Southend High School for Girls

Assessment Policy for Biology

Our assessment policy and procedures are underpinned by three key questions :

1. Where is the learning going?
2. Where is the learner now?
3. How does the learner get there?
   (Dylan Wiliam)

Our students should be able to answer these two questions:

1. What am I doing well in the subject?
2. What do I need to do to improve my work in the subject?

At SHSG we see assessment, in all its forms, as an integral part of teaching and learning and as such it is inextricably linked to our curriculum.

We use three broad overarching forms of assessment at Southend High School for Girls:

1. Diagnostic assessment – assessment used to determine what students already know (usually at the start of a lesson / unit)
2. Formative assessment (responsive teaching) – assessment used during the learning process to provide feedback and encourage students to act upon it to make improvements.
3. Summative assessment (in-school summative assessment and nationally standardised summative assessment) – used at the end of the learning process as a measure of where students are in their learning.

KS3

By the end of KS3 students should be able to

- demonstrate a good understanding of key biological concepts, including cells, cell transport, organ systems, genetics, ecology, photosynthesis, and respiration.
- recognise the importance of biodiversity and understand ecological concepts, such as food chains and the impact of human activities on the environment.
- have a basic understanding of the human body, including the structure and function of organs and systems, as well as concepts related to health and well-being.
- interpret and analyse data from experiments and observations, drawing conclusions and making connections between data and biological concepts.

- use and understand appropriate scientific terminology and vocabulary related to biology.
- develop practical skills such as using microscopes, handling laboratory equipment, and performing biological experiments safely.

KS4

By the end of KS4 students should be able to

- display a solid understanding of key biological principles, including cell biology, genetics, ecology, evolution, photosynthesis, respiration, and human physiology.
- apply the scientific method to investigate and analyse biological phenomena, including designing experiments, collecting data, and drawing evidence-based conclusions.
- understand the interconnections between various biological concepts and how they relate to real-world phenomena and issues.
- use appropriate scientific terminology accurately and effectively when describing biological processes and phenomena.
- demonstrate basic practical skills, including the ability to use laboratory equipment, carry out experiments, and analyse experimental data.
- develop basic analytical skills to interpret data and scientific information, including graphs, charts, and diagrams.
- communicate scientific ideas and findings effectively, both in written form and verbally in lessons.
- understand the importance of ethical considerations and safety protocols in biological research and experimentation.
- recognize the implications of biological processes on human health and the environment, including the impact of human activities on ecosystems.
- evaluate scientific information, arguments, and theories, including identifying strengths and weaknesses in scientific studies.

KS5

By the end of KS5 students should be able to:

- have an advanced understanding of complex biological concepts, including genetics, molecular biology, physiology, ecology, and evolution.
- apply critical thinking skills to analyse and evaluate complex biological data, scientific arguments, researching and referencing findings.
- demonstrate advanced laboratory skills, including experimental design, accurate data collection, and precise data analysis.
- conduct independent research, gather data, and draw meaningful conclusions.
- utilise quantitative skills for data analysis and statistical analysis in biological contexts.

- write laboratory reports, and essays that demonstrate an advanced level understanding of synoptic elements.
- understand and apply ethical considerations in biological research and experimentation, including awareness of ethical issues related to genetics and biotechnology.
- communicate complex scientific concepts effectively, both in written and oral form.
- apply biological knowledge to real-world issues, such as healthcare, environmental conservation, biotechnology, and global health.
- exhibit a high degree of self-motivation and independent learning, as A-level Biology often requires students to engage deeply with the subject beyond the classroom.

Diagnostic assessment methods:

KS3: Year 7 and 8 Diagnostic test before Organisms, Genes and Ecosystems modules.

Formative assessment methods

KS3:

- In class quizzes (starter, plenary)
- Practice exam questions on every topic
- Year 9: end of topic tests

KS4:

- in class quizzes (starter, plenary)
- practice exam questions on every topic
- end of topic tests

KS5:

- in class quizzes/polls (starter, plenary)
- practice exam questions on every topic
- end of topic tests
- Required Practical Assessments: Students will be measured against the exam board's requirements to be deemed competent in practical skills.

Summative assessment

KS3: cumulative tests and end of year examinations

KS4: Pre – public examinations, cumulative tests

KS5: Cumulative assessments, Pre – public examinations

Marking and Feedback

KS3

Diagnostic and Formative assessment:

The diagnostic assessment comprises two components, delving into both the exploration of new topics and a formative evaluation of the preceding subject matter. These are self-assessed.

Formative assessment:

For formative assessment, examination questions within the assessment pack are used. Some of these questions are subjected to thorough teacher marking, offering students constructive feedback to guide their progress. Some of these questions are self-assessed and feedback is provided at both class and individual level.

During lessons, starter and plenary activities are used to check for understanding. Feedback is provided at both class and individual level.

Summative assessment

Following the marking of tests, mark scheme answers are presented to pupils to illustrate success criteria at an individual level.

Pupils are encouraged to record "correct answers/phrases" using a different colour of pen.

Subsequently, pupils are prompted to complete the front section of the sheet to identify their areas of challenge and formulate SMART (Specific, Measurable, Achievable, Relevant, Time-bound) targets for self-improvement.

Teachers verify whether this self-assessment and target-setting process has been completed by the students.

Additionally, a cumulative assessment further contributes to the process, enabling a holistic understanding of students' grasp on the overall curriculum.

In the case of cumulative assessments, personalised follow-up tasks are assigned to pupils, specifically tailored to address their weakest areas, as indicated through the self-assessment process.

KS4:

Marking and feedback of formative assessments:

Marking and evaluation of assessments of completed topics are routinely conducted.

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KS5

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Required practicals are routinely assessed according to the examination boards (AQA) criteria and students are given a pass or a fail for competencies.

Marking and Feedback Codes

When providing written feedback in exercise books to ensure consistency across the school particularly for literacy the following codes should be used above the relevant word /section:

✓ good point

X incorrect or wrong point

SP spelling error which needs correction

P punctuation error which needs correction

GR grammatical error which needs correction

/ start a new sentence

// start a new paragraph

?? the point is not clear

WW wrong word

^ missing word

[ ] this part needs rewording

+1 academic achievement point

| blank space on answer lines following student answer

BOD   Benefit of doubt

Presentation

All work should have a date on the right-hand side, written in full and underlined with a ruler (e.g. 12th September 2023).

- All work will have a title / heading which is underlined with a ruler
- All work should have CW/HW written in the top left-hand margin (MFL require students to write these in the target language)
- Only black or blue ink should be used for writing with the exception of student responses to feedback (as indicated by individual department policies)
- All diagrams / graphs should be done in pencil.
- All work should be set out neatly.

Recording and Monitoring of Assessment

Student data is systematically recorded in centralized spreadsheets tailored to each year group within the Teams platform.

Some colleagues opt to document assessment scores in their personalised planners or personalised spreadsheets initially; nevertheless, all data is subsequently consolidated into the online spreadsheet for uniformity and comprehensive record-keeping.

The use of trackers is diligently upheld to guarantee department-wide awareness of each colleague's progress in the course. This practice not only fosters effective communication but also cultivates a collaborative environment within the department.