THE JCB ACADEMY

CURRICULUM OPTIONS

Year 10
2023/24

INTRODUCTION

This booklet contains brief details of each of the options available at The JCB Academy. Due to the demands of the curriculum on offer, **only one option** exists for learners.

The full curriculum comprises:

- **Core Block**

  - English Language (GCSE)
  - English Literature (GCSE)
  - Science - Combined (two GCSEs)
  - Mathematics (GCSE)
  - Physical Education (non-examined)

  More able learners undertake the separate science pathway below instead of the combined sciences:

  - Biology (GCSE)
  - Chemistry (GCSE)
  - Physics (GCSE)

- **Technical Block**

  - Business & Finance (LIBF Level 2)*
  - Engineering Design (OCR Level 2)*
  - Engineering Manufacture (OCR Level 2)*
  - Design & Technology (GCSE)
  - Practical Skills (non-examined)

- **Option - one choice from:**

  - Programmable Systems (OCR Level 2)*
  - Engineering Production (NCFE Level 2)*
  - iMedia (OCR Level 2)*
  - Computer Science (GCSE)
  - Sport (NCFE Level 2)*
  - Business and Enterprise (BTEC Level 2)*
  - Spanish (GCSE)

* Level 2 qualifications are vocational subjects that are equivalent to a GCSE

The curriculum comprises ten Level 2 qualifications (11 for the more able).

Although we will attempt to ensure as many learners as possible undertake their first choice option, in the event of an option being very popular we will consider second choices. Therefore please carefully consider your second choice.

Spanish - GCSE

Having a language at GCSE can be beneficial as many jobs require languages skills. At The JCB Academy you can learn Spanish, which has an ever increasing presence in the global market.

Spanish is the world's second language and an official language in 22 countries. Spanish is spoken by 500 million people with a growing trend which will reach 600 million by 2050.

Learning another language can help your memory skills, enhance your ability to multitask and improve your communication, presentation, problem solving, organisation and independence.

It can also improve your English as it heightens your awareness of structure and grammar.

It is advisable that this language has been studied previously before choosing it as an option. However, if you have a passion for learning a new language and are willing to work independently, you should still be able to make good progress in Spanish.

Spanish GCSE Specification:

- **Topics:** Identity and Culture; Local Area, Holiday and Travel; School; Future Aspiration, Study and Work; International and Global Dimension
- **Exam based:** 25% Listening, 25% Reading, 25% Speaking, 25% Writing

ICT – Creative iMedia

The Level 2 OCR Cambridge Nationals in Creative iMedia is designed primarily for learners who wish to explore a vocational route in Key Stage 4. The course is suited to learners who are creatively driven and are looking to develop knowledge, understanding and practical skills that would be used in the media industry.

The course will:

- inspire and enthuse learners to develop independence and confidence in using skills that would be relevant to the media industry.
- encourage personal development, motivation and confidence, through practical participation and by giving learners responsibility for their own projects.
- support learners to develop their interpersonal, communication, planning and team-working skills.

The units to be covered are valued as a percentage of the final grade:

Coursework Units

R094 Visual identity and digital graphics (25%)
In this unit you will learn to how to develop visual identities for clients and use the concepts of graphic design to create original digital graphics to engage target audiences. Topics include develop visual identity, plan digital graphics for products, create visual identity and digital graphics.

R095 Characters and comics (35%)
In this unit you will learn how to plan, create and review comics which contain original characters. Topics include Ppan characters and comics, create characters and comics, review characters and comics.

Examined Unit

R093 Creative iMedia in the media industry (40%) - exam 1.5 hours
In this unit you will learn about the media industry, digital media products, how they are planned and the media codes which are used to convey meaning, create impact and engage audiences. Topics include the media industry, factors influencing product design, pre-production planning and distribution considerations.

SPORT

If you enjoy sport and are interested in furthering your knowledge and understanding, improving your fitness and developing your leadership skills, then this course is for you.

The course is aimed at those passionate about sport, fitness and performance. We will focus on the structure and function of body systems and the effects of health and fitness activities on the body, through to the principles of training and how to structure a health and fitness programme.

Assessment
Assessment and content of the course will be structured using practical methods as much as possible. Learners are required to successfully achieve all learning outcomes from one single graded unit which consists of two assessments: one non-examined assessment and one written examined assessment. The non-examined assessment is an assignment and the formally examined element consists of a mixture of multiple choice, short answer, and extended response questions which learners do at the end of Y11.

Grades
This is a level 2 qualification, graded at pass, merit, distinction and distinction*. However, the exam board have included the opportunity for learners to gain a level 1 qualification.

ENGINEERING PRODUCTION

The Level 1/2 Technical Award in Creative Design and Production is designed for learners who want an introduction to design and production that includes a vocational and project-based element, approached from a creative perspective with regular opportunities to experiment and create. The qualification will appeal to learners who wish to pursue a career in the design and production sector.

This qualification aims to:

- focus on the study of creative design and production in the design and production industry
- offer breadth and depth of study, incorporating a key core of knowledge
- provide opportunities to acquire a number of practical and technical skills

The objectives of this qualification are to:

- place design and production in context
- understand design materials and processes
- understand design brief and production processes
- prepare for the presentation of a design solution
- undertake a review of processes and final solution
- explore working in the design production industries

The course comprises:

Non-exam assessment (coursework) (60%) on a topic set by the exam board
End of course exam (40%).

PROGRAMMABLE SYSTEMS – OCR LEVEL 2

The Level 2 OCR Cambridge Nationals in Engineering Programmable Systems is designed for learners who wish to explore electronic products and systems. The course is suited to learners who enjoy studying the principles of electronics, making and testing circuits and programming systems.

The course aims and objectives are to:

- Understand and apply the fundamental principles and concepts of Engineering Programmable Systems, including the principles of electronic circuits, the components and devices used in electronic and programmable systems, and how to construct and test them.

- Develop learning and practical skills that can be applied to real-life contexts and work situations.

- Think creatively, innovatively, analytically, logically and critically.

- Develop independence and confidence in using skills that would be relevant to the maintenance, installation and repair sector and more widely.

- Use computer aided design (CAD) software to produce diagrams and simulate circuits.

- Construct and test electronic circuits for a specific purpose, using tools and equipment to assemble printed circuit boards.

- Solve problems using microcontroller programs to develop programmable systems and test that they solve such problems.
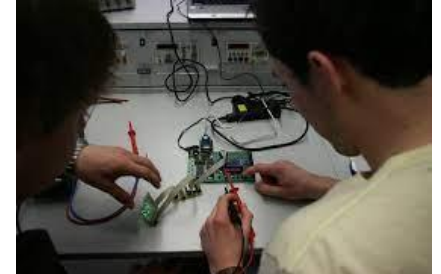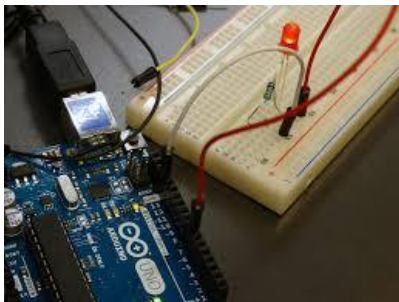
Coursework units
R048 Making and testing electronic circuits (30%)
R049 Developing programmable systems (30%)

Examined units
R047 Principles of electronic and programmable systems (40%)

GCSE COMPUTER SCIENCE (AQA)

This exciting GCSE is a new option for 2022/23 which gives you an excellent opportunity to investigate how computers work and how they are used. Along the way you will develop computer programming and problem solving skills that are vital to any computer scientist applying computational thinking to find ways that computers can help solve the problems we face.

What topics will you be studying?

3.1 Fundamentals of algorithms
3.2 Programming
3.3 Fundamentals of data representation
3.4 Computer systems
3.5 Fundamentals of computer networks
3.6 Cyber security
3.7 Relational databases and structured query language (SQL)
3.8 Ethical, legal and environmental impacts of digital technology on wider society, including issues of privacy
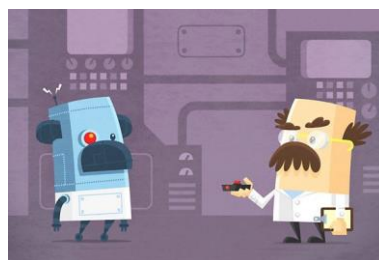
Paper 1: Computational thinking and programming skills (2 hour written exam, 90 marks, 50% of GCSE)

What's assessed?
Computational thinking, code tracing, problem-solving, programming concepts including the design of effective algorithms and the designing, writing, testing and refining of code.
The content for this assessment will be drawn from subject content 3.1 and 3.2 above.

Question Types
A mix of multiple choice, short answer and longer answer questions assessing programming, practical problem-solving and computational thinking skills.

Paper 2: Computing concepts (1 hour 45 minutes written exam, 90 marks, 50% of GCSE)

What's assessed?
The content for this assessment will be drawn from subject content 3.3 to 3.8 above.

Question Types
A mix of multiple choice, short answer, longer answer and extended response questions assessing SQL programming skills and theoretical knowledge.

BUSINESS AND ENTERPRISE – BTEC LEVEL 2

Enterprise is an important part of the business sector and plays a major role in the UK's global economic status. The role of entrepreneurs is to help create wealth for the nation and its citizens through the creation of enterprises that innovate and grow the economy. According to data, there are nearly six million such businesses in the UK, employing around 16.6 million people. Small and medium-sized enterprises (SMEs) account for 99.9 per cent of the business population in the UK and account for three-fifths of the employment and around half of the turnover in the UK private sector, worth around £2.2 trillion.

This qualification is designed to provide learners the opportunity to expand their Business intake and study a second qualification alongside that in the Technical Block. Study of this sector at Key Stage 4 will complement your studies through providing an opportunity for practical application alongside conceptual study.

The units to be covered are valued as a percentage of the final grade:

Coursework Units

Component 1 – Exploring Enterprises (30%)
Learners will explore different enterprises to develop their knowledge and understanding of the characteristics of enterprises and the skills needed by entrepreneurs to be successful. Learners will explore how enterprises use market research to find out about their customer needs and competitor behaviour and how internal and external factors may affect enterprises.

Component 2 – Planning and Presenting a Micro Enterprise Idea (30%)
Learners will generate two realistic ideas for a micro-enterprise and choose one of these to plan within budget. They will individually present their business plan for their idea and review the production and delivery of their presentation to make recommendations for improvements.

Examined Unit

Component 3 - Marketing and Finance for Enterprise (40%) - exam 2 hours
Learners will explore how marketing is used by enterprises and the factors that influence how enterprises identify and target their market. Learners will complete financial documents and statements and explore how to use them to monitor and improve the performance of an enterprise in order to make decisions and recommend strategies for success.