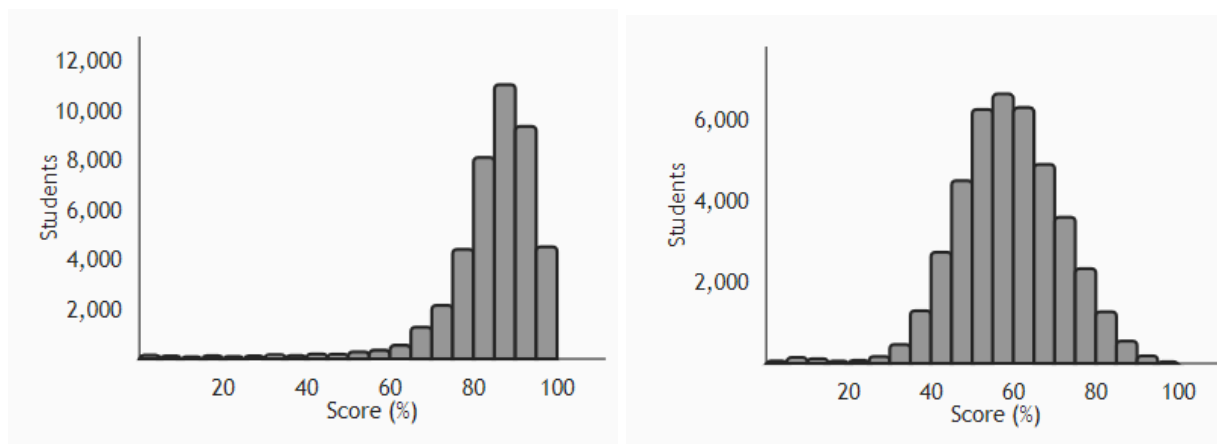


British Biology Olympiad

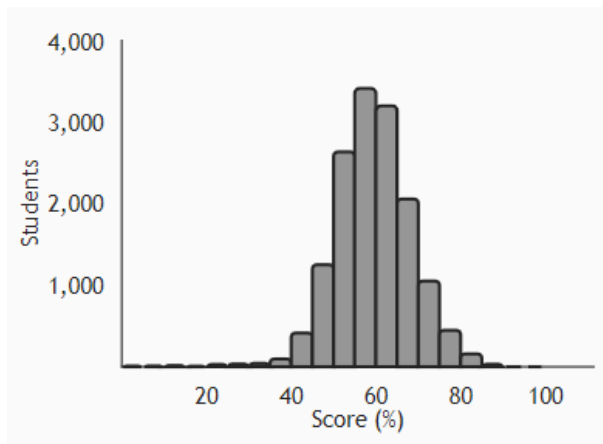


Academic rigour

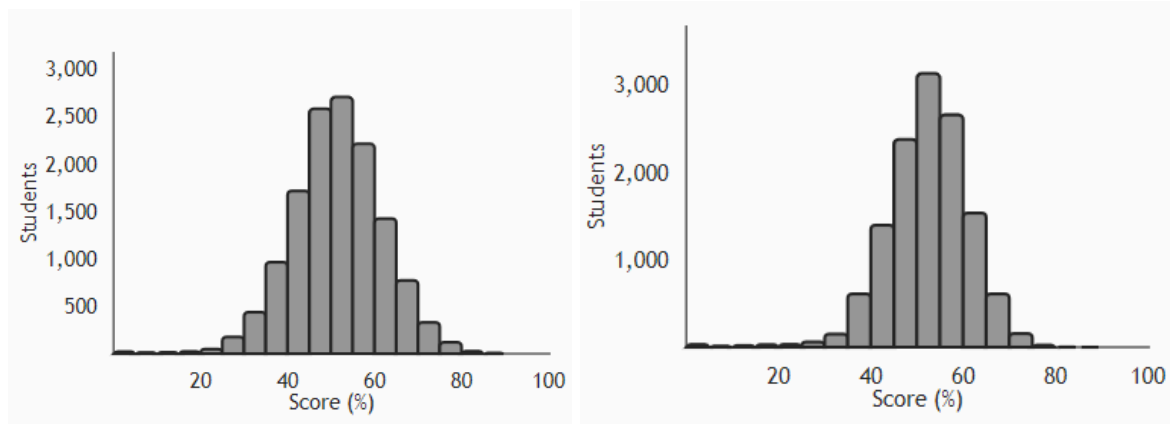
Grade distributions for each competition had desirable characteristics, with successive papers from the BC to BBO increasing in difficulty, as shown in the figures below. Trustees will continue to work to include questions of a variety of difficulties to stretch the distributions further, while maintaining to engage students at all levels.



Biology Challenge (papers 1 & 2)



Intermediate Biology Olympiad



British Biology Olympiad (papers 1 & 2)

The UK team won one gold, two silver and a bronze medal at the Al Ain IBO 2023. 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 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).

In 2022, 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. In 2023, due to popular demand, UKBC purchased and distributed medals as mementos.

ASDAN China

UKBC provided the BC, iBO and BBO competitions to ASDAN China. Participation rates in all three competitions grew strongly. ASDAN began translating the competitions into Chinese to aid Chinese competitors.

Volunteers

UKBC appointed new trustees. Volunteers new to 2022 attended team selection and the IBO in Al Ain. 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.

Policies

Data protection and safeguarding

Trustees reviewed and updated UKBC's data protection and safeguarding policies.

Sustainability

UKBC undertook a review of its environmental footprint and attempted to quantify its carbon emissions. At the AGM, trustees discussed these findings and undertook to reduce its emissions where possible without reducing the beneficial impact of its activities, and to offset some of its carbon emissions. A copy of this review and undertakings are available on the UKBC website.

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 £213,475, from £183,004 at the start of the year. This was due to unexpectedly strong income due to greater than trend participation growth, despite increased expenditure on hosting an awards dinner, team training and attending the IBO.

At the end of the accounting period, trustees carefully reviewed the reserves policy and strategies to reduce them to the target level. Trustees decided to expand the number of free entries to the competitions to constrain income and prepare outreach and training programmes

to increase expenditure. An accountant will also be hired to instigate VAT filings when the appropriate income threshold is crossed.

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. Trustees have streamlined UKBC operations to reduce administrative workload, and trustees decided to terminate this agreement to be replaced with a cheaper alternative early in the next financial year.

Expenses paid to trustees

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

Trustee	Sub total	Total	Description
Joshua	£477.28	£702.28	<i>IBO travel & jury refreshments</i>
Hodgson	£225.00		<i>Awards dinner</i>
	£1,616.59	£9,297.71	<i>Website hosting (1)</i>
Matthew	£618.90		<i>Food at team selection</i>
Johnston	£359.97		<i>Hotel for AGM</i>
	£6,702.25		<i>IBO flights for team & jury</i>
Robert Starley	£101.55	£479.35	<i>IBO travel & team / jury refreshments</i>
	£14.48		<i>Spring meeting refreshments</i>
Kim Ngan	£37.05		<i>Travel to team selection</i>
Luu Hoang	£427.82	£917.59	<i>IBO travel & team / jury refreshments</i>
	£146.90		<i>Travel to team selection</i>
Andrew	£269.13		<i>IBO e.V. membership fee</i>
Treharne	£316.61		<i>IBO travel & team / jury refreshments</i>
	£184.95		<i>Email server hosting (includes previous years costs)</i>
Grand total		£11,394	

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 30th May 2024.



Dr Matthew Johnston

Chair

12th June 2024

Dr Andrew Treharne, MBE

Secretary

12th June 2024



Dr Joshua Hodgson

Treasurer

12th June 2024



Annual accounts

1st September 2022 - 31st August 2023

Receipts

Item	2022/23 Unrestricted funds	Notes	2021/22	2020/21
Biology Challenge participation fees	£18,012		£16,335	£9,720
Intermediate Biology Olympiad participation fees	£20,300		£17,979	£11,760
British Biology Olympiad participation fees	£6,690	Made free in 2021 due to pandemic	£4,679	£0
Selling papers to other charities	£53,432	To ASDAN China	£40,136	£26,460
Selling examination system to other charities	£0	To British Physics Olympiad	£1,000	£0
Misc. inc. collection of arrears & mistaken payments	£4,443		£0	£656
Total receipts	£102,878		£80,129	£237,596 (Including 189000 grant)

Payments

Administration	£42,000	To Royal Society of Biology	£42,000	£42,000
Participation in the IBO	£12,379	All inclusive	£8,558	£1,025
University residential course	£6,931	At University of Warwick	£6,674	£0
Certificates / medals	£3,065	Surplus for subsequent years	£0	£4,489
Advertising	£720		£720	
Awards ceremony /dinner	£225		£0	£1,434
Committee/volunteer expenses	£1,038	Including insurance, DBS checks	£790	£1,097
Professional fees	£400		£400	£1,800
Website maintenance	£1,802		£1,399	£1,293
Payment processing fees	£723	To Stripe	£421	£218
Account fees	£84	To CAF bank	£159	£105
Return of mistaken payments	£3,041	To sender / correct recipient, incl. some rec. in prev. year	£137	
Sub total	£72,407		£61,260	£53,461

Asset purchases

	£0	New website built in 2021	£0	£20,000
Total payments	£72,407		£61,260	£73,461

Net

Receipts less payments	£30,471		£18,869	£164,135
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Assets at year end

Item	2021/22 Unrestricted funds	Notes	2021/22	2020/21
Cash at end last year	£183,004			
Cash at end this year	£213,475		£183,004	£164,135
Outstanding invoices	£8,730	From the latest year only	£7,440	£0
Total assets	£222,205			

Liabilities at year end


Deferred income (2020-21)	£270		£330	£420
Deferred income (2021-22)	£2,118		£2,388	£0
Deferred income (2022-23)	£3,120		£0	£0
Outstanding invoices	£0		£0	£0
Total liabilities	£5,508			

Declaration

The trustees declare that they have approved the accounts above.


Dr Matthew Johnston
Chair
12th June 2024

Dr Andrew Treharne MBE
Secretary
12th June 2024


Dr Joshua Hodgson
Treasurer
12th June 2024



CHARITY COMMISSION FOR ENGLAND AND WALES

Independent examiner's report on the accounts

Section A

Independent Examiner's Report

Report to the trustees/
members of

Charity Name

UNITED KINGDOM BIOLOGY COMPETITIONS

On accounts for the year
ended

31/08/2023

Charity no
(if any)

1191037

Set out on pages

11 OF THE ANNUAL ACCOUNTS AND TAR (if additional sheets)

I report to the trustees on my examination of the accounts of the above charity ("the Trust") for the year ended 31/08/2023.

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:

Date:

14/06/2024

Name:

SAM CLARKE

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

ACA (ICAEW)

Address:

11 HORNBEAM CLOSE
DURHAM
DH1 1EN