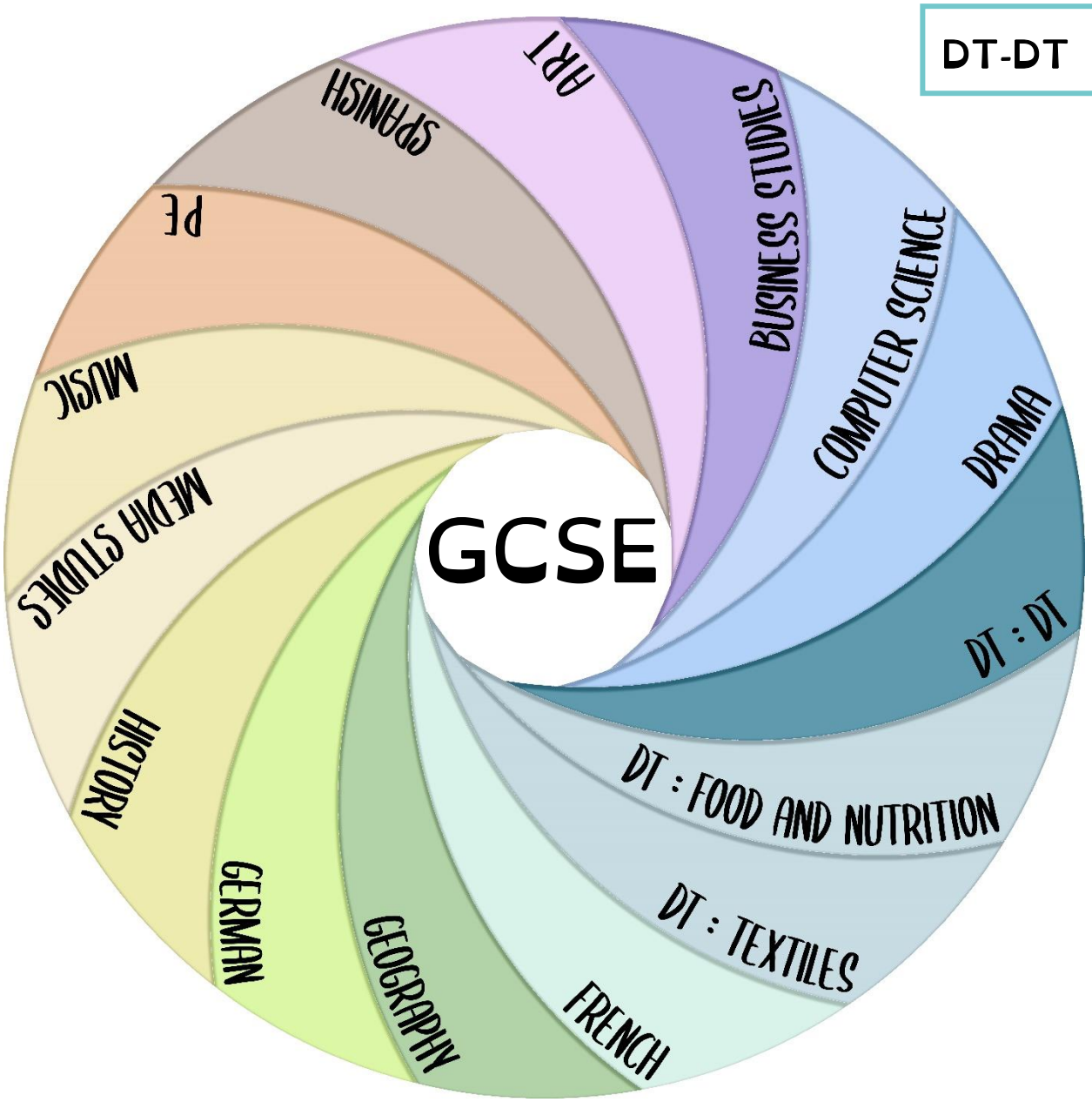
Name: _____

Tutor: _____

Tutor Group: _____

DT-DT



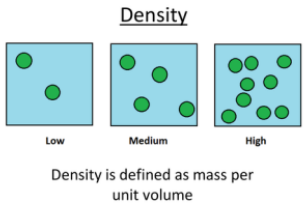
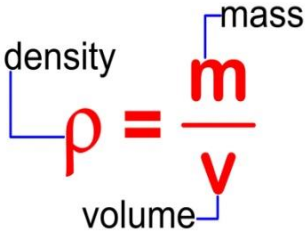
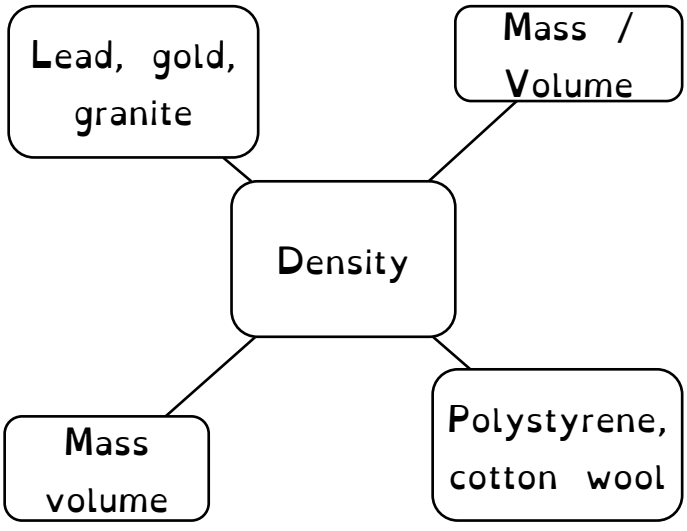
Guildford County School
SPECIALIST MUSIC COLLEGE

GCSE Options

Vocabulary Booklet

VOCABULARY ACTIVITIES

"Density"

Define	Draw	In a sentence	Symbol
Density – the mass of matter per unit volume		Iron has a higher **density** than wood.	
Antonyms	**Synonyms**	**Etymology**	**Simile**
Dispersion Lightness	Concentration Compactness Tightness	From the Latin word 'densus' meaning 'thick' or 'dense'	As dense as marble
Play:	**Draw a Word Map**		**Gesture**
Ideas include: Pictionary Taboo Charades 20 questions			

DT: DT

Keyword	Definition
Accuracy	When drawings or objects are measured carefully to ensure all dimensions are correct.
Adobe Illustrator	A vector graphic computer program that enables drawings to be accurate as well as creative
Alloy	Are mixtures of different metals. Metals are mixed to give them different physical and working properties, improving them for different uses. Examples: stainless steel and brass.
CAD/CAM	Computer Aided Design and Computer Aided Manufacture means the using computers to design and make products.
Compass	A device for drawing circles of different sizes
Component	A small or large part/piece that is joined to other components to form a whole product. Example: a screw, a nut, a bolt, a door etc.
Composite Materials	Composite materials are made from two or more materials that have contrasting properties. Combining materials can lead to improved materials. Example: Concrete and Glass/Carbon Reinforced Polymer (GRP).
Digital rendering	Where the computer adds in colour or gradient to create a 3D drawing
Dimensions in mm	How we measure and draw lines in millimeters (mm) to create accurate drawings
Drawing board	A device for holding paper with a moveable straight edge this makes drawing straight lines and angles easier
Ferrous Metal	Metals that contain iron. All ferrous metals are magnetic and unless they are treated, they rust.

DT: DT

Keyword	Definition
Finite resources	Are resources that will eventually run out if we keep using them at the speed and amount that we are. Examples: Oil, gas and coal.
Hardwood	Comes from the types of trees that shed their broad leaves annually. These are also called 'Deciduous' trees. They are slow growing.
Jig	A device that holds a piece of work and guides the tool operating on it. For example: when drilling a jig might be used to help ensure the holes are drilled in the correct places each time.
Laser cutter	A machine that uses a high-power laser to cut and etch a variety of materials with a high degree of accuracy
Life Cycle Assessment	Assessment used to understand the environmental impact of a product at every stage of its 'life'. Example: obtaining the materials, to the transport of these to the disposal of the product once it has been manufactured.
Linkage	Type of mechanism based on joining levers together to make a linkage. Linkages change an input motion + force into an output motion + force. They often transmit force and motion at a distance from the initial point.
Manufactured board	Wooden board that are made from fibres, chips, blocks or layers of different timber (wood) bonded together using adhesives (glue). Examples: MDF, Chipboard and Plywood
Marking Out	Workshop process carried out to prepare materials for cutting and shaping. Marking out should always be done carefully to reduce wasting materials.

DT: DT

Keyword	Definition
Mechanism	Mechanisms help to make things move and reduce the amount of effort needed. Mechanisms work by using an input force to create an output force/movement. Examples: gears, pulleys, linkages, cams and followers, levers.
Non Ferrous Metal	Metals that do not contain iron. They are not magnetic. When compared to 'Ferrous' metals, they are resistant to corrosion and are more expensive. Examples: aluminium and gold.
Non Finite	Are resources that are renewable and will not run out. These resources can be replaced quickly to meet the demand for them. Example: Fast growing timber (trees)
Orthographic Drawing	A way of drawing a 3D object from three separate views top (plan view) front and side views.
Parallel lines	Two or more lines that run along-side each other in parallel
Perspective drawing	A way of drawing 3D objects to make them look realistic
Physical Property (of materials)	How a material is recognised based upon what it looks like, feels like, how heavy it is, if it can conduct heat etc.
Polymer	Also known as plastic, polymers are made by people using finite resources. Polymers are used for a wide variety of different products.
Production/ Manufacturing Aid	A template, tool, jig, or component used to speed up, improve accuracy or perfect the manufacture of a product. Example: steel rule to help ensure accurate measuring.

DT: DT

Keyword	Definition
Prototype	A pre-production working model of a product that is used to communicate and test a concept.
Protractor	A device for measuring angles and to help with drawing accurate angles.
Quality Control and Assurance	Are specific tests and processes (what is tested) that are used to check and inspect the quality of a product or components of products, against set standards and specification criteria. Quality assurance relates to the actual tests themselves (how products are tested) that are undertaken to help ensure that products perform to their expected function and meet the needs of the user.
Risk Assessment	A study to identify, the hazards and dangers that could harm a person when doing practical work. It is important to remove hazards if possible or control the level of risk involved for a person, when doing practical work.
Scale drawings	A way of drawing products that are either smaller, larger or the right size
Scales or Production	Products are made using different scales of production and production methods (ways of making). The method of production that is used will depend on the product being made, the materials being used and the technology available. It will also be determined by the amount of the product that is required and the scale on which it needs to be produced.
Set square 90 30 60	A triangular measuring device that enables the drawing of accurate 90-, 30- and 60-degree angles

DT: DT

Keyword	Definition
Smart Materials	Materials that respond or change to external stimuli in environment. Example: temperature, light and moisture etc.
Softwood	Comes from the types of trees that keep their pines and leaves all year round. These are also called 'Coniferous' or 'Evergreen' trees. They are fast growing.
Solidworks	A 3D modelling software that enables the user to create simple to complex 3D models
Standard Components	A standard component is an individual part or component, manufactured in large quantities, to the same specification (such as size, weight, material etc). Example: is a steel bolt or screw. Standard components are supplied in standard or common sizes and this makes them easy to obtain and use with tools and equipment.
Sustainability	Finding alternative materials and different ways to avoid of the disappearance of natural resources. Example: using recyclable materials for products.
Template	A shaped piece of rigid material (acrylic for example) that can be drawn around when marking out for cutting out, shaping, or drilling. A template is used to help ensure that multiple pieces to be made, are the same.
Thermoplastic/ Thermoforming Polymers	Polymers that can be made into different shapes, using heat. Thermoforming polymers can be easily melted, moulded and re-shaped using heat. They are recyclable. Example: Acrylic used for baths, signs and can be used instead of glass.

DT: DT

Keyword	Definition
Thermosetting	Polymers that can be made into different shapes once, using heat. Thermosetting polymers cannot be re-shaped again. Example: Melamine Formaldehyde (MF) which is used for tableware and kitchen worktops.
User Centred Design (UCD)	User-centred design (UCD) is an iterative design process in which designers focus on the users and their needs in each phase of the design process. In UCD, design teams involve users throughout the design process via a variety of research and design techniques, to create highly usable and accessible products for them. Designers modify and adapt their designs as they progress using the feedback of the users to help them develop their designs and iterations.
Vanishing point	Where lines meet at a point on the horizon to create 3D drawings
Vinyl cutter	A CAM machine that cuts self-adhesive vinyl into specific shapes making stickers
Working Property (of materials)	How a material reacts to other factors/conditions/forces etc. For example: the ability for a material to be bent or shaped without breaking.