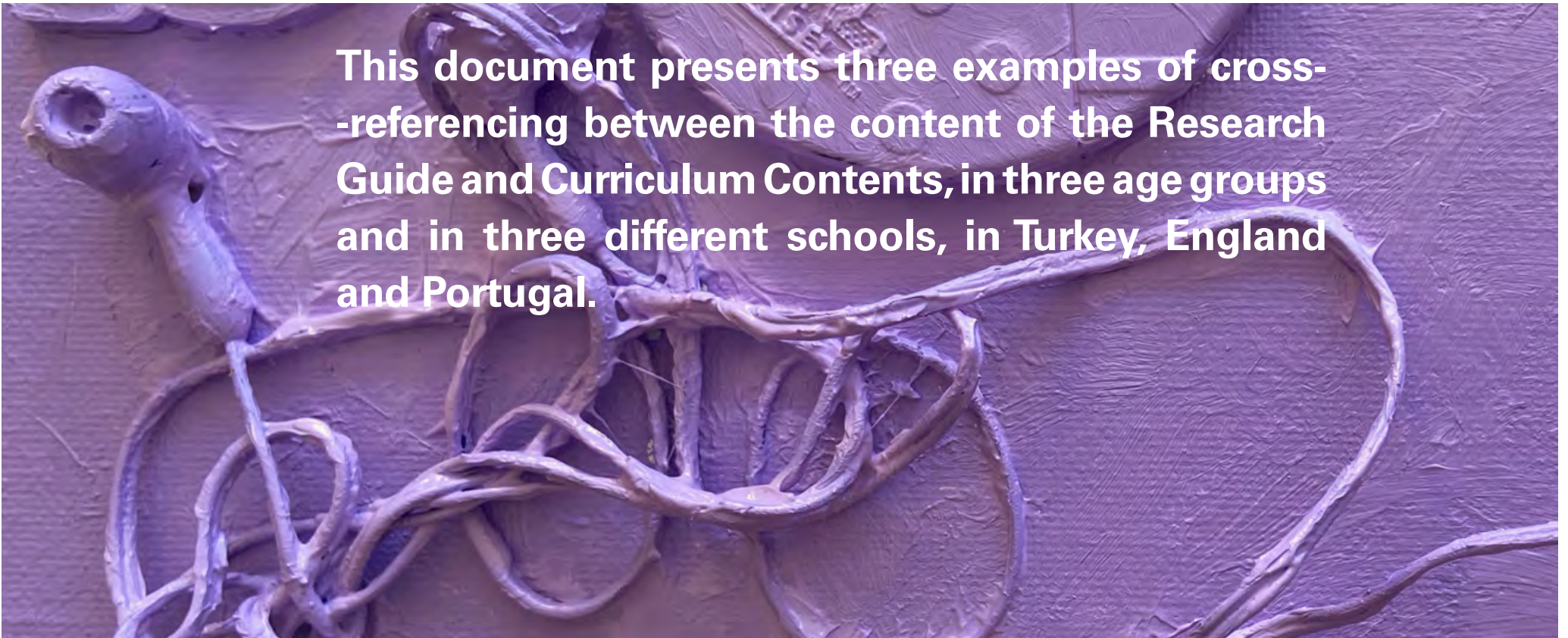# BRIDGE BETWEEN THE RESEARCH GUIDE AND THE CURRICULUM

This document presents three examples of cross-referencing between the content of the Research Guide and Curriculum Contents, in three age groups and in three different schools, in Turkey, England and Portugal.

STUDENTS 5 TO 9 YEARS OLD

A bridge between the curricular contents for teaching children from 5 to 9 years old, made by educators and teachers of the Escultor António Fernandes de Sá School Grouping, Vila Nova de Gaia, Portugal.

RESEARCH GUIDE

SYSTEM

1. WORLD, WORK, INDUSTRY & CONTEMPORANEITY

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Industry	Knowledge of the Physical and Natural World	Understand and identify differences and similarities between different materials (metals, plastics, paper, wood, etc.) relating their properties with objects made from them. Identify, describe and seek explanations for phenomena and transformations they observe in the physical and natural environment.	Anticipate and express their ideas about what happens when forces act on objects in situations they observe or experience. Demonstrate concern for the environment in everyday life.
Buttons	Technological world and use of technologies	Recognise the technological resources of their environment and explain their functions and advantages.	Talk about technological resources existing in their environment, revealing some knowledge of their usefulness.
Machine	Technological world and use of technologies	Recognise the technological resources of their environment and explain their functions and advantages.	Talk about technological resources existing in their environment, revealing some knowledge of their usefulness.

Education	Technological world and use of technologies	Develop a critical attitude towards the technologies they know and use Recognise the technological resources of their environment and explain their functions and advantages. Use different technological support in their daily activities, carefully and safely.	Talk about technological resources existing in their environment, revealing some knowledge about their usefulness. Imagine and create, in two or three dimensions, 'machines', robots or instruments with a specific purpose.
Fundamental principles and rights at work	Society	To recognise the importance of dialogue, negotiation and compromise in the peaceful resolution of conflict situations. Recognise the importance of the Universal Declaration of Human Rights for the construction of a more just society.	Formulation of hypotheses with a view to providing response to a problem that arises in the face of a particular phenomenon. Organization of debates that require the formulation of opinions. Organization of debates that require the formulation of opinions; - Conducting games, role-playing and simulations.
Gender	Personal and Social Training Society	Develop respect for others and their opinions, with an attitude of sharing and social responsibility. Recognise the multiple belonging of each person to different groups and different groups and communities. Recognise the importance of the Universal Declaration of Human Rights for the construction of a fairer society.	Accept that boys and girls, men and women can do the same things at home and outside the home. Formulate hypotheses in order to respond to a problem that arises in relation to a certain phenomenon. Organise debates that require the formulation of opinions. Organising debates that require the formulation of opinions and simulations.
Work hours	Social World	Recognise basic units of daily, weekly and annual time, understanding the influence they have on their lives.	Associate routines with certain times of the day. Refer to and identify the activity associated with some occupations they come into contact with in everyday life (parents, relatives, community). Use terms such as day, night, morning, afternoon, week, month in their narratives

2. WORKERS AND WORK SHIFTS

1ST SHIFT LABOUR/CONTRACT

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Natural resources	Knowledge of the Physical and Natural World	- Understand and identify differences and similarities between various materials (metals, plastics, paper, wood, etc.) relating their properties to objects made from them.	Demonstrate concern for the environment on a daily basis. Enjoy and appreciate green spaces and contact with nature
Raw material	Technology	Identify technological objects (analogue and digital) used in the past and present, relating them to the materials used in their manufacture, in order to notice permanence and evolutions.	
Sustainability	Knowledge of the Physical and Natural World Society/ Nature/ Technology Technology	Express concern for nature conservation and respect for the environment. Recognise the existence of goods common to all mankind (water, air, soil, etc.) and the need to preserve them. Produce technological solutions by reusing or recycling materials (windmill, solar oven, etc.).	Demonstrate concern for the environment on a daily basis. Enjoy and appreciat§e green spaces and contact with nature. Free oral presentations, followed by questioning by the class; Presenting different points of view, as a response to responding to polemical questions posed by the teacher or teacher or student(s); Development of solidarity actions, as a response to problem situations.

Experiment	Introduction to scientific methodology	To take ownership of the process of developing scientific methodology in its different stages: questioning, hypothesising, envisioning how to find answers, experimenting and collecting information, organising and analysing information to reach conclusions and communicating them.	Demonstrates curiosity and interest in their surroundings, observing and asking questions that show their desire to know more. Demonstrates involvement in the process of discovery and exploration and shows satisfaction with the new knowledge they have built up. Finds tentative explanations to answer the questions posed.
Health & safety	Personal and social training – independence and autonomy.	Taking care of themselves and taking responsibility for their safety and well-being.	Awareness of the physical risks they may face and adopts safety rules at home, in the kindergarten and on the street concern for the well-being and safety of other children, alerting the adult when they notice that a child is in danger.
Affirmative action	Personal and Social Training - Independence and Autonomy	Acquire the ability to make choices, take decisions and assume responsibilities, taking into account their own and other people's well-being. Develop a critical and active attitude towards what is happening in the world around them.	Choose the activities they want to carry out and progressively acquires more autonomy in the selection of available resources to carry them out, without disturbing the group. Takes charge of the tasks they have undertaken to carry out, carrying them out with increasing autonomy. Faced with opinions and perspectives different from their own, listen, question and argue, seeking to reach negotiated resolutions or conclusions.

Discrimination	Personal and social training - Democratic Coexistence and Citizenship	Develop respect for others and their opinions, with an attitude of sharing and social responsibility. Respect diversity and show solidarity with others.	Recognise the diversity of characteristics and habits of other people and groups, showing respect for children and adults, regardless of physical differences, abilities, gender, ethnicity, culture, religion or others. Identify in his/her social context some forms of injustice or discrimination (based on ethnicity, gender, social status, disability or others), proposing or recognising ways to solve or alleviate them.
Corporate identity	Social World Knowledge Society	Knowing central elements of their community, highlighting physical, social and cultural aspects and identifying some similarities and differences with other communities.	Understand and accept the diversity of habits, clothing, food, religions, etc. characteristic of different cultural realities. Identify some manifestations of the cultural heritage and landscape of their environment and of other environments, such as traditions, architecture, festivities.

2ᴺᴰ SHIFT REST/PRIVACY

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Family identity	Personal and Social Development - Construction of identity and self-esteem	Recognise and value bonds of social and cultural belonging.	Recognise their belonging to different social groups (family, school, community, among others). Represent roles and situations of their family culture in moments of dramatic play.

3ᴿᴰ SHIFT LEISURE AND ACTION

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Association, Collective bargaining and action	Society	Recognise and value bonds of social and cultural belonging.	
Memory	Social World Knowledge Society/Technology	Establish relationships between the present and the past of their family and community, associating them with objects, life situations and cultural practices. Communicate knowledge about places, regions and events.	Reveal an interest in knowing the similarities and differences between what happens in their own time and in the life times of their parents and grandparents.
Industrial heritage	Social World Knowledge Society/Technology	Establish relationships between the present and the past of their family and community, associating them with objects, life situations and cultural practices. Communicate knowledge about places, regions and events.	Reveal an interest in knowing the similarities and differences between what happens in their own time and in the life times of their parents and grandparents.

STUDENTS 10 TO 14 YEARS OLD

A bridge between the curricular contents for teaching children from 10 to 14 years old, made by teachers of Nezihe Derya Baltali Bilim ve Sanat Merkezi, Turkey.

RESEARCH GUIDE

SYSTEM

1. WORLD, WORK, INDUSTRY & CONTEMPORANEITY

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Industry	Geography	Getting knowledge of the Industry in the region * Give information about the types of industry in the region * Compare some industrial types * Advertise a local industrial region	*Asking for and giving information about the ways of getting information about local industry* - giving advice about means of gathering information of local industry
Buttons	Automatization	Expressing advantages and disadvantages of using automatization or using computers in industry - Suggesting solutions to the problems with computers - *Complaining about complicated operations instead of mechanical buttons*	Students work in groups and state their ideas about *complicated operations* instead of using mechanical buttons
Machine	Social Sciences	Expressing opinions about the future of machines Narrating an event connected to a machine	Students are encouraged to narrate an event connected to a machine

Education	Social Sciences	Giving information to students to learn to follow a set of rules when operating a machine, one needs to comply with its handling instructions for the machine to work. Beyond the instruction of rules, students will discuss what can education teach to contribute to the improvement of the living conditions of workers.	Comparing school life in an industrial zone school to an ordinary school.
Worker	Social Sciences	Describing Craftsmanship and urban development in Social Sciences lesson. Describing various business types	*Making requests for workers on business.*
Fundamental Principles and Rights at work	Literature Lesson	Expressing attitudes in Fundamental principles and rights at work Expressing feelings on human rights from the right to decent work and freedom of association to equal opportunity and protection against discrimination. Specific rights related to the workplace include health and safety in the workplace and the right to privacy at work, amongst many others will be debated by students.	
Gender	Literature Lesson	Reporting one's ideas or opinions. Discussing opinions about relations in family and society about gender. Discussing opinions about relations with different groups.	Group discussion will be applied guided by teacher.

2. WORKERS AND WORK SHIFTS

1ˢᵀ SHIFT LABOUR/CONTRACT

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Industrial landscape	Geography Getting knowledge of the Industrial landscape in the region	Gathering information about the Industrial landscape in the region. Describing a place in a region regarding the feasibility for industry.	Students will use digital maps and locate these Industrial landscapes in the region.
Natural resources	Science Lesson	Asking for and giving scientific information about natural resources. Defining concepts of natural resources. Introducing various natural resources.	Students identify the natural resources they see around by filling in a chart. They record the natural resources in a science chart.
Sustainability		Expressing opinions about environmental problems. Stating solutions for environmental problems. Discussing responsibilities of individuals and institutions for their environment and the importance of sustainability.	
Transport and distribution		Making a request about transportation and distribution of goods. Making a reservation about transportation _Complaining about transportation or distribution of materials._	

Industrial building		Giving information about Industrial buildings in our region.	By offering various workshops (connected with the industrial heritage) for secondary school pupils and the possibility of a visit, working also as a museum. The organized tours help students to discover important clues about the plant in a treasure-hunt game.
Experiment	Science Lesson	Finding out the importance of experiments. Science Experiments are usually methodical procedures that are conducted to counter, support and justify the hypothesis. *Experiments may vary depending upon the scale and goals. But they are relevant depending upon the procedure and can rely on the logical analysis of the results.*	Students identify the importance of experiment. Students illustrate the causes and effects through demonstration and detects the outcomes when a particular factors are employed.
Health & safety	Health Education	Giving opinions about healthy life. Giving advice for a healthy life. Stating reason and result related to health and safety. Giving information about health precautions.	Giving information about casualties and first aid. Expressing opinions on injuries and illnesses.
Division of labour	Politics	Discussing responsibilities of individuals institutions for division of labour. *Hypothesizing about division of labour and warning about problems that will arouse in case of not equal division of labour.*	
Gender gaps	Turkish Language	Stating the reasons why there is gender gap in the workplace. Expressing opinion about gender gap and giving information how gender roles affect the workplace.	Students discuss how they can *close* gender gap at work.
The Right to work	Turkish Language	Giving opinion on unemployment problems Asking for and giving statistical data related to unemployment. Expressing reasons for unemployment.	Suggesting solutions for unemployment problems.

2ND SHIFT REST/PRIVACY

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Private housing and industrial settlements		Describing a district in an industrial settlement. Discussing lifestyles in private housing and industrial settlements. Comparing housing in industrial zones to hosing in other districts.	Students write down their ideas about private housing in industrial settlement and they compare and contrast housing in industrial areas and in other districts.
Childcare	Health Education	Giving information about hygiene. Giving information about nutrition. Warning someone about health problems. Stating various diseases in childcare.	Students work in pairs and write down their ideas about hygiene and nutrition Students talk about various diseases in childhood.
Annual leave	Health Education	Expressing opinions about professions and annual leave. Comparing advantages and disadvantages of different jobs.	Work in groups and read the opening paragraph of a text about professions, then look at the graph and interpret the jobs. Students discuss why some people change their jobs and the importance of an annual leave.

3RD SHIFT LEISURE AND ACTION

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Memory	History Lesson	Expressing past ability. Expressing ideas and beliefs in the past. Expressing opinions related to past and present.	Students look at the photographs of past industrial scenes and tell how they are related to present day. They try to answer in what ways people are different than they were in the past.
Industrial heritage	Citizenship and Human Rights	Stating the industrial heritage in our cities. Expressing opinion about reuse of industrial heritage and giving information how industrial heritage can be renovated.	Students work in pairs and write down their ideas.
Work-life balance		Stating what a good work-life balance look like. Finding out it can be challenging if working people also have caring responsibilities, a demanding boss or health difficulties.	Students identify how a worker know if hi/her work-life balance is unhealthy.

STUDENTS 15 TO 18 YEARS OLD

A bridge between the curricular contents for teaching youngsters from 15 to 18 years old, made by teachers from the Department of Design and Enterprise at Launceston College, Cornwall, UK.

RESEARCH GUIDE

SYSTEM

1. WORLD, WORK, INDUSTRY & CONTEMPORANEITY

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Industry	**GCSE** Design and technology	Students must know and understand the impact of new and emerging technologies on contemporary and potential future scenarios in relation to industry.	Students study the impact of new and emerging technologies on: the design and organisation of the workplace including automation and the use of robotics. Buildings and the place of work. Tools and equipment.
Buttons	**GCSE** Design and technology	The use of buzzers, speakers and lamps, to provide functionality to products and processes.	Students study the functions of mechanical devices to produce linear, rotary, reciprocating and oscillating movements.
Machine	**GCSE** Design and technology	Mechanical devices.	Students study the functions of mechanical devices to produce linear, rotary, reciprocating and oscillating movements.

Education	**BTEC Tech Award** in Health and Social Care (14-16 years)	Factors affecting growth and development	Learners will explore the different factors that can affect an individual's growth and development. Different factors will impact on different aspects of growth and development. Social and cultural factors, to include: educational experiences.
Systemic industrialization	**A'level business** (Advanced level course for 16-18 year old students)	Production	Students study different methods of production and external economies of scale.
Worker	**A'level business** (Advanced level course for 16-18 year old students)	People	During the course student study a 'theme' called people. This involves studying how workers are recruited, trained, motivated and manahed and led.
Fundamental principles and rights at work	**A'level business** (Advanced level course for 16-18 year old students)	Legislation	Students study the range of legislation in place in the UK to protect workers' rights including recruitment, contracts and dismissal.
Gender	**GCSE History** (14-16 years old)	Equality and rights	Women's rights: the campaign for women's suffrage, reasons, methods and responses; role of individuals, including the Pankhursts; the reasons for the extension of the franchise and its impact; progress towards equality in the second half of the 20th century.
Work hours	**A'level business** (Advanced level course for 16-18 year old students)	Legislation	Students study the range of legislation in place in the UK to protect workers' rights including recruitment, contracts and dismissal.
Life-long learning	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities;business decisions and strategy; global business).	In the 'people' section of the course students learn about different types of training and its benefits to employees.

1. WORKERS AND WORK SHIFTS

1ST SHIFT LABOUR/CONTRACT

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Natural resources	**GCSE** Geography (14-16 year old students)	The challenge of resource management. Food, water and energy are fundamental to human development.	The significance of food, water and energy to economic and social well-being. An overview of global inequalities in the supply and consumption of resources.
Raw material	**GCSE** Geography (14-16 year old students)	Urban issues and challenges	Students study how urban growth has created opportunities: social: access to services – health and education; access to resources – water supply, energy economic: how urban industrial areas can be a stimulus for economic development
Sustainability	**GCSE Geography** (14-16 year old students)	Urban sustainability requires management of resources and transport.	Features of sustainable urban living: water and energy conservation waste recycling creating green space. How urban transport strategies are used to reduce traffic congestion.
Transport and distribution	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students study the different distribution channels that businesses use and analyse/ evaluate their appropriateness.
Industrial building	**GCSE** Design and technology	Students must know and understand the impact of new and emerging technologies on contemporary and potential future scenarios in relation to industry.	The impact of new and emerging technologies on: the design and organisation of the workplace including automation and the use of robotics. Buildings and the place of work. Tools and equipment.

Networks	**GCSE** Computer Science	Wired and wireless networks	Students study different types of networks (LAN, WAN) and the factors affecteting their performance and the hardware needed. Also included is the study of the internet and virtual networks.
Production chain	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students study methods of production including JIT methods, stock control, production effeciency.
Assembly line	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students learn about the origins of the production line (The Ford Motor Company) and its links to theories of Scientific Management Theory (Frederick W. Taylor). Students also examine production processes and methods to improve effeciency.
Marketing and brands	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students study marketing in detail including; the meaning of a market, types of market, methods of promotion, the importance of branding.
Health & safety	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students study legisaltion that affect business including health and safety.
Division of labour	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students study motivation theory including Frederick Taylor's theory of scientific management and how it influenced the Ford Motor Company. Division of labour was a key element of this theory.
Discrimination	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students study the difference between legal and unfair decrimination. They learn about the introduction of the Eqaulity Act 2010 which replaced the Sex Descrimiation Act 1975.

Equal pay	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Different areas of businesses affected by legislation. Study of legislation that affects equal pay - including the introduction of the Equal Pay Act in the UK in 1970.
Gender gaps	**GCSE History** (14-16 years old)	Equality and rights	Women's rights: the campaign for women's suffrage, reasons, methods and responses; role of individuals, including the Pankhursts; the reasons for the extension of the franchise and its impact; progress towards equality in the second half of the 20th century.
Corporate identity	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	As part of the marketing aspect of the course students learn about the importance of mission statements and branding which are used to support the corporate identity of organisations.
The Right to work	**GCSE Citizenship** (14-16 years)	What are the principles and values that underpin British society?	The key principles and values underpinning British society today. The human, moral, legal and political rights and the duties, equalities and freedoms of citizens. Key factors that create individual, group, national and global identities.

2ND SHIFT REST/PRIVACY

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Private housing and industrial settlements	**A'level geography** (16-18years)	Contemporary urban environments	Urbanisation and its importance in human affairs. Global patterns of urbanisation since 1945. Urbanisation, suburbanisation, counter-urbanisation, urban resurgence. The emergence of megacities and world cities and their role in global and regional economies.
Family identity	**BTEC Tech Award** in Health and Social Care (14-16 years)	Factors affecting growth and development. Coping with change caused by life events.	Learners will explore the different factors that can affect an individual's growth and development. Social and cultural factors, to include: personal relationships with friends and family. Learners will explore how individuals can adapt or be supported through changes caused by life events. People may react very differently to the same type of event. Sources of support: family, friends, partners
Childcare	**BTEC First Award** in Children's Play, Learning and Development (14-16 years)	Give learners the opportunity to gain a broad knowledge and understanding of, and develop skills in, the early years sector, for example, of child development and using play to promote child development.	To develop your knowledge and understanding of child development. Learners look at how early years settings use play to promote children's learning and development at different ages and stages, including babies, and the types of play opportunities that early years settings usually provide. Learners look at some of the key principles that are reflected in best practice in early years.
Family protection	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students learn about the introduction of legislation concerning maternity and paternity rights. In addition students learn about how many organisations have introduced flexible working to allow parents to better manage the 'work-life balance'.

Annual leave	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students study the range of legislation in place in the UK to protect workers' rights including the right to paid annual leave.

3RD SHIFT LEISURE AND ACTION

Research Guide Concept	General Subjects	General subject main objectives	Specific objectives
Association, Collective bargaining and action	**A'level business** (Advanced level course for 16-18 year old students)	The study of four main themes (Marketing and people; Managing business activities; business decisions and strategy; global business).	Students learn about the roles of trade unions in society and the process, advantages, disadvantages of collective bargaining. Students are also taught about industrial action, its meaning and the different methods that can be deployed.
Memory	**A'level psychology**	Introductory topics in Psychology	The multi-store model of memory: sensory register, short-term memory and long-term memory. Features of each store: coding, capacity and duration. Types of long-term memory: episodic, semantic, procedural. The working memory model: central executive, phonological loop, visuo-spatial sketchpad and episodic buffer. Features of the model: coding and capacity.
Industrial heritage	**A'level history** (Advanced level course for 16-18 year old students)	Industrialisation and the people: Britain, c1783–1885	Economic developments: industrialisation; the growth of cotton and other industries; changes in power; the condition of agriculture.