



FBEC STUDENT NEWSLETTER

THE OFFICIAL NEWSLETTER OF FERRYHILL BUSINESS ENTERPRISE COLLEGE

INTEGRITY

CREATIVITY

EXCELLENCE



ASPIRE DAY

We are proud to announce that FBEC will be holding our final 'Aspire Day' of the year on Thursday 30th of June for all students. According to the dictionary, the word 'aspire' means to direct one's hopes or ambitions towards achieving something. Yet again, we are working with a number of providers such as The Gala Theatre, Sunderland University, Bishop Auckland College, Engineers from Black and Decker and MBDA Missiles Systems as well as our outstanding teachers to ensure you have a day filled with endless possibilities. You will be given the opportunity to demonstrate integrity, channel your creativity and strive for excellence. Ultimately, it's your chance to show us what you're truly capable of.

Year 7

Drama workshops delivered by the Gala Theatre company.

Year 8

Mini-olympics tournament. Students need to attend school in their PE kit. Any students that arrive without it, will not be able to participate.

Year 9

Forensics workshops/engineering sessions and Science practicals.

Year 10

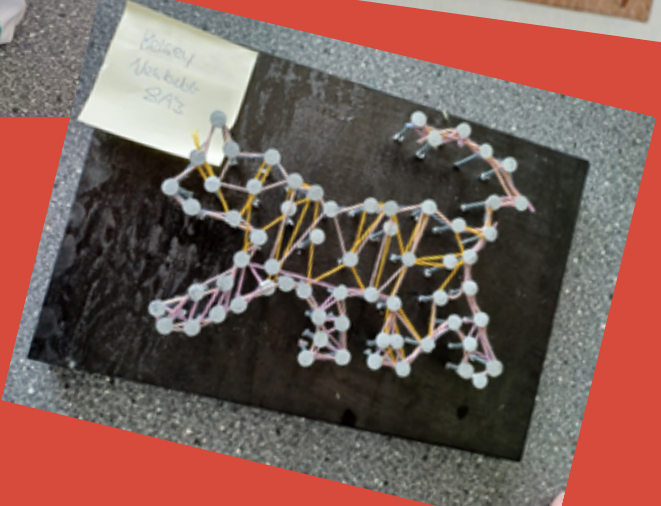
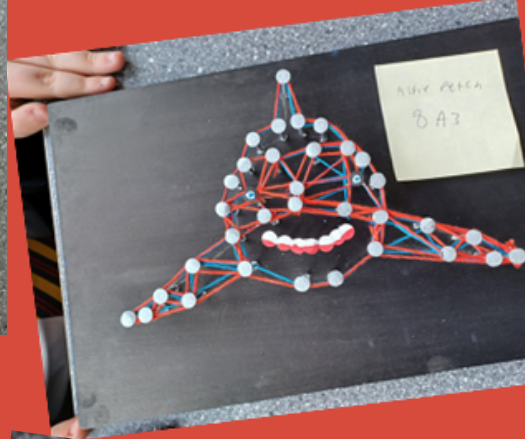
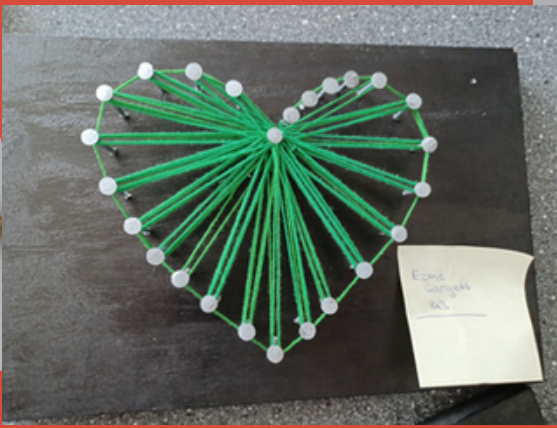
University of Sunderland/Bishop Auckland College/South West Durham Training



Key Stage 3 Engineering

Our Key Stage 3 students have been working incredibly hard on building their skills in making and developing skills for life.

Students have been working in a range of areas of engineering from textiles and sewing to resistant materials and CAD CAM.



Key Stage 4 Engineering



We currently have some fantastic work in KS4 Engineering. Students are currently working on their coursework. In year 10 students are designing and making their own drill bit holder, which can also be used as a pen holder. Students need to draw technical drawings both by hand and by using Computer Aided Design (CAD) and then make their drill bit holder. In year 11 students are working on the assembly and disassembly of a product.

COMPONENT 1: INVESTIGATING AN ENGINEERING PROJECT
LEARNING AIM B - INVESTIGATE A GIVEN ENGINEERED PRODUCT USING DISASSEMBLY TECHNIQUES.

Components Disassembled

1. Socket Holder - 30 grams, 65mm long 25mm wide 2mm thick 5 grams
2. Assembly Bolts - 13 grams - 43mm long, 5mm diameter
3. Multi Head Spanner - 70mm long by 18mm and 2mm thick. 14 grams
4. Locking Nuts - 8 grams 10mm external diameter, 6mm internal diameter
5. Sockets & Wrench - 50 to 60 grams, 20mm long. They are sized 8mm, 9mm and 10mm & 11, 12 grams 31 grams in total wrench is 20 grams
6. Screwdrivers - 62mm long, 6mm diameter 11 grams each
7. Washers - 5 grams in weight - 10mm & 12mm outside diameter 5mm internal
8. Outer Casing HDPE - 3mm thick and 90mm long. It is 28mm wide at the widest part. 4 grams each 8 in total
9. Metal Sides/Supports - 70 grams, 90mm long and 28mm wide 1mm thick 12.5 grams each 25 in total
10. Allen Keys - 58mm to 63mm long and 3mm to 6mm wide. From 3 to 10 grams and in total 50 grams

Assembled Multi Tool - Overall weight 206 grams, 88mm length, 25mm width, 46mm depth, assembled multi tool

COMPONENT 1: EXPLORING ENGINEERING SECTORS AND DESIGN APPLICATIONS
LEARNING AIM B - Explore Engineering Skills Through The Design Process

Orthographic Projection

DRILL BIT HOLDER (VERSION 1.0)
 ORTHOGRAPHIC PROJECTION

Product Name: Drill Bit Holder
Manufacturer Code: EE7-01-AM

PRODUCT SPECIFICATIONS
Diameter Range: Ø10.00mm - Ø12.00mm
Product Mass: 790.00g

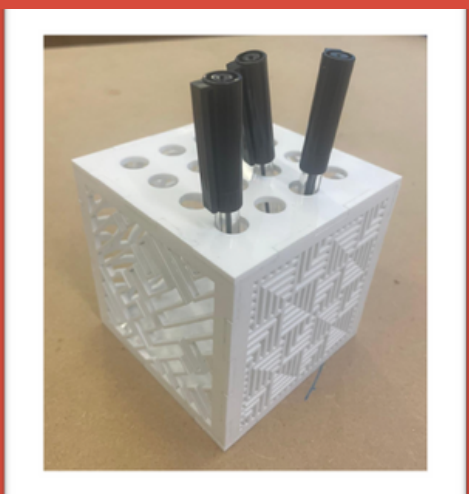
COMPONENT 2: INVESTIGATING AN ENGINEERING PROJECT
LEARNING AIM B - INVESTIGATE A GIVEN ENGINEERED PRODUCT USING DISASSEMBLY TECHNIQUES.

Components

I started by safely dismantling the multi tool because it is made from cast iron because the brake arms must be strong do it doesn't break in a bad situation that can cause a fatal injury, so it must be strong and durable, and it must last a long time.

There is no actual assembly drawing for this particular multi tool, therefore we used a picture diagram from the website it was purchased from.

1. Locking nuts
2. Outer Casing
3. Multi head spanner
4. Assembly bolts
5. Metal sides
6. Washers
7. Allen Keys
8. Screwdrivers
9. Socket rod
10. Socket holder and sockets



COMPONENT 2: INVESTIGATING AN ENGINEERING PROJECT
LEARNING AIM A - UNDERSTAND MATERIALS, COMPONENTS AND PROCESSES FOR A GIVEN ENGINEERED PRODUCT.

The Arms of the Caliper

I believe that the brake arms and yoke are made from cast iron because the brake arms must be strong do it doesn't break in a bad situation that can cause a fatal injury, so it must be strong and durable, and it must last a long time.

- Cast iron is a ferrous metal because it is made from iron and any kind of metal that has iron in it counts as a ferrous metal
- Cast iron melting temperature: 1990-2300 °C (3588-4160 °F). This makes it good for casting explained below.
- Cast iron is used in the caliper arms on this product. Some advantages of cast iron. It has a good wear resistance as well as good vibration damping. Some disadvantages of cast iron are it is prone to rusting and has poor tensile strength.
- The properties of cast iron are:
 - hard
 - tough
 - ductile - can be deformed without losing toughness
- It is also known for its elasticity which is a materials ability to return to its original dimensions after it has been deformed

Engineering Process - Casting (for yoke and arms)

Casting is an engineering method where extremely hot molten metal is poured or forced into a mould to create a shape when cooled. The process is quick but parts will need to be checked when cast to remove any excess parts such as the pouring cavity known as the sprue.

COMPONENT 2: INVESTIGATING AN ENGINEERING PROJECT
LEARNING AIM A - UNDERSTAND MATERIALS, COMPONENTS AND PROCESSES FOR A GIVEN ENGINEERED PRODUCT.

Bike Brake Caliper Research

To get me started I needed to really understand more about what a brake bike caliper is and used for, where they can be purchased and price?

A brake bike caliper is the most common type of brake on the bike. A caliper should be strong, sleek, dependable and simple.

How the brake works is you will pull the lever and then it will compress the rubber material against the metal rim on the bike and it will gradually slow you down or to a stop.

I have used this page to research some bike brakes that have a difference in price range to get an understanding of what is available and that the materials that these will be made from.

£109.99

Shimano Saint M832 & M702N Caliper Front Mount For Road OH Rear - £109.99 | Disc Brakes - Shimano | From Cycle24.co.uk

ICE TECHNOLOGIES front mount High pressure ceramic piston caliper Easy and clear bleeding thanks to one way bleeding caliper and new funnel bleeding tool This has a different shape to the others so for no material is mentioned

£119

Cane Creek EE Regular Mount Brake Caliper | Rim Brakes | Wiggle

£655

Experience the same best-in-class damping power and also light weight and come to repair from websites. The ee 110 caliper brakes are not like with most caliper brake systems that you can't cross combine them with other caliper systems. Shimano, for your high grade aluminum, titanium, and carbon fiber

£1036

This is a different, it integrates hydraulic technology from disc brakes into the calipers, which offers a great alternative without being another offering for the market. Caliper that won't compromise (M7) provide functionality thanks to parallel manufacturing in linked and modular arms. A unique product that is a work of engineering embedded in carbon fiber and 7075 aluminum parts. Method for Computer Numerical Control (CNC) 60756 USD supports via the order online. www.starkbikes.com



UNIFORM UPDATE

Our new branded uniform can now be purchased on the Price & Buckland website. Please note that this is only compulsory for 2022 year 7 intake and this will not be sent out before the week beginning 11 July 2022.



IMPORTANT DATE

Please note that School will be closed on Friday 1 July 2022 due to a Summer Teacher Training Day.

BUS PASSES



Bus passes must be shown to the bus driver both on the way to school and when boarding the bus for the return journey. If a student forgets or loses their bus pass, they must go to the Student Support office to obtain a temporary bus pass between 8 – 8.30am, break time and lunchtime only. Please do not wait until the school day has finished as they will not be issued then and if you have no bus pass to get home the bus driver may refuse you travel.

Lost, Found and Confiscated Items

We still have a number of clothing items such as coats and jumpers that have been handed into our Student Support Office over a period of time. Please check for lost items at home and come and claim what is yours. Any items not claimed by 30th June will be donated to charity.

In addition to this, we also have a number of items that have been confiscated from students whilst in school. Some of these items may be of value and therefore if you believe any of these may belong to your child, can you ask that items are collected at the end of the school day from Student Support.



Internet Safety Tip

Remember to check your security settings often and check who can see your posts.

Book of the Week!

The Boy at the Back of the Class
by Onjali Q. Rauf



There used to be an empty chair at the back of my class, but now a new boy called Ahmet is sitting in it.

He's nine years old (just like me), but he's very strange. He never talks and never smiles and doesn't like sweets - not even lemon sherbets, which are my favourite!

But then I learned the truth: Ahmet really isn't very strange at all. He's a refugee who's run away from a War. A real one. With bombs and fires and bullies that hurt people. And the more I find out about him, the more I want to help.

That's where my best friends Josie, Michael and Tom come in. Because you see, together we've come up with a plan. .

Stop by Room 14 to pick up a copy!

After School Clubs

Homework Club

The club is held on Mondays and Wednesdays in room 36.

Board Games/Lego Club

Miss Corner is running a board game/Lego club in room 12 on a Monday 2:30-3:30.

After School History Club

Students from Year 7 and 8 are invited to our history club which runs every Thursday in room 35.



Drama Club

Running every Wednesday 2:30-3:30
in the Main Hall



Steam Club

For students in Year 7, 8 and 9 STEAM Club started Wednesday 19th of January and runs once a fortnight. We will be doing different Science investigations looking at different topics such as chromatography and forces. If interested please speak to Mrs Porritt (room 48).

Choir

Running every Thursday 2:30 - 3:30
in the Main Hall

Pride Club

Pride Club is open to students from all year groups and has now moved to lunchtime drop in sessions on a Tuesday Week A
(room 18)

After School Reading Club

All students are invited to our Reading Club which runs on a Thursday after school in room 14. Each term we will explore a new book and share our thoughts and opinions on the book, the characters and more. It's a great way to share our love of reading and also for students to make new friends. We look forward to seeing you there,
Miss Gibbs

EXTRA CURRICULAR PE

Our PE department are pleased to announce the return of their extracurricular clubs. Please see below information on the various clubs running, these are open to all within the specified year groups.

Monday - Table Tennis - All Year groups
Netball - All Year groups

Wednesday - Dodgeball - All Year groups

Thursday - Football - All Year groups

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website www.fbec.co.uk

Inspiring learners to succeed as enterprising individuals

Headteacher : Kevin Brennan



Cleaner

12.5 hours per week (whole time permanent)

Hours of work during term time 2.40pm – 5.10pm each day. Different hours of work times apply during school holidays

Grade 1 (Point 3) £9.79 per hour

Further details and an application form are available from the school office and are also available on the school website www.fbec.co.uk following the link to Vacancies.

For an informal discussion about the post please contact Louise Edgar (CFO).

Closing date: 8th July 2022

The College is committed to safeguarding and promoting the welfare of children and young people and to this end any offer of employment will be subject to receipt of a satisfactory CRB Enhanced Disclosure.

The County Council is an Equal Opportunities Employer. We want to develop a more diverse workforce and we positively welcome applications from all sections of the community'

Applicants with disabilities will be invited for interview if the essential job criteria are met.