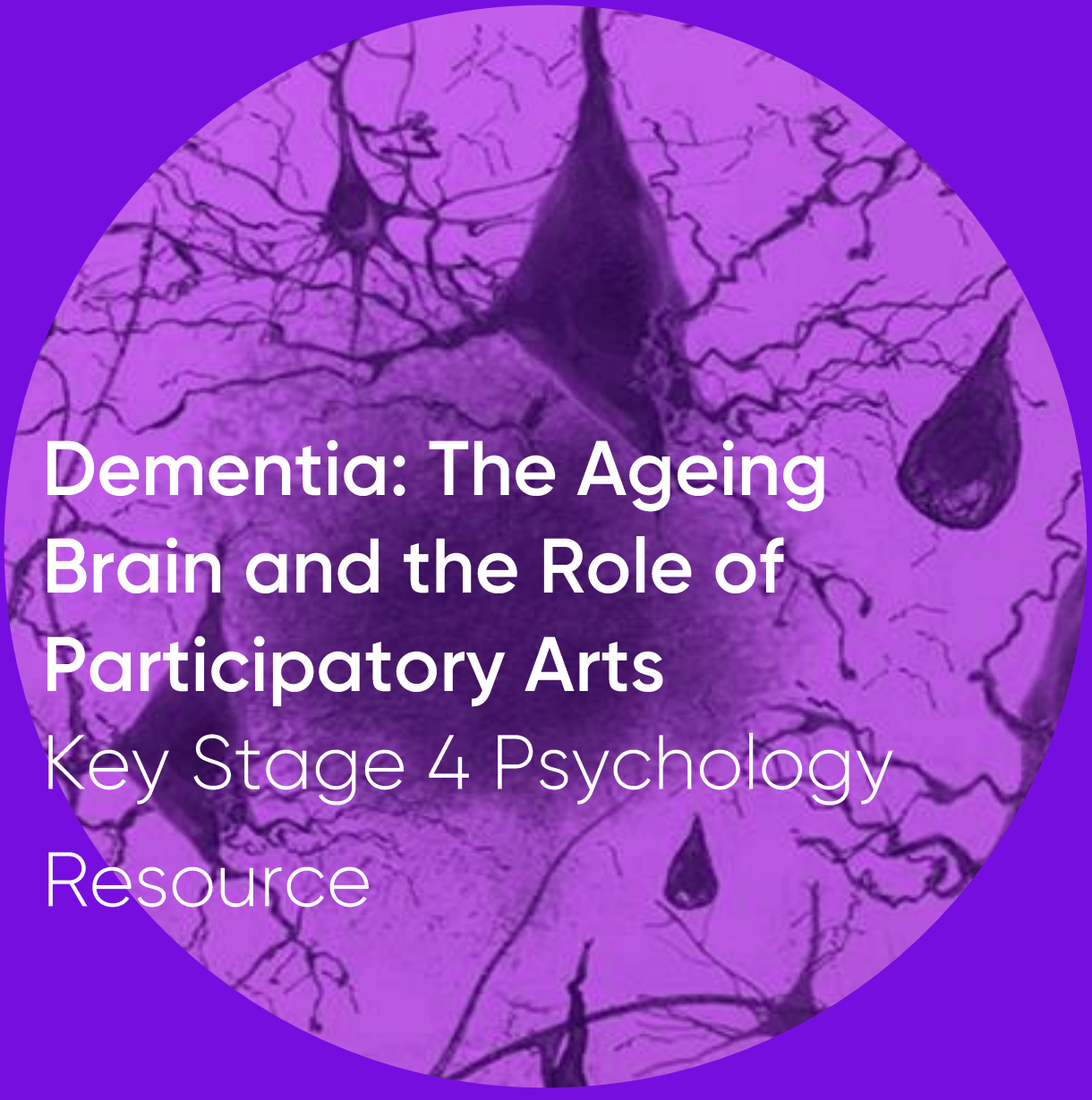
Research
Based
Curricula



Dementia: The Ageing Brain and the Role of Participatory Arts

Key Stage 4 Psychology Resource

2019

BROUGHT TO YOU BY RBC ACCESS ED

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For Pupils
Welcome

To get into the best universities, you must demonstrate that you are intellectually curious, and will make the most of the wonderful academic opportunities available to you.

One of the best ways of demonstrating this, is by going above and beyond what is taught in school and studying something that is not on the curriculum.

This resource will give you exactly such an opportunity. You will have something interesting to write about in your application to university, something interesting to talk about in a university interview, and open whole new areas of study you might be interested in!

You will develop valuable academic skills as you go, that we have marked out with gold badges (see the next page on university skills). As you work through the resource you can look out for these badges so that you can explain which skills you have developed and what you did to demonstrate them. Developing these skills will help you get university ready!

If you have any questions while you are using the resources in this pack, you can contact your teacher or email us directly at schools@access-ed.ngo.

Good luck with your journey to higher education!

For Pupils
University Skills

To complete this resource, you will have to demonstrate impressive academic skills. When universities are looking for new students, they will want young people who can study independently and go above and beyond the curriculum. All of these skills that you will see here will demonstrate your abilities as a university student – while you're still at school!

Every time you have to look something up, or write up a reference you are showing that you can work independently. Every time that you complete a challenging problem or write an answer to a difficult question, you might demonstrate your ability to think logically or build an argument. Every time that you evaluate the sources or data that you are presented with, you are showing that you can "dive deep" into an unfamiliar topic and learn from it.

Here are the skills that you will develop in this course:

independent research	your ability to work on your own and find answers online or in other books
creativity	your ability to create something original and express your ideas
problem solving	your ability to apply what you know to new problems
building an argument	your ability to logically express yourself
providing evidence	your ability to refer to sources that back up your opinions/ ideas
academic referencing	your ability to refer to what others have said in your answer, and credit them for their ideas
deep dive	your ability to go above and beyond the school curriculum to new areas of knowledge
source analysis	your ability to evaluate sources (e.g. for bias, origin, purpose)
data interpretation	your ability to discuss the implications of what the numbers show
active reading	your ability to engage with what you are reading by highlighting and annotating

For Teachers
RBC Guide

Programme Aims

The Research-Based Curriculum aims to support student attainment and university progression by providing classroom resources about cutting-edge research at local universities. The resources are designed to:

- ✓ promote intellectual curiosity through exposure to academic research
- ✓ stretch and challenge students to think deeply about content that may be beyond the confines of the curriculum
- ✓ develop core academic skills, including critical thinking, metacognition, and written and verbal communication
- ✓ inform students about how subjects are studied at university, and provide information, advice and guidance on pursuing subjects at undergraduate level

Content

The programme represents a unique collaboration between universities and schools. Trained by AccessEd, PhD Researchers use their subject expertise to create rich resources that help bring new discoveries and debates to students.

The Research-Based Curriculum offers ten modules suitable for either KS4 or KS5 study. The modules span a range of disciplines, including EBacc and A-level subjects, as well as degree subjects like biochemistry. Each module includes six hours of teaching content, supported by student packs, teacher notes and slides. All modules are available online and free of charge for teachers at select schools.

Delivery

Resources are designed to be used flexibly by teachers. The resources can be completed by students individually or in groups, in or out of the classroom.

For Teachers
RBC Guide

Here are five examples of delivery options:

Extra-Curricular Subject Enrichment Clubs

The resources can be completed in small groups (4-8 pupils) across a series of weekly lunch clubs or after-school clubs. Groups can reflect on their learning by presenting a talk or poster on the subject matter at the end of the course.

University Access Workshops

The resources can be used by students to explore subjects that they are interested in studying at university. This can inform their decision making with regards to university degree courses, and allow students to write more effective personal statements by including reflections on the Research-Based Curriculum.

Research Challenge

The resources can be used to ignite curiosity in new topics and encourage independent research. Schools could hold a research challenge across a class or year group to submit a piece of work based on the resources. Pupils could submit individually or in small groups, with a final celebration event.

Summer Project

Resource packs can function as 'transition' projects over the summer, serving as an introduction to the next level of study between KS3 and KS4, or KS4 and KS5. Students could present their reflections on the experience in a journal.

Evidence

The Research-Based Curricula programme builds on the University Learning in Schools programme (ULiS), which was successfully delivered and evaluated through the London Schools Excellence Fund in 2015. The project was designed in a collaboration between Achievement for All and The Brilliant Club, the latter of which is the sister organisation of AccessEd. ULiS resulted in the design and dissemination of 15 schemes of work based on PhD research for teachers and pupils at Key Stage 3. The project was evaluated by LKMCo. Overall, pupils made higher than expected progress and felt more engaged with the subject content. The full evaluation can be found here: ULiS Evaluation.

Questions?

For more information contact hello@access-ed.ngo

Introduction to Topic Dementia and Participatory Arts

The topics within this pack will include:

The Anatomy of the Functioning Human Brain

Alzheimer's Disease

Types of dementia

Approaching Dementia More Positively

Dementia, Society and the Role of Participatory Arts

The Benefits of Using Participatory Arts for People with Dementia

The prevalence of dementia is steadily increasing internationally. According to Alzheimer's Society (2018), it is estimated that over 1 million people will be living with dementia in the United Kingdom by the year 2025. Not only is the growing prevalence of dementia a concern, but past statistics have shown that about one third of all people living with dementia in the UK are living at home alone. This is troubling, given that these individuals are at risk of less access to care, support and social relationships, all of which may contribute to premature death. Although researchers are continuing to work on a way of reversing and preventing dementia, there is currently no cure for it; there are only medications that treat some of the symptoms. With no signs of a cure on the horizon, our focus must turn to how we can improve the daily lives of people living with a diagnosis of dementia. This is the motivation for my research project, which explores how the use of community-based participatory arts activities might benefit the health, wellbeing and quality of life of people living with dementia and their caregivers.

Within recent years, there has been a growth in the promotion of arts across health, wellbeing and social care services. Research to date has demonstrated that creative activities can have benefits for people with dementia, such as more positive emotions, improved social interactions, better memory recall and improved wellbeing. However, given that research within dementia and arts is relatively young, the evidence base is somewhat limited and there is little consensus on what type of creative participatory activity or approach is better: is it music, drama, dance, or all combined? One of the main aims of my research project is to this find out.

The field of psychology has helped to develop our understanding of how arts can have a positive impact on people with different physical, psychological, and neurodegenerative health diagnoses. This pack will focus specifically on dementia.

Introduction to Subject Psychology at University

Psychology is a diverse discipline that involves the scientific study of mind, thought, brain and behaviour. The overarching aim of all psychologists is to better understand the mental processes and behaviours of humans and non-humans. Psychology may overlap with other subjects including anthropology, health sciences, linguistics, neuroscience and sociology.

Since the late 19th Century, the content and application of Psychology degrees has continued to grow with many different options available to new students. Nowadays, most undergraduate psychology degrees will cover the following main topics in the first years of study:

Cognitive Psychology – mental processes including memory, attention, thinking and language.

Developmental Psychology – growth and development throughout the lifespan, from childhood to older age.

Social Psychology – the role of relationships and social interactions for individuals and groups.

Psychobiology – the anatomy of the brain and the physiological, biological and genetic basis of behaviour.

Individual Differences – the study of personality, mental ability and intellect between individuals.

Perception – the study of the senses (in particular vision and hearing) and how we interpret the world around us.

You will also receive the opportunity to specialise in optional modules throughout your degree. Some universities offer modules in ageing, art, atypical development, crime, environment, gender, sports performance and more! In summary, any topic related to human and non-human behaviour can be made relevant to psychology! Check university websites to see their specialisms.

Introduction to Subject Psychology at University

I recommend checking whether the degree programme you are considering is accredited by The British Psychology Society (BPS). You will require a BPS-accredited degree if you are interested in doing further postgraduate study in Psychology, such as aspiring to become a Clinical or Educational Psychologist.

The material of this pack is from one particular perspective on how to apply psychology to a topic that is current in our society. I hope this pack makes you more enthusiastic about psychology and demonstrates how psychology can be applied to the real world.

Good luck and best wishes!

Meghánn Ward

Meet the PhD Researcher Meghánn Ward

From my early years, I was always performing, singing and playing piano around my family home. Music was part of everyday. When I started school, I enjoyed the creative opportunities that came my way, including art competitions and the school choir. I also really enjoyed my classwork and learning new things. I loved all of my subjects so much and although I had difficulty choosing my Key Stage 4 and 5 subjects, I decided on Psychology as one of my A Level subjects.

I felt that Psychology could lead me to a future career in music therapy. I was accepted onto a BSc Psychology degree at Queen's University Belfast and during my first year was placed into a tutor group led by a researcher who specialised in ageing. From that point onwards my passion for learning about ageing blossomed, with all of my projects having been based around older adults: their risk-taking behaviours, emotions, multi-sensory memories and currently their experience of dementia. After my Psychology degree, I completed a Master of Arts in Social Anthropology, before being accepted onto a four-year Health Research PhD programme at Lancaster University, where I am currently half way through my fieldwork in the beautiful Lake District!

A-Level Subjects	English Literature, Psychology and Religious Studies
Undergraduate	BSc (Hons) Psychology, 1st Class, Queen's University Belfast
Postgraduate	MA Social Anthropology, Queen's University Belfast
	MRes and PhD in Health Research, Lancaster University

Glossary

Term	Definition
Dementia	An umbrella term for a group of related symptoms that are associated with neurodegenerative diseases, such as Alzheimer's disease or vascular disease.
Alzheimer's disease	The most common cause of dementia, whereby degeneration of the brain is caused by the presence and build-up of protein plaques and tangles.
Dementia with Lewy bodies	A less common cause of dementia, caused by deposits of proteins which cause symptoms that have shared similarities with both Alzheimer's disease and Parkinson's disease.
Frontotemporal dementia	A cause of dementia in which degeneration predominantly occurs in the frontal and temporal lobes of the brain.
Vascular dementia	A cause of dementia that can vary in the way it manifests itself but is linked to blood vessels and circulatory fluids.
Limbic System	A system of interconnected structures (including the hypothalamus, amygdala and hippocampus) associated with emotional and motor functions, including fear, pleasure memory and motivation.
Person-centred approach	An approach to health care where the person/patient's interests are put at the centre of decision-making.
Hippocampus	Small uniquely shaped structure responsible for the formation of new memories and storage of long-term memories; part of the limbic system.
Neuron	A small, fundamental part of the nervous system. Receives and carries information in electrical impulses throughout the body. Also known as a nerve cell or neurone.
Neurotransmitter	A chemical substance that enables the transmission of information by travelling from neuron to neuron through the synaptic gap via electrical impulses.
Positive Psychology	Psychological approach that involves the scientific study of positive human functioning, human strengths and flourishing.

Glossary

Term	Definition
Participatory Arts	A collection of creative activities conducted by artists and practitioners to promote health and wellness.
Quality of Life	Interchangeably used with the term 'wellbeing'. Refers to the general wellbeing of individuals and groups, measured by positive and negative features of daily life. The DEM-QoL is a quality of life questionnaire for dementia.
Wellbeing	A general term that refers to the state of being healthy, happy and/or comfortable.

Resource One Overview

Topic	The Anatomy of the Functioning Human Brain
GCSE Modules	Biopsychology, memory, neurons, brain function
Objectives	By the end of this resource, you should be able to: ✓ Have a good understanding of the structures and functions of the human brain ✓ Locate different structures of the human brain on a diagram ✓ Explain the role of neurons and neurotransmitters in the human brain
Instructions	1. Read the data source 2. Complete the activities 3. Explore the further reading
Context	The brain is the most complex organ of the body for all vertebrates. The central organ of the nervous system, the human brain is responsible for sending signals to different parts of the body and coordinating our responses to the environment around us. The complexities of the brain are difficult to summarise in a short introduction to biological psychology, but the following resource will outline three elements of brain anatomy: a) the structure of the brain; b) the function of different structures of the brain, and c) the activity of neurons and neurotransmitters of the brains.

Resource One
Data Source

Section A

The Structures and Functions of the Brain

Deep Dive

Please read the following material on the organisation of the brain, influenced by Atkinson and Hilgard's 2009 textbook *'An Introduction to Psychology'*.

Understanding the anatomy of the brain can be confusing amongst newbies to psychobiology, particularly because the brain can be defined, organised and divided up into different 'compartments' or sections using different terms. The following bullet-pointed overview offers a brief summary of the main structures or elements of the brain that are useful to know for a psychologist:

- At its most basic, the human brain can be broken down into the cerebrum, cerebellum and brainstem.
- The cerebrum is the largest element of the brain and contains two hemispheres – generally, the left hemisphere controls the right side of the body, while the right hemisphere controls the left-side of the body, though each hemisphere contains many other more complex structures.
- The brainstem is located underneath the cerebrum, while the cerebellum is behind the brainstem.
- The cerebrum has an outer layer called the cerebral cortex which can be divided into four different lobes, as illustrated in figure 1:
    - → Frontal lobe – associated with executive functioning, motor skills, reasoning and higher-level cognition. It contains most of the dopamine system linked to reward, attention, planning and motivation.
    - → Parietal lobe – responsible for the processing of tactile sensory information and somatosensory information, in addition to some elements connected to language processing.

Resource One
Data Source

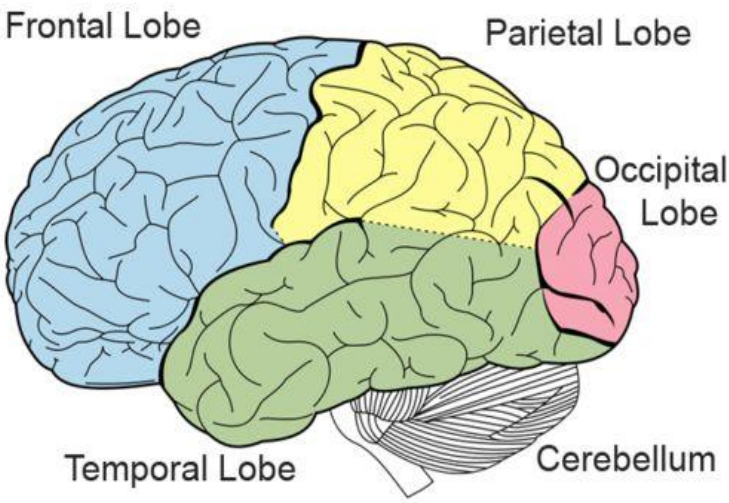
→ Temporal lobe - associated with the formation and storage of memories, as well as auditory and language processing.

→ Occipital lobe – responsible for visual stimuli interpretation, including colour identification and motion perception.

- Another common way to divide the brain is into three main regions based on location: the hindbrain, the midbrain, and the forebrain (see above figure). Regardless of how one decides to divide the brain, it is more important to develop an understanding of the brain's intricate anatomy by identifying the smaller structures and their different functions. The following diagram, from Atkinson and Hilgard's 2009 textbook, illustrates some of the main structures in the brain, while the figure on the right offers a more detailed illustration of the limbic system which is not present in the first image. The subsequent table offers you a brief description of the functions of some of the labelled structures.

Figure 1

Lobes of the Brain



Resource One
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Figure 2

Other structures of the brain

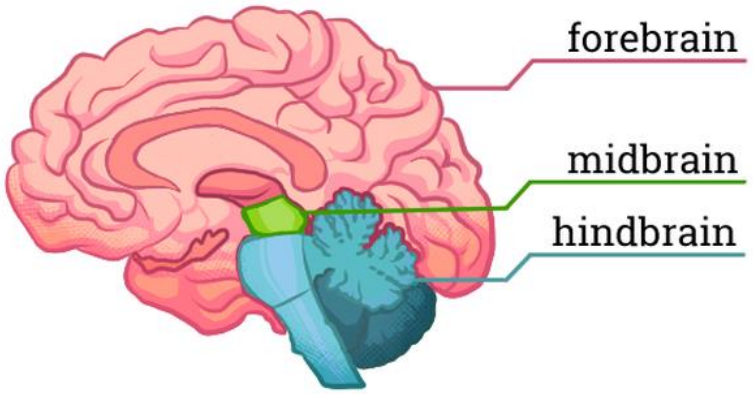
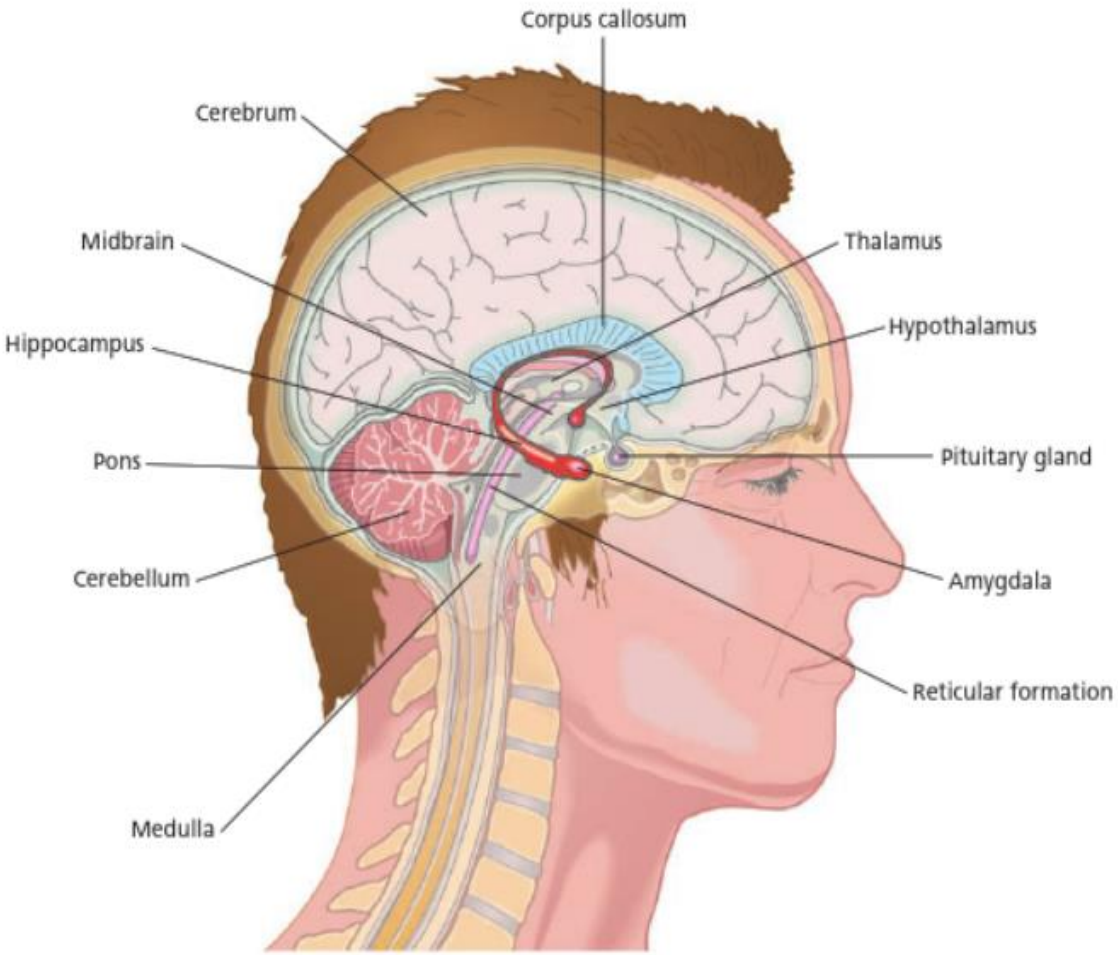


Figure 3

Main Brain Structures



Resource One
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Figure 4

Limbic System Structures

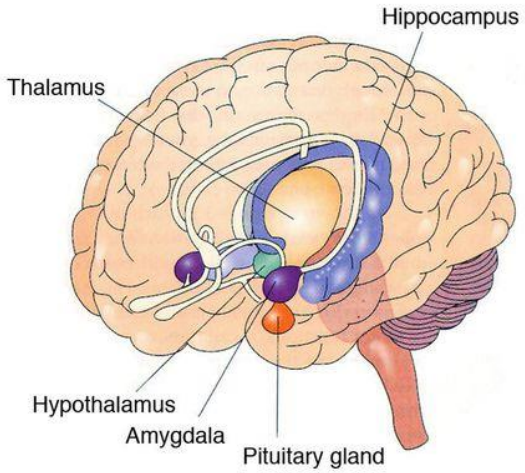


Table 1: The Main Brain Structures and Functions

Brain Structure	Brain Function
Cerebrum	Largest part of the brain – responsible for approximately two thirds of brain mass – associated with highest intellectual processes and contains an outer layer called the cerebral cortex, the largest section of neural integration associated with attention, memory, perception, language, consciousness and emotion.
Substantia nigra	Smallest structure of the brain and plays a role in the 'reward-pathway' in relation to dopamine. Also regulates auditory, visual and motor functions.
Thalamus	Part of the gray matter of the brain possessing various functions, including relaying sensory and motor signals to the cerebrum, as well as regulating consciousness and alertness. Part of the limbic system.
Hypothalamus	Small structure with many functions, including regulating sexual behaviour, eating and drinking, while also maintaining homeostasis in the endocrine and autonomic nervous systems by regulating weight, emotions and sleep cycle.
Corpus callosum	Thick structure of white matter connecting the left and right hemispheres of the brain, responsible for physical co-ordination. Also processes complicated thought patterns.
Limbic system	System of interconnected structures (including the hypothalamus, amydala and hippocampus). Associated with emotional and motor response functions, including fear, pleasure, memory and motivation.
Pituitary gland	Most important part of the endocrine system with links to the limbic system. Produces hormones based on the signals and control shared by the hypothalamus.
Amygdala	A selection of small structures associated with the processing of emotions, in particular the detection of fear and preparation of the stress response i.e. 'fight, flight or freeze'.
Hippocampus	Small uniquely shaped structure with roles in the limbic system. It is responsible for the formation of new memories, storage of long-term memories and memories of locations, objects and people.

Resource One
Data Source

Section B

Neurons and the Brain

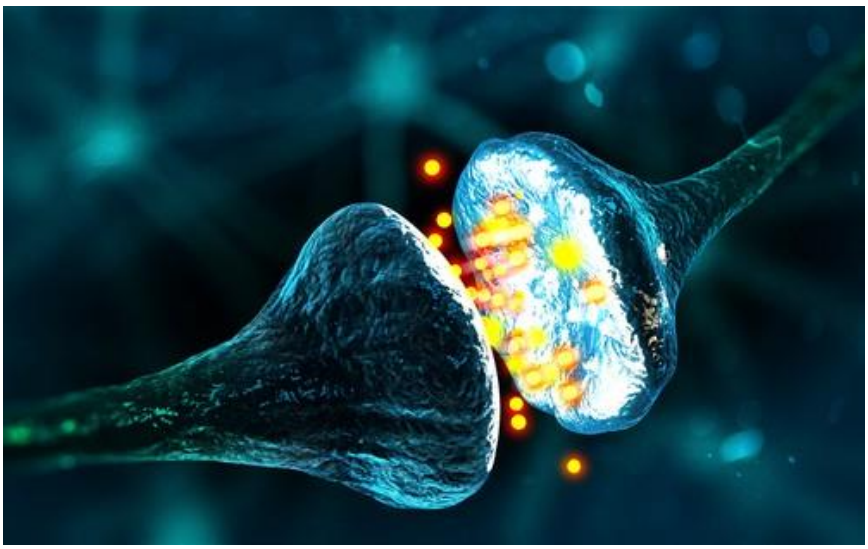
Neurons are what make up the cells in the brain and nervous system of a human being. Also referred to as nerve cells, neurons are found across the whole body and are fundamental to our functioning because they send and receive signals throughout the body and brain. In our brains, there are estimated to be tens of thousands of different types of neurons and they are both complex and hard to distinguish from one another (University of Queensland Australia, 2018). Recent research has estimated that the human brain possesses around 86 billion neurons. In a basic explanation, neurons – or nerve cells - conduct electrical pulses that travel down part of the cell called the axon. These electrical pulses or charges aid in the transmission of information around the brain. These electrical pulses are created by the action potential of neurons – that is, a "phenomenon that is generated through the flow of positively charged ions across the neuronal membrane" (University of Bristol, 2011). Do not worry if you do not understand this – we won't need to go into any further detail for this pack! All you need to know is that these electrical pulses instigate the release of neurotransmitters which pass through the microscopic gaps between neurons called synapses and are able to pass information from one neuron to the other. Neurotransmitters are like messengers for neurons – they are released and passed across the synapse to the adjacent neuron, where they are received by receptors on the subsequent neuron. There are more than 70 types of neurotransmitters in the brain, including the following:

- Acetylcholine
- Norepinephine
- Dopamine
- Serotonin
- Gamma-aminobutyric acid (GABA)
- Glutamate

Resource One
Data Source

Figure 5

Neurons and neurotransmitter



This simple journey of a neurotransmitter can take place in a miniscule amount of time, potentially thousands of times per thought.

Imagine how often these chemical reactions take place in your brain every day! This neural network and the normal functioning of neurotransmitters is essential for the health of our brain, body and behaviour.

Resource One Activities

Activities

1. Can you recall the names of the four brain lobes and their general functions?

2. Sketch the human brain and illustrate where the four brain lobes are located. Use the diagrams in Source 1 to assess your answer when you are finished.

3. List four types of neurotransmitters that can be found in the human brain.

4. Match the names of the brain structures with their functions using arrows to connect them.

Brain Structure		Brain Function
Amygdala		System of interconnected structures associated with emotional and motor responses, including fear, pleasure and memory.
Corpus Callosum		Part of the endocrine system that receives information to produce hormones.
Hippocampus		Multifunctional structure that regulates sexual behaviour, eating, temperature and aims to maintain homeostasis in the body and brain.
Limbic System		Uniquely shaped structure in the limbic system that is responsible for memory.
Pituitary glands		Small structures associated with processing emotions and the fight, flight or freeze response.
Hypothalamus		Thick structure of white matter connecting the left and right hemispheres of the brain, responsible for physical co-ordination. Also processes complicated thought patterns.

Resource One Activities

Activities

5. Which structure of the brain is most associated with the storage of memories and why?

6. Re-read the brain structures and their functions from the table in Source 1. Now pick two structures that you think have similar functions to each other. State one similarity and one difference that they have based on the above information.

7. Based on your assumptions about dementia, which structures of the brain would you propose to be affected by dementia and why? Don't worry if you aren't sure about the correct answer – you will cover this material in Resource 2. For now, make an argument based on the basic information you have learned so far.

Resource One
Further Reading

Explore

Read

Read Chapter 2 'Biological Foundations of Psychology' from Atkinson and Hilgard's 15th Edition Introduction to Psychology:

https://www.amazon.co.uk/Atkinson-Hilgards-Introduction-Psychology-Nolen-Hoeksema/dp/1844807282

Have a look at the American Association of Neurological Surgeons' 'Anatomy of the Brain' online article, which reviews the material of the above resource, as well as including some additional anatomical information:

https://www.aans.org/Patients/Neurosurgical-Conditions-and-Treatments/Anatomy-of-the-Brain

Listen and Watch

Check out Jam Campus 'Parts of the Brain Song | Science Music Video' on YouTube.

Jam Campus: Parts of the Brain

Do

Visit 'Sporcle.com' which is "the world's largest trivia quiz website" and find the following quizzes to practice your brain anatomy knowledge and learn new terms: 1) 'Parts of the Brain quiz'; and 2) 'Can you name the parts of the human brain that are pictured here?'

https://www.sporcle.com/

Resource Two Overview

Topic	Dementia on the Brain: What happens when the brain does not function as it should? Part 1: Alzheimer's Disease
GCSE Modules	Biopsychology, memory, cognition and development.
Objectives	By the end of this resource, you should be able to: ✓ Define dementia and Alzheimer's disease ✓ Explain the development of plaques and tangles in Alzheimer's disease ✓ Describe the structural and chemical changes in the brain of someone with Alzheimer's ✓ Understand the symptoms that may accompany Alzheimer's
Instructions	1. Read the data source 2. Complete the activities 3. Explore the further reading
Context	In the previous Resource, you covered some basic information about the structures and functions of the human brain, in addition to the normal functioning of neurons and neurotransmitters. With this in mind, we are now going to move on to consider what happens when the brain does not function as it is intended to, resulting in dementia. But what exactly is dementia?

Resource Two
Data Source

Section A

Defining Dementia

Unlike popular assumption, dementia is not a disease itself. Rather, it is a broad term that describes the set of symptoms that people display when they are affected by a degenerating condition affecting the brain. The symptoms associated with dementia tend to include memory loss, decreased language processing, difficulties with problem-solving, as well as changes to mood and behaviour. However, there are so many different forms of dementia that affect the brain differently. 'Dementia' is just a broad umbrella term which represents multiple diseases. Thanks to enhanced brain imaging techniques and brain scan equipment, we are now able to investigate the brains of living patients, to get a better understanding of potential brain tissue loss and decreased activity. Let's consider each of the different types of dementia now and how they affect the brain differently. In this resource, we will consider Alzheimer's disease in greater depth, while the latter Resource 3 will consider other forms of dementia. The following material has been informed by the Alzheimer's Society website and Professor June Andrew's book 'Dementia: The One-Stop Guide'. Both will be included in your further reading section if you would like to get some additional information and reading completed after this resource.

Section B

Alzheimer's Disease

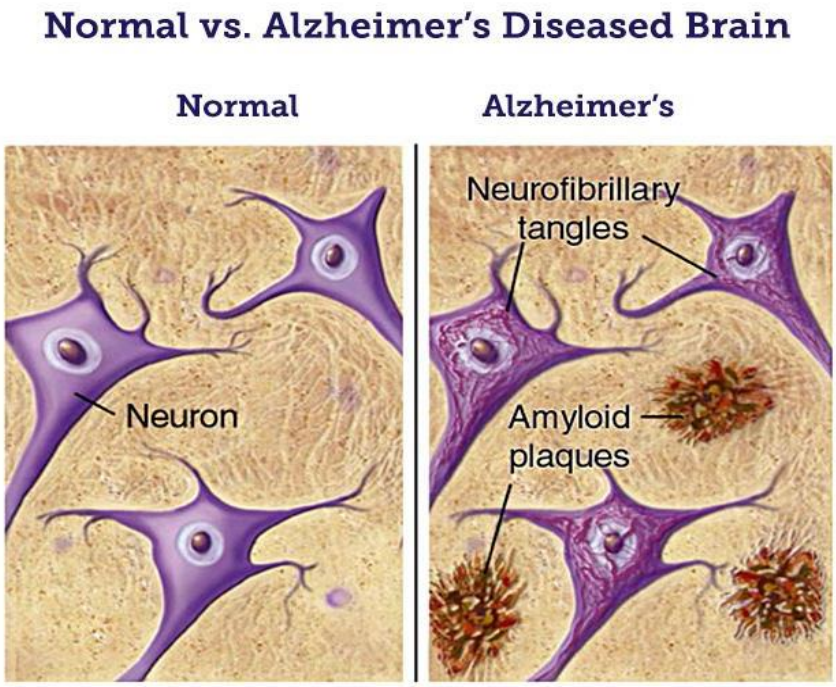
Alzheimer's is the most well-known and most common form of dementia. According to Alzheimer's Society, around 520,000 people in the United Kingdom are affected by dementia – that's approximately over half of all dementia cases. It is named after the doctor who first described the disease, Alois Alzheimer. When the brain tissue of someone with Alzheimer's disease is examined under a microscope, large abnormal clumps of tissue can be seen. Although still not fully

Resource Two
Data Source

understood why this happens, the prime suspects for these clumps are proteins in the brain referred to as 'plaques' and 'tangles'. These plaques and tangles disrupt the normal workings of the brain's neural network. As explained in Resource 1, there are billions of neurons and nerve connections in the human brain that are constantly in communication with one another. However, when a person starts to develop Alzheimer's disease, these connections between cells being to deteriorate and neurons start to die, resulting in large parts of brain tissue slowly being lost.

Figure 1

Normal and Alzheimer's Neurons



Beta-amyloid protein plaques: scientific research has shown that beta-amyloid plaques form when the proteins on the surfaces of neurons are broken down differently. A large protein called APP (amyloid precursor protein) is normally sectioned by enzymes on the surfaces of neurons, resulting in the freeing of amyloid-beta protein fragments, which are

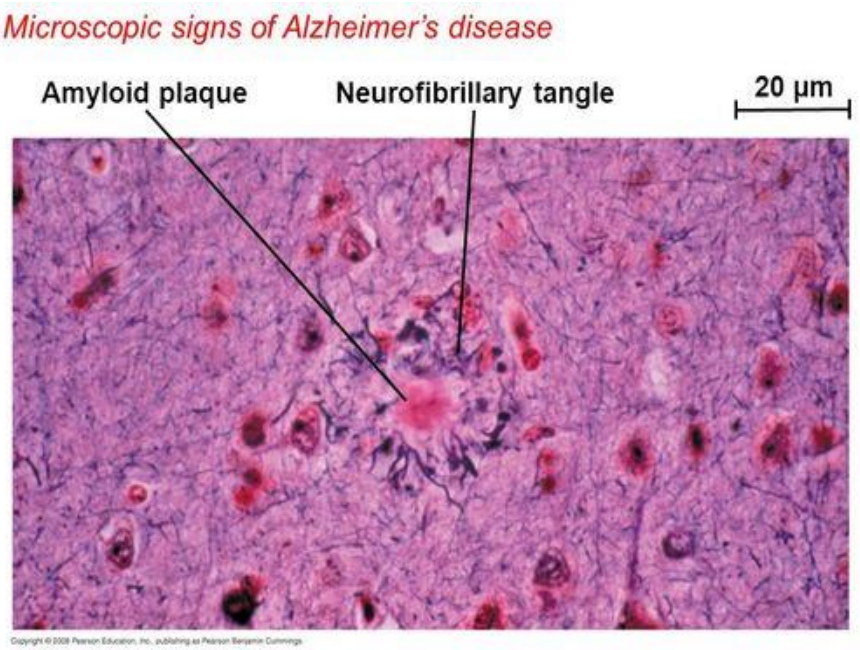
then broken down and cleared in the body. When someone has Alzheimer's disease, these amyloid-beta proteins are no longer sufficiently regulated or cleared by the body, resulting in an imbalance of amyloid-beta proteins which clump together and form large plaques which increase in size, becoming insoluble. These clumped amyloid-beta fragments are toxic in the brain and disrupt the normal functioning of neurons.

Neurofibrillary tau protein tangles: unlike plaques which form outside of neurons, Alzheimer's disease tangles form in the interior of neurons. As explained earlier, signals in the brain pass from the main body of one neuron, through the synapse or synaptic gap, and into the adjacent neuron. Before the signals pass through the synapse, they travel down a long tube known as a microtubule. Microtubules are maintained and taken care of by normal tau protein – look upon it as the glue for the skeleton of microtubules, attaching itself along the circuit to help keep it in working order. However, in Alzheimer's disease the tau protein detaches from the microtubules, resulting in the breaking down of the circuits and the microtubules fall apart. Similar to amyloid-beta protein, fragments of freed tau protein clump together and form tangles which are located inside the neuron. Without the long microtubular circuits, signals cannot be sent from one neuron to another; hence, the neuronal transport system is lost, and the neuron subsequently dies. When we refer to 'neurodegeneration' in dementia, tau protein has a large part to play in this.

Resource Two
Data Source

Figure 2

Plaques and Tangles



In addition to some structures being damaged by Alzheimer's disease, there is often less of some of the brain's 'chemical messengers' or neurotransmitters that are important for functioning well. All in all, Alzheimer's disease is a progressive condition, which means that damage to the brain will continue to worsen over time, resulting in shrinkage to the size of the brain and worsening symptoms.

Section B

Alzheimer's Disease, Smaller Structures of the Brain and Subsequent Symptoms

Deep Dive

People often assume that Alzheimer's disease – or dementia in general – is just about memory loss, but there are many other symptoms characterised by the condition. The following sub-sections are taken from Alzheimer's Society 'Dementia Symptoms and Areas of the Brain':

'In Alzheimer's disease, among the areas often damaged first are the hippocampus and its connected structures. This makes it much harder for someone to form new memories or learn new information. A person with Alzheimer's may struggle

to remember what they did earlier that day, or what they have just said, meaning they may repeat themselves in conversation. The hippocampus is needed for retrieval of memories but retrieving those from longer ago may depend on it less. This is why someone in the earlier stages of Alzheimer's (with a damaged hippocampus but an intact cortex) may remember a childhood holiday but struggle to remember what they ate for breakfast that morning.'

'In Alzheimer's disease the amygdala is generally affected later than the hippocampus. So a person with Alzheimer's will often recall emotional aspects of something even if they don't recall the factual content. They may therefore respond more according to how they feel about a place or person than in a more logical way.'

'Damage to the visual system in the temporal lobes makes recognising familiar faces and objects harder. The person may seem to forget who a familiar person is. However, because the pathways for vision and hearing are separate, they may still know who that person is once they hear them speak.'

'As the damage spreads to the frontal lobes, someone with Alzheimer's may struggle with decision-making, planning or organising (e.g. family finances). A more complex task with a sequence of steps, such as following a new recipe, might also become much harder.'

'In contrast to these losses, many abilities are retained, particularly those acquired long ago. Learned skills such as dancing or playing the piano rely on procedural memories, and so are mostly stored deep within the brain. In Alzheimer's disease, these skills are often retained the longest.'

Resource Two Activities

Activities

1. Define dementia.

2. Define what Alzheimer's disease is and what it is caused by.

3. In Alzheimer's disease, which brain structure is generally affected first: the amygdala or the hippocampus? And what does this mean for someone living with dementia?

4. Below is an artwork published in Science Daily illustrating plaques and tangles in the brain of someone with Alzheimer's disease. Can you identify the plaques and tangles in the below image? Include the names of each type of protein that is responsible for each forming.

Resource Two Activities

Activities

5. In the form of a short essay, explain how plaques and tangles are formed in the brain of someone with Alzheimer's disease.

6. Based on material offered by Alzheimer's Society, identify some of the structures of the brain that will be damaged by Alzheimer's disease and how the damage will affect the behaviour of someone with the condition.

7. From what you have read above about the damage of the brain during Alzheimer's disease, suggest why you think music and creative activities are useful for people with Alzheimer's? Don't worry if you don't know the exact answer to this question – just propose some ideas based on the information you have been given so far. Your answer should be a short paragraph.

Resource Two
Further Reading

Explore

Read

Follow up with the data sources that informed the above resource:

'Symptoms of Alzheimer's disease' web article by Alzheimer's Society.

https://www.alzheimers.org.uk/about-dementia/types-dementia/alzheimers-disease-symptoms#content-start

Read Professor June Andrew's book 'Dementia: The One-Stop Guide'.

Andrews, J (2015). Dementia: The One-Stop Guide. London: Profile Books LTD.

Watch

'Plagues and Tangles' video on YouTube with animation:

Plagues and Tangles

Do

Research the most recent research into pharmaceutical products for Alzheimer's disease and find out how they aim to improve, prevent or reverse dementia symptoms. Write up what you find in a short PowerPoint slide.

Resource Three Overview

Topic	Dementia on the Brain: What happens when the brain does not function as it should? Part 2: Other types of dementia
GCSE Modules	Biopsychology, memory, cognition an development
Objectives	By the end of this resource, you should be able to: ✓ Define different types of dementia ✓ Differentiate between how each different type of dementia affects the brain differently ✓ Compare and contrast between the different types of dementia
Instructions	1. Read the data source 2. Complete the activities 3. Explore the further reading
Context	Alzheimer's disease is only one of many types of diseases and conditions that can cause dementia symptoms to appear. Alzheimer's may be the most common, but it is important to highlight the other ways that brain damage and deterioration can lead to dementia symptoms. The following data source is informed by material published on the Alzheimer's Society website and Professor June Andrews' book 'Dementia: The One-Stop Guide'.

Resource Three
Data Source

Section A

Vascular Dementia

Compared with other forms of dementia, vascular dementia is more variable and affects wider sections of the brain. Although vascular dementia can be caused by a range of different diseases or health events, all of these diseases affect the blood supply to the brain. You can remember this by bearing in mind that the word 'vascular' is associated with blood vessels and circulatory fluids. The symptoms can generally appear much more suddenly than with Alzheimer's, often due to the aftermath of a stroke. June Andrews differentiates between Alzheimer's disease and vascular dementia in the extract from her book:

'One of the biggest differences between vascular dementia and Alzheimer's dementia lies in the underlying disease process. In Alzheimer's the brain shrinks relatively slowly as individual brain cells die back and so the symptoms creep up over time. In vascular dementia there is a distinct moment when the blood vessel gets blocked by a clot. That's more likely when there is narrowing of the blood vessel caused by thickening of the wall where fat deposits have gathered. The symptoms of vascular dementia depend on which part of the brain has been damaged' (Andrews, 2015: 30).

Below are some types of vascular dementia and accompanying scans:

a) Multi-infarct dementia: the most common form of vascular dementia where many mini strokes affect lots of different areas of the brain. Refer to image A of a normal aging brain, while image C shows multi-infarct dementia (sourced from bnr.org). Symptoms are dependent on where the damage is caused in the early stages. For instance, if a mini stroke affects the hippocampus, then episodic memory may be affected, while a damaged frontal lobe may affect executive function, decision making and planning.

Resource Three
Data Source

Figure 8

Normal brain scan

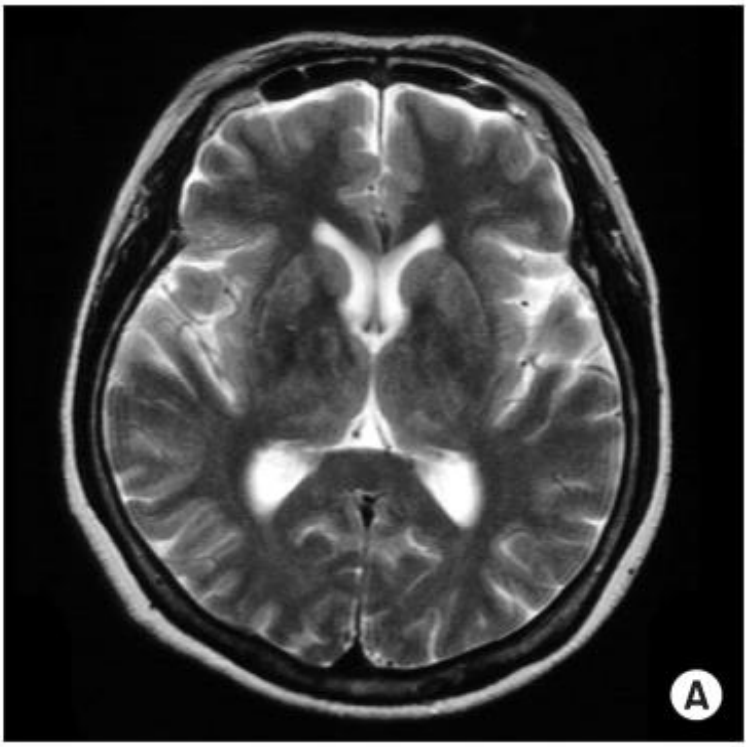
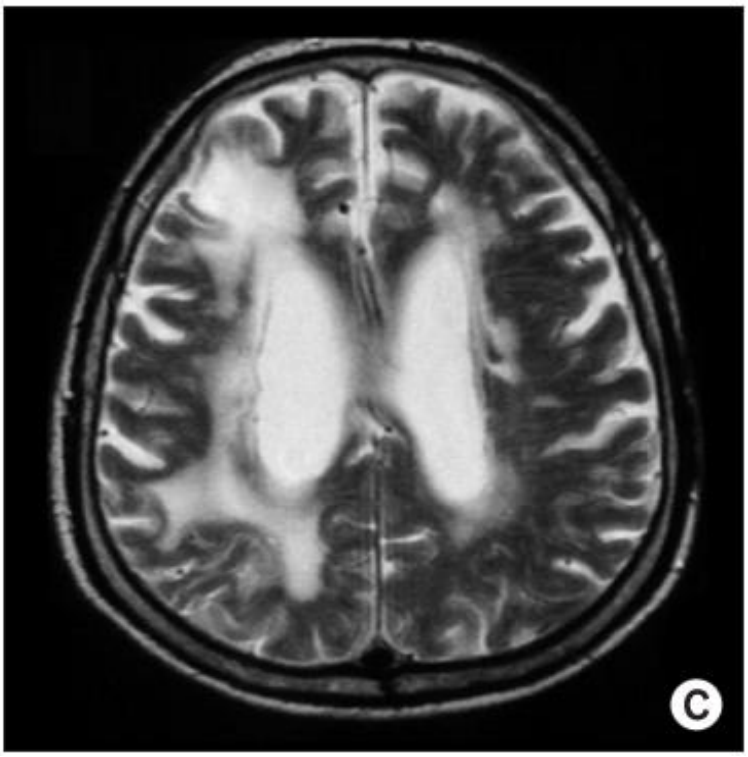


Figure 9

Multi-infarct dementia



Resource Three
Data Source

b) Subcortical vascular dementia or Binswanger's disease: when blood vessels deep inside the brain at the subcortical level are damaged by a stroke. This damages the white matter deep in the brain, beneath the cerebral cortex, in addition to signals typically sent to the frontal lobe. Therefore, a vast range of symptoms can occur, including problems with slowed thinking processes and executive functioning, lack of facial expression, difficulty walking and speech difficulties.

Figure 10

Normal brain scan

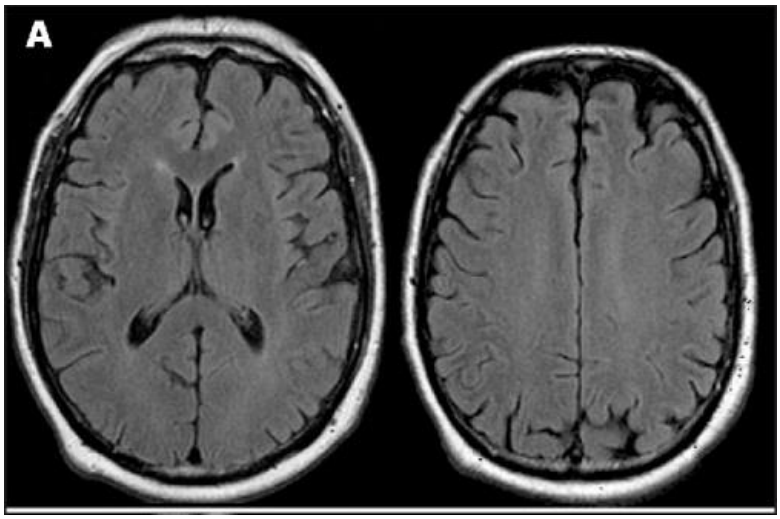
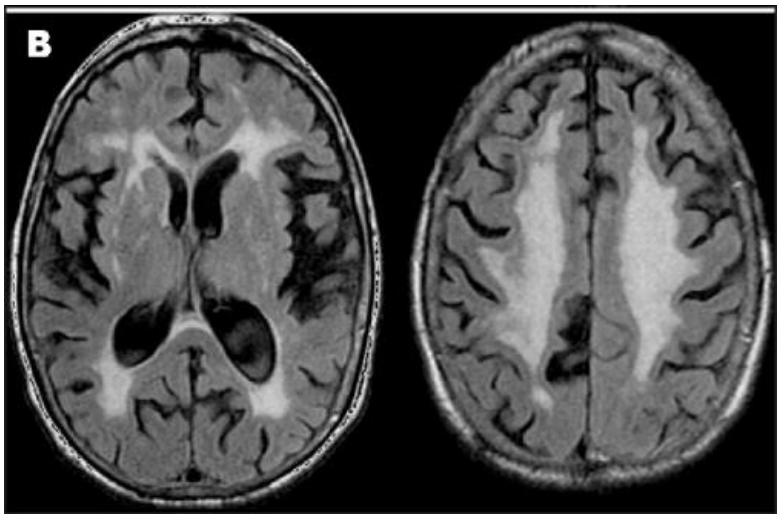


Figure 11

Subcortical dementia



Resource Three
Data Source

c) Dementia can also follow after a major stroke, where a larger part of brain tissue is damaged, and the typical motor and movement-based outcomes of stroke will occur (e.g. more pronounced damage down one side of the body and speech difficulties) in addition to planning, memory and thinking problems. Rehabilitation can assist in recovery, unlike other types of dementia causes.

It can be very difficult diagnosing one type of dementia from another. According to Andrews, "about 10 per cent of people with dementia have a mixture of vascular disease and Alzheimer's" (p 31). This statistic gives a small insight into how overlapping neurodegenerative conditions can be!

Section B

Dementia with Lewy Bodies

This cause of dementia is not as common as Alzheimer's and vascular disease but is distinct in its effects on the individual with it. Similar to the plaques and tangles responsible for Alzheimer's disease, Lewy bodies are made up of a form of protein that create tiny clumped deposits in the brain, particularly in the cerebral cortex, limbic system and brain stem. Unlike Alzheimer's, however, there is less overall shrinkage of the brain. Lewy bodies dementia has a lot of overlap with Parkinson's disease, given that the Lewy body clumps are similar to the abnormal proteins in the brains of those developing Parkinson's. Because it is a rarer form of dementia, it is often difficult to diagnose. The development and diagnosis of Lewy bodies can go in typically two ways:

The person develops Parkinson's disease first and it is common for those with this disease to later develop dementia with resemblances to Lewy bodies dementia.

The person develops dementia with Lewy bodies first, but given its rarity, it is difficult to diagnose and therefore may be incorrectly diagnosed as Alzheimer's in the early stages.

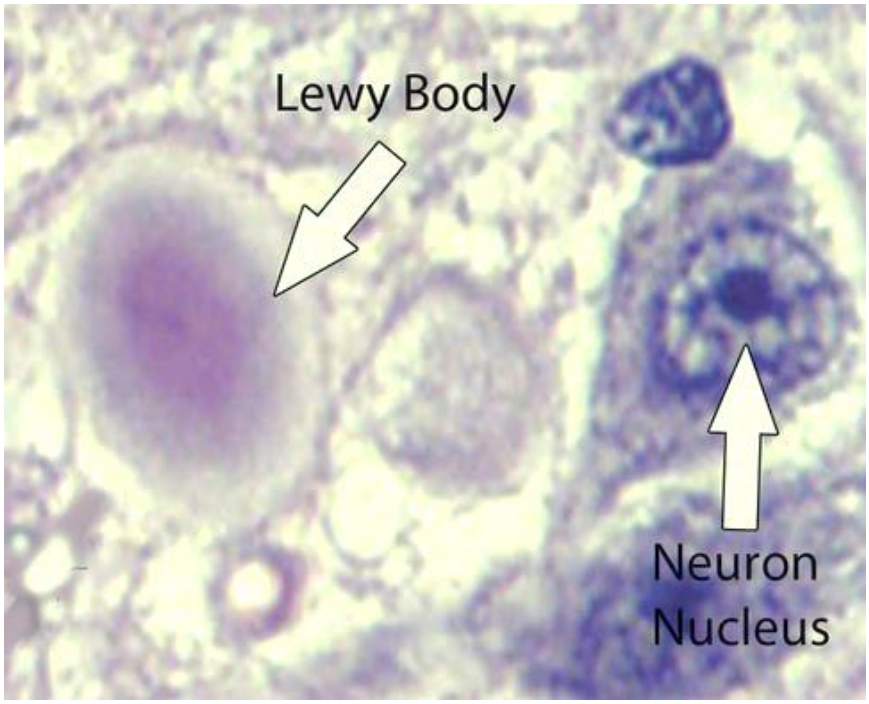
Resource Three
Data Source

Early symptoms of dementia with Lewy bodies often involves damage to visual pathways and the frontal lobe of the brain, impacting a person's vision, perception and attention.

Lewy bodies in the brainstem will have effects on movement, similar to the stiffness and shuffling movements that are common in Parkinson's disease. Damage to the limbic system may result in memory problems and issues surrounding emotional expression.

Figure 12

The presence of Lewy bodies in brain tissue



Section C

Frontotemporal Dementia

Dementia of the frontotemporal type is the last of the four most well-known diagnoses, although it is not as common. It consists of a wide range of conditions that all have the same brain locations in common – the frontal and temporal lobes. For more information on the role and function of the frontal and temporal lobes, revisit material in Resource 1. In general, behaviour, emotions, memory and language are affected by damage to the frontotemporal sections of the brain.

Resource Three
Data Source

Shrinkage occurs in these lobes due to a build-up of abnormal tau proteins clumping together in small areas, leading to the loss of nerve cells and the degeneration of neural networks in the affected areas. This is similar to the shrinkage effect that accompanies Alzheimer's disease, although it typically affects all areas of the brain gradually. There are different names and sub-types of frontotemporal dementia which may reflect different patterns of damage. The most common are as follows, according to the Alzheimer's Society (2019):

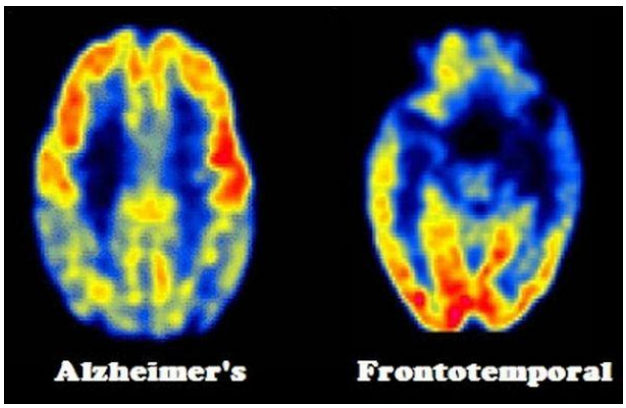
Behavioural variant frontotemporal dementia: "...the areas of the brain affected early on are in the frontal lobes. For example, damage to the upper middle surfaces of the frontal cortex is linked to becoming withdrawn and losing motivation...damage to the frontal lobes may also mean the person repeats the same word, phrase or action over and over again."

Semantic frontotemporal dementia: "...the front of the left temporal lobe, dealing with verbal semantic memory, is damaged first. So the person may have fluent speech but struggle to find the right word for something, or they may ask what a familiar word (e.g. 'knife') means. Damage to the right temporal lobe leads to problems recognising faces and objects".

Frontotemporal dementia is also often experienced by people with motor neurons disease.

Figure 13

PET scan of two different causes of dementia



Resource Three Activities

Activities

1. Why is dementia with Lewy bodies often difficult to diagnose?

2. What can lead to vascular dementia? Give some examples of how vascular dementia may develop.

3. What are the main differences between behavioural-variant frontotemporal dementia and semantic frontotemporal dementia?

4. In the following table, write down some key words that help you differentiate between the four main types of dementia. I have completed an example for Alzheimer's Disease.

Type of Dementia	Keywords
Alzheimer's Disease	Plaques; beta-amyloid; tangles; tau; hippocampus; memory; shrinkage; amygdala; visual system; frontal lobe; limbic system.
Frontotemporal dementia	
Dementia with Lewy bodies	
Vascular dementia	

Resource Three Activities

Activities

5. Write a short essay on the four main types of dementia, comparing and contrasting their symptoms and the parts of the brain that are affected (you may need to refer back to Resource 2 for guidance on Alzheimer's disease).

6. Get creative! Using the information provided in Resource 3's data source, write a creative piece (such as a short poem) or draw an image that illustrates some aspect of dementia symptoms or disease. Once completed, in no more than 200 words explain what your creative piece is about.

Resource Three
Further Reading

Explore

Read

Follow up with the data sources that informed the above resource:

'Symptoms of Alzheimer's disease' web article by Alzheimer's Society.

https://www.alzheimers.org.uk/about-dementia/types-dementia/alzheimers-disease-symptoms#content-start

Read Professor June Andrew's book 'Dementia: The One-Stop Guide':

Andrews, J (2015). Dementia: The One-Stop Guide. London: Profile Books LTD.

A journal article from a scientific journal about the behavioural and psychological symptoms associated with different kinds of dementia:

Chiu, M. J., Chen, T. F., Yip, P. K., Hua, M. S., & Tang, L. Y. (2006). Behavioral and psychologic symptoms in different types of dementia. Journal of the Formosan Medical Association, 105(7), 556-562.

Watch

Living with Dementia: To Be or Not To Be | Yvonne van Amerongen | TEDxWarwick

TED Talk - Dementia: To Be or Not To Be

Resource Four Overview

Topic	Approaching Dementia More Positively: Theories and ways of thinking about people with dementia
GCSE Modules	Approaches to psychology, Humanistic psychology.
Objectives	By the end of this resource, you should be able to: ✓ Bust some myths about what it is like to live with dementia ✓ Identify and compare useful humanistic theories and approaches for researching dementia, including a) the person-centred approach and b) positive psychology. ✓ Better understand alternative ways to communicate and treat a person with dementia.
Instructions	1. Read the data source 2. Complete the activities 3. Explore the further reading
Context	To begin to understand dementia, it is important to firstly understand the brain and the structures that are affected by various dementia-related diseases, which have been covered in Resources 1, 2 and 3. Although we have briefly mentioned some of the symptoms which may affect different people with dementia, little has been discussed about what it actually feels like to live with dementia. There are many myths and unhelpful stereotypes and assumptions surrounding the topic of dementia in our society which we hope are starting to shift, thanks to greater awareness and information about dementia being made available. The following resource contains are a few myths about dementia and ways to improve how we speak about it and research it.

Resource Four
Data Source

Section A

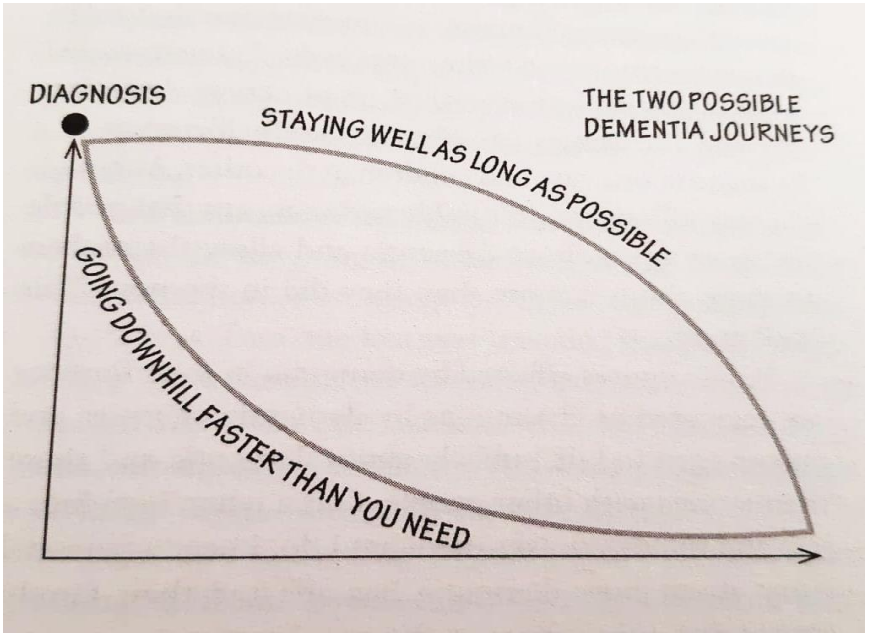
Myth-Busting

Building an argument

a) "A diagnosis of dementia means that life is over". Dementia is a very difficult diagnosis to receive, but this is an unhelpful attitude towards dementia which can lead to people 'giving up' on trying to live well with it. Meaningful lives are possible while living with dementia. People with dementia are very capable of continuing to live their lives as normally as possible, with the right support system around them. Instead of thinking "they are dying with dementia" we need to rephrase the sentence so that it reads "they are living with dementia and living well". Professor June Andrews illustrates this in a simple diagram in page 1 of her book:

Figure 14

The Two Possible Dementia Journeys by June Andrews



b) "People with dementia do not understand what is going on around them; they are like an empty shell". It is true that confusion is possible at any point in the dementia journey and people may experience difficulties in communicating – whether early or late stages of the disease progression. However, this doesn't mean that the person doesn't

understand you or the situations unfolding around them. Viewing them as an 'empty shell' dehumanises them and leads people to only focus on what they are losing, as opposed to what they are still capable of doing. Continue to treat the person with dementia with respect, describe their situation without negative phrases and find an alternative way to communicate with them if verbally is difficult, often using their different senses (e.g. cooking, music, dance, old photographs and objects).

c) "Dementia makes people aggressive and violent". This type of behaviour can happen occasionally, but certainly not all people become violent. Think about your own behaviour for a moment: think about a time when you were angry or feeling aggressive in the past. What made you angry? Was there a cause? What helped you calm down? Now think about someone with dementia: if they are showing some occasional aggression, some reasons for this could be frustration over their decreased ability or their worsening memory; confusion about where they are; seeing faces that seem unfamiliar and assuming they are intruders. With all these things taken into account, it is important to the environment comfortable and calming for people with dementia.

Section B

The Person-Centred Approach

The person-centred approach to dementia views the individual as playing a vital role in their care and treatment interventions, as well as reminding healthcare professionals that the individual has rights and needs which must be met. Tom Kitwood was a pioneer in dementia care and research, who developed models and approaches to dementia starting in the 1980s that focused on maintaining the personhood of somebody living with dementia. One such model is 'The Flower of Emotional Needs' (figure 15).

Resource Four
Data Source

Figure 15

The Flower of Emotional Needs

When applying person-centred care in dementia, it is important to consider the following elements:

1) value the person with dementia, their family and their friends;

2) treat the person with dementia with dignity and as an individual;

3) attempt to empathise with the person with dementia, and consider their perspective; and lastly,

4) create a positive social environment and community.

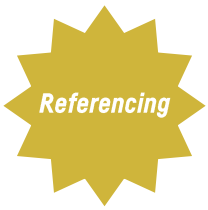
A person-centred approach encourages carers, health professionals, researchers and members of the public to think about what the individual person needs to improve their well-being and adapt to their changing situation. Hence, the consideration of well-being is one of the greatest benefits of adopting a person-centred approach in health care and research, since it reintroduces the person back into a definition of what health is; this can significantly change

Resource Four
Data Source

behind the disease. This is in contrast to the biomedical model of health and medicine, which focuses more on the physical attributes of health and less on the subjective experience of an individual living with a particular illness or disease.

Section C

Positive Psychology Approach to Dementia



Another useful approach to use when working with or researching people with dementia is by using a positive psychology approach. The below definition of this approach is from 'The Oxford Handbook of Positive Psychology' by Lopez and Snyder:

"Positive psychology, the term, was first used in 1954 by Abraham Maslow in a book chapter where he noted that 'the science of psychology has been far more successful on the negative than on the positive side. It has revealed to us much more about man's shortcomings, his illnesses, his sins, but little about his potentialities, his virtues, his achievable aspirations, or his full psychological height…' (Maslow, 1954: 354). More than 40 years later, Martin Seligman reintroduced the term and proclaimed that… more attention needed to be paid to the good in people and in the world" (p.3).

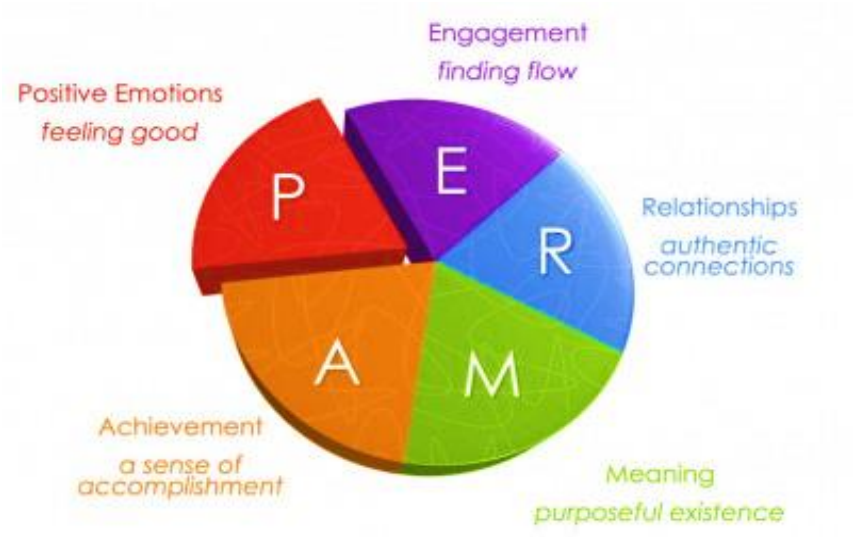
Taking this perspective when considering people with dementia is very useful. Instead of looking at their shortcomings, their losses and their changes, it is helpful to consider their continued strengths, skills, interests, passions, and the ways that these things can be maintained. One way to measure this is by using Martin Seligman's PERMA model of wellbeing, which consider these five elements to be of importance to one's health, happiness and wellbeing: positive emotions, engagement, relationships, meaning and achievement.

Resource Four
Data Source

Not many previous studies have applied the PERMA approach to dementia but this is something I am introducing in my own PhD research project. While observing people with dementia in my research project, I am considering the following: What types of emotions is the person expressing? Are they engaging with people or with any particular activities? Or are they very withdrawn? What are their relationships like? Are they making new friendships? Are they doing personal things in their daily lives that they enjoy? Do they still get the sense that they've achieved something today? Above all, are they focusing on what they can still do and not fixating on what they can't? While this approach is reductionist and may miss out on other factors that improve people's happiness and health (e.g. outdoor natural environments that are intrinsically therapeutic), it is a good starting point when considering what may improve someone's wellbeing.

Figure 16

Seligman's PERMA Model of Wellbeing



Resource Four Activities

Activities

1. What do each of the letters in Martin Seligman's PERMA model stand for? Write a few sentences on how each of the five parts of the model could be considered in dementia research.

2. What four things should you consider when attempting to make dementia care more person-friendly?

3. Outline two myths about dementia and explain why they are not true or accurate.

4. Briefly compare Martin Seligman's positive psychology PERMA model with Tom Kitwood's person-centred Flower of Emotional Needs. What overlaps or similarities do you see between their elements?

5. You have been asked to write some guidelines for new volunteers who will be working with people with dementia. Write a list of 10 things that volunteers should bear in mind when they are communicating with people with dementia. This list can be influenced by any material from the Resource 4's data source

Resource Four
Further Reading

Explore

Read

We have considered person-centred and positive psychology approaches in Resource 3. Below is a link to a journal paper by one of my PhD supervisors – Christine Milligan – and her colleague Carol Thomas. The paper is about how the UK society can and should adjust to dementia:

http://eprints.lancs.ac.uk/56355/1/society_adjust_dementia_summary.pdf

Read the following paper, which considers the PERMA model of wellbeing in relation to older adults and singing activities. Reference: Lee, J., Davidson, J. W., & Krause, A. E. (2016). Older people's motivations for participating in community singing in Australia. International Journal of Community Music, 9(2), 191-206. https://minerva-access.unimelb.edu.au/bitstream/handle/11343/194274/Lee%2CDavidson%26Krause2016_singers_PrePrint.pdf?sequence=1&isAllowed=y

Listen

A podcast on Soundcloud from the Alzheimer's Society called 'Source of Strength – Dementia together podcast June/July 2018'. This not only touches upon the experience of supportive family and friends, but also looks at the difficulties of the LGBT+ community who are affected by dementia.

Watch

'The Toddlers who took on Dementia' is a BBC programme where young toddlers were brought together with a group of older adults with dementia. Although no longer available to watch, you can find some clips in the following link or on YouTube:

http://eprints.lancs.ac.uk/56355/1/society_adjust_dementia_summary.pdf

Do

Visit the 'Positive Psychology Program' website, which offers further information on what the PERMA model by Martin Seligman is about.

Resource Five Overview

Topic	Dementia, Society and the Role of Participatory Arts
GCSE Modules	Social influence, relationships, and change
Objectives	By the end of this resource, you should be able to: ✓ Define what a dementia-friendly community is ✓ Identify steps that can be taken to make a community more dementia-friendly ✓ Define what participatory arts are ✓ Differentiate between participatory arts approaches and therapy approaches ✓ Use creative research methods (photography) to capture the experiences of people in creative activities.
Instructions	1. Read the data source 2. Complete the activities 3. Explore the further reading
Context	People with dementia are capable of living normal, fulfilling and meaningful lives, just like any one of us without it. However, to enable this to be achieved, some additional support is necessary from individuals, communities and societies. A beneficial way of reaching out to people with dementia is by creating dementia-friendly communities and ensuring that there are enriching and engaging activities available to members of the public who may otherwise feel isolated and excluded. The following data source will consider ways in which this can be done, including an insight into my research on participatory arts.

Resource Five
Data Source

Section A

Dementia-Friendly Communities

The following information is from the Alzheimer's Society website (2019):

"A dementia-friendly community is a city, town or village where people with dementia are understood, respected and supported. Dementia-friendly communities are vital in helping people live well with dementia and remain a part of their community. Too many people affected by dementia feel society fails to understand the condition they live with, its impact or how to interact with them. That's why people with dementia sometimes feel they need to withdraw from their community as the condition progresses."

Figure 17

The Dementia Friends Advertising Logo

Dementia Friends
An Alzheimer's Society initiative

The Alzheimer's Society offer advice to communities and organisations for aiding them in becoming more dementia-friendly. Some small changes they could make include:

- Create a local group called a local dementia-friendly alliance led by people from the community helping to identify areas for local action (the Alzheimer's Society have some suggestions on their website for areas to consider).
- Help organisations – such as banks and supermarkets – receive training on how to effectively communicate and help customers with dementia
- Raise awareness by becoming dementia friends, accessing Alzheimer's Society training or conducting lessons in schools (this is something that someone like you could consider doing!)
- Visit services such as Alzheimer's Society Memory cafés or Singing for the Brain groups
- Host community events where people with dementia are invited

Resource Five
Data Source

Local initiatives are very important to people with dementia, particularly because the funding for dementia-friendly activities is limited. This is why activities that are run in the local community are really beneficial to people with dementia and can help the "live well". There are various different ways that people with dementia can be welcomed into communities but the area I am most interested in is creative activity – in particular, participatory arts. My PhD research project is based in a dementia-friendly organisation that offers participatory arts to members of its local community who are affected by dementia – both people with a diagnosis and their family or caregivers.

Section B

Participatory Arts

Participatory arts activities are creative activities that aim to promote health and wellness. They are normally led by professional artists or creative practitioners and can include music, visual arts and crafts, drama, poetry, storytelling, dance, movement, photography or film-making. They are distinctly different from therapy – such as music, art or drama therapy – for three main reasons: a) therapies are conducted by trained therapists, unlike participatory arts; b) therapies normally have an end goal of 'psychological change' for their 'clients', while participatory arts focus more on the process of members taking part rather than on the measurable health outcomes; and c) therapies are often one-to-one and commonly take place in clinical or nursing home settings, while participatory arts are almost always group-based and take place in community settings, such as museums and theatres.

Participatory arts aim to promote health and wellbeing without being constituted as a 'therapy'. In a 2014 review by Zeilig, Killick and Fox on arts-based participation for people with dementia, they define participatory arts as "...professional artists [or creative practitioners] that conduct

Resource Five
Data Source

creative or performing arts programs in community settings for the purpose of promoting health and wellness" (2014: 13). Hence, any creative activity that has relevant participatory or interactive elements and is conducted by a suitable facilitator could be considered under the broad participatory arts umbrella. Performing arts activities, which are commonly referred to within published literature, come under the participatory arts umbrella. They are also primarily concerned with active participation while promoting health and wellness through specific activities such as drama, dance and singing; activities within which an audience is normally required. However, participatory arts also include activities that are active or participative but lack audience or performance-based elements, such as writing or visual art. Hence, participatory arts are a broader concept that include the less performative but nonetheless participatory visual and literary group-based activities that performing arts exclude.

Below are some sample images of participatory activities taken during my research project and descriptions of the activities taking place within them:

This image was taken during 'World Food Week' where participants were tasked with making something out of dough. This participant started talking to us about his childhood of baking fruit cakes for his family – this was something we didn't know about the participant before the activity began.

Resource Five
Data Source

This image was taken during ‘County and Western’ week, where a variety of different props were put on the table and passed around the group. Some participants enjoyed pretending to play the banjo and doing Clint Eastwood impersonations.

This image shows an activity between a husband and wife, where they are working together to create a cloak inspired by ‘Joseph and his Technicolor Dream Coat’. Although they had creative differences, they found ways to work as a team to complete their piece!

Resource Five
Data Source

Finally, this image was taken during ‘Weddings and Marriages’ week. A quiet participant was very captivated by the vintage wedding dresses worn by the facilitators and enjoyed touching and stroking the material. She also started counting the bows on one of the dresses. This demonstrates the usefulness of costume and props for bringing a theme or topic to life, in a way that participants can relate to.

Resource Five Activities

Activities

1. Define what a dementia-friendly community is.

2. Identify three ways that members of the community can make their local village, town or city more dementia-friendly.

3. Define what participatory arts are.

4. What are some of the differences between participatory arts approaches and therapy approaches?

5. Brainstorm a creative a list of potential themes or activities you could do if you were running a participatory arts group for people with dementia. Take some inspiration from the photographs above or think of your own hobbies and how you could make them relevant to people affected by dementia. Display them in a table, such as below:

Theme	Activity
Food week →	Make art using dough

Creativity

6. Create a photo essay of something you enjoy – this could be anything from a hobby like football or music, to time with family or friends (just make sure that no photographs are taken of people without their consent). Aim for up to five photographs. Take them as creatively as you like. Use the research photographs from this data source as inspiration. For each photograph, write a short caption about what it portrays and why you took the photograph. This task will introduce you to creative research methods that can be used in academic research.

Resource Five
Further Reading

Explore

Read

Read the full journal paper by Young, Camic and Tischler who review participatory arts for dementia: Young, R., Camic, P. M., & Tischler, V. (2016). The impact of community-based arts and health interventions on cognition in people with dementia: A systematic literature review. Aging & mental health, 20(4), 337-351.

https://www.tandfonline.com/doi/full/10.1080/13607863.2015.1011080

Read the full journal paper by Zeilig, Killick and Fox on participative arts for dementia: Zeilig, H., Killick, J. & Fox, C. (2014) The participative arts for people living with a dementia: a critical review. International Journal of Ageing and Later Life, 9 (1), 7-34. http://www.ep.liu.se/ej/ijal/2014/v9/i1/14-238/ijal14-238.pdf

Visit the Alzheimer's Society Dementia Friends initiative webpage to read a list of recognise dementia friendly communities:

https://www.dementiafriends.org.uk/WebArticle?page=dfc-public-listing#.XH-1uij7TIV

Watch

Watch this video about the Alzheimer's Society 'Singing for the Brain' music activity group:

Singing for the Brain

Do

If you liked the look of the 'Singing for the Brain' video above, consider finding your local Singing for the Brain group and join as a volunteer.

Become a Dementia Friend. It is simple to do – complete some tasks online and receive a dementia friend badge and booklet information in the post.

Resource Six Overview

Topic	The Benefits of Using Participatory Arts for People with Dementia
GCSE Modules	Humanistic psychology, relationships, analysing data
Objectives	By the end of this resource, you should be able to: ✓ Explore the potential benefits of participatory arts activities for people with dementia ✓ Summarise key findings of research papers ✓ Better understand ways of summarising and displaying research findings ✓ Critically analyse the content of research reviews and papers on dementia and participatory arts activities
Instructions	1. Read the data source 2. Complete the activities 3. Explore the further reading
Context	It can be difficult to summarise the benefits that participatory arts activities can have for people with dementia, given that there are so many different ways that participatory arts can be used: singing songs, playing percussion instruments, writing stories, acting out a scene from a play, painting, creating a mosaic etc. Given the various ways that participatory arts can be applied to promote health and wellbeing, I decided to conduct a literature review and summarise the findings that previous researchers have gained from their own studies in this area. The papers I analysed, reviewed and summarised came under the following criteria: The remainder of this resource contains small extracts from my review results, which offer examples of how participatory arts may or may not benefit people with dementia, in addition to a glimpse of academic review writing in progress. The data source includes a table of summarised papers, as well as written extracts.

Resource Six
Data Source

Author(s), Year and Country of Publication	Study Aim or Purpose	Arts Intervention(s) and Research Setting	Key Findings
2. Belver et al (2017); Spain.	To design and evaluate an arts activity programme, based at Prado Museum, for people with dementia; determine if the activities have an effect on participants.	'We Have a Date with Art' artistic activity programme based on visits to Prado Museum following the MoMA model – a) visiting culturally significant art and discussing them with each other, and b) attending an art-making workshop.	Participants showed reactions of engagement, good humour and satisfaction. There were also positive effects on their general mood and social relationships, combating social isolation. Their cognitive decline did not affect their participation.
3. Burnside, Knecht, Hopley and Logsdon (2015); USA.	To explore the impact of a museum-based arts program called here:now (described as experiential arts) on people with dementia and carers	'here:now' program, based on the MoMA model, consisting of monthly 90-minute discussions and 120-minute art classes conducted in Frye Museum.	The program encouraged high levels of engagement, social relations and mindfulness with both people with dementia and their carers; hence it was considered as well-received. Other themes that were identified in interviews were enjoyment, joint respite, personhood, relationship normalising and personal growth. Based on interview comments, the art-making had a greater impact than the single gallery tour experience. The results led to the design of a conceptual model of participant experience.
4. Camic, Williams and Meeten (2013); UK.	To determine whether participating in a community singing group can have a positive impact on people with dementia and their carers.	'Singing Together Group' facilitated by qualified community musician. Weekly 90 minutes sessions for a period of 10 weeks.	Slow deterioration in cognitive ability, daily living activity skills and behaviour through the course of the study. Their QoL rating and carers' rating remained stable. Engagement levels were high and attendance was strong. The group promoted wellbeing for all participants according to qualitative data. Standardised questionnaires failed to detect impact in comparison to qualitative data. Small sample size and short study.

Resource Six
Data Source

8. Flatt et al (2015); USA.	To describe the subjective experience of older adults with early stage of Alzheimer's/ dementia and family carers during art museum activity	Four art museum engagement activity sessions based on the MoMA model, conducted at The Andy Warhol Museum.	84% of participants said the group met their expectations. 89% said that they attend the activity group again. On average, the activity group was rated highly, at 4.51 out of 5. Participants rated making art as the most enjoyable aspect of the group, closely followed by group interaction and the guided art discussion. Five overall themes were identified by thematically analysing the focus group data: cognitive stimulation; social connections; self-esteem; programmatic concerns and activity-related concerns; and logistical issues. Overall, the art museum activities were enjoyable and valuable for quality of life and wellbeing of participants.
9. Hafford-Letchfield (2013); UK.	To use a community-based comedy/drama project as an unconventional means to communicate with people with dementia, and to share outcomes and evaluations of using comedy in this context.	The Grange comedy project, encompassing four weeks of two-three hour once-weekly workshops, using a mockumentary approach of unscripted, improvised acting with humour and parody.	Encouraging and working with humour was therapeutic for people with dementia. The comedy project encouraged a focus of 'being in the moment'. Relationships developed between family carers and staff members. Additionally, relationships between dementia participants were strengthened through creative activities. Comedy challenged dementia stereotypes and encouraged the use of social skills.

Resource Six
Data Source

15. Petrescu, MacFarlane and Ranzijn (2014) ; Australia.	To test the effectiveness of writing poetry on functioning (psychological) in people with early stages of dementia.	Poetry workshop led by researcher (lecturer in poetry and published poet), involving different types of poetry, techniques, brainstorming, homework, and participants' reading their own poetry to group. Participants asked for a published book of their work.	Results indicate that poetry interventions may be useful, amongst other activities, for optimising engagement with life for people in early stages of dementia. They may enhance quality of life for those with dementia. Each participant had a different emphasis based on their responses (some enjoyed it while others were hesitant; two in particular would have liked the intervention to last longer). Poetry or writing workshops may tap talents that have not been realised. More ongoing support would be needed to achieve full effectiveness in poetry workshops.

"Art-viewing and art-making activity programmes are commonly designed for people with dementia. With regards to effectiveness, the art-viewing-art-making papers demonstrated a positive effect on engagement and the relationships of participants with dementia (Burnside et al, 2015; Belver et al, 2017). In particular, the interventions encouraged good attendance, increased art engagement, improved social relationships and the utility of good humour. In some papers with multiple activity types, participants tended to rate art-making activities more highly than art-viewing (Burnside et al, 2015; Flatt et al, 2015). This suggests that interactive activities are more highly enjoyed than passive activities, though the art-viewing activities are still shown to manifest positive outcomes; for instance, in one study both object-handling and art-viewing activities led to increased subjective wellbeing while refreshment breaks did not have an impact. This suggests that it is not the social interaction alone of participatory arts activities that offers benefits to members, but that the creative activity is intrinsically beneficial, or is at least useful when combined within a social setting."

Resource Six
Data Source

"Music-based interventions were found to increase confidence, engagement and attention levels (e.g. Camic et al, 2013) and decrease social isolation. While the positive outcomes relating to engagement, behaviour and mood were generally consistent, effectiveness for cognitive purposes was less concrete across the music-based papers. Some researchers found improvements in memory and general cognition, while others stated that memory problems and cognitive decline were noticed by carers over the intervention period (Camic et al, 2013). This highlights that the main purpose of participatory arts is not to improve memory or reverse dementia symptoms, but to encourage interactions and inclusivity."

"Petrescu's poetry intervention was less performative but demonstrated the varied ways that poetry can be applied in a creative process for people with dementia. The unique inclusion of 'homework' in this intervention encourages the participatory arts activity to merge with everyday life activities, as opposed to the two being distinctly unconnected. Poetry interventions had mainly positive results, working to optimise the engagement of people with dementia, while also encouraging new or existing skills."

"In conclusion, my review has shown evidence that community-based participatory arts activities for people living with dementia can have a positive impact on their health, subjective wellbeing, mood and general everyday living. The majority of studies found that the experience of being part of a group –socialising with each other and building relationships - was a positive element of the participatory arts interventions that produced positive responses from participants that social activities could not do alone. Participants and carers indicated that group

participation encouraged social inclusion and offered opportunities for non-verbal communication and exchange of emotions. This social inclusivity and group setting are integral to all participatory arts interventions and programmes, regardless of which arts activity is being pursued, and has an impact on wellbeing and quality of life of people with dementia. The effectiveness of group-based activities for people with dementia indicates the potential of participatory arts interventions over individualised, client-based therapies to develop and maintain healthy social skills through creative engagement that can enhance behaviour and wellbeing."

Resource Six Activities

Activities

1. Using the summary table of selected participatory arts papers for people with dementia, answer the following questions:

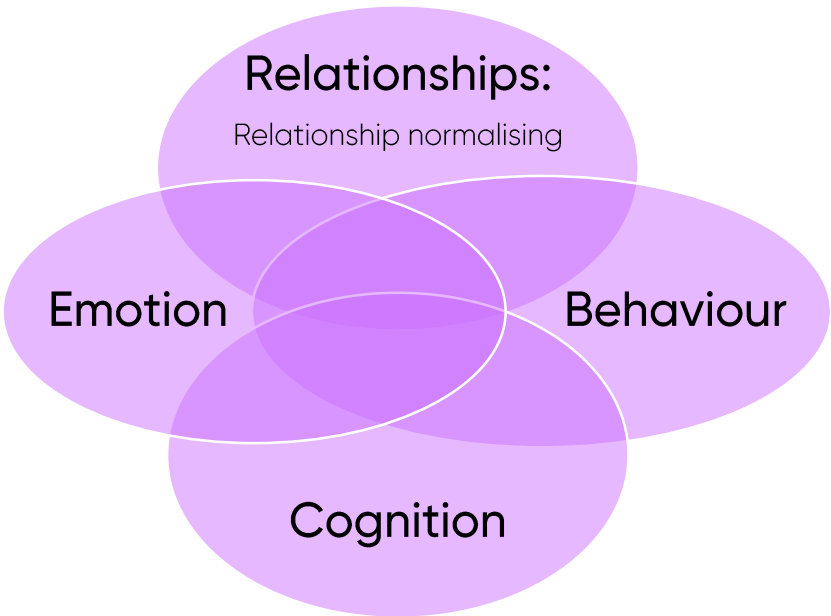
a. What was the aim of Camic, Williams and Meeten's (2013) research project on the 'Singing Together' activity group?

b. Describe what was involved in the poetry intervention that Petrescu et al (2014) were investigating.

c. Define the Grange comedy project researched by Hafford-Letchfield (2013).

d. Summarise all of the key findings from papers that come under the category of 'art-viewing-art-making".

2. Using a visual diagram of your choice (such as a Venn diagram or spider diagram), categorise the benefits of participatory arts activities into the following categories: a) behaviour; b) relationships; c) cognition and d) emotions. Include additional categories if you think it is necessary. An example is shown below.



Resource Six Activities

Activities

3. Critically analyse information from the summary table and written extract. Write an essay on the benefits of participatory arts activities for people with dementia, including aspects of activities that may not have resulted in positive outcomes.

Resource Six
Further Reading

Explore

Read

Read some of the full papers that were used in my literature review. You can find them on Google Scholar. Examples below:

Belver, M.H., Ullán, A.M., Avila, N., Moreno, C. and Hernández, C., 2017. Art museums as a source of well-being for people with dementia: an experience in the Prado Museum, Arts & Health, pp.1-14.

Burnside L.D., Knecht, M.J., Hopley, E.K. and Logsdon, R.G., 2017. Here:now – Conceptual model of the impact of an experiential arts program on person with dementia and their care partners. Dementia, 16(1), pp.29-45.

Camic, P.M., Williams, C.M. and Meeten, F., 2013. Does a 'Singing Together Group' improve the quality of life of people with a dementia and their carers? A pilot evaluation study. Dementia, 12, pp.157-176.

Watch

Watch an excerpt of Henry from 'Alive Inside' documentary about music for people with dementia:

'Alive Inside'

Do

Spend some time this week doing something creative – whether that be drawing, inventing new products, making music or dancing. While you are doing this activity, be mindful of how you feel during it. Write a short diary entry after you take part in a creative activity and consider what was positive/negative about the experience.

Final Reflection

Deep Dive

BROUGHT TO YOU BY RBC ACCESS ED

Topic

A Reflection on the Future of Participatory Arts for Dementia

Objectives

Based on everything you have covered over the past 6 resources of this pack, you are being asked to create a PowerPoint presentation that summarises and explores the previous material. The main objective of this activity is to creative an informative presentation that is suitable for people who do not know about the subject area and have no previous knowledge or experience in dementia or arts. The instructions section below will give you a better idea of what is expected from this PowerPoint.

By the end of this activity, you should be able to:

- ✓ Demonstrate their knowledge and understanding of dementia
- ✓ Demonstrate their knowledge and understanding of participatory arts
- ✓ Present key findings from major papers in the area of dementia and arts
- ✓ Share their thoughts and projections about the future use of participatory arts for dementia based on the current literature and research

Instructions

Your PowerPoint should last about 10 minutes.

You should spend no longer than 2 minutes on each slide of your PowerPoint, so aim for at least 5 slides.

Include a contents page at the beginning of your PowerPoint, which should summarise the areas you will be covering in your presentation. In general, your slides should cover the following:

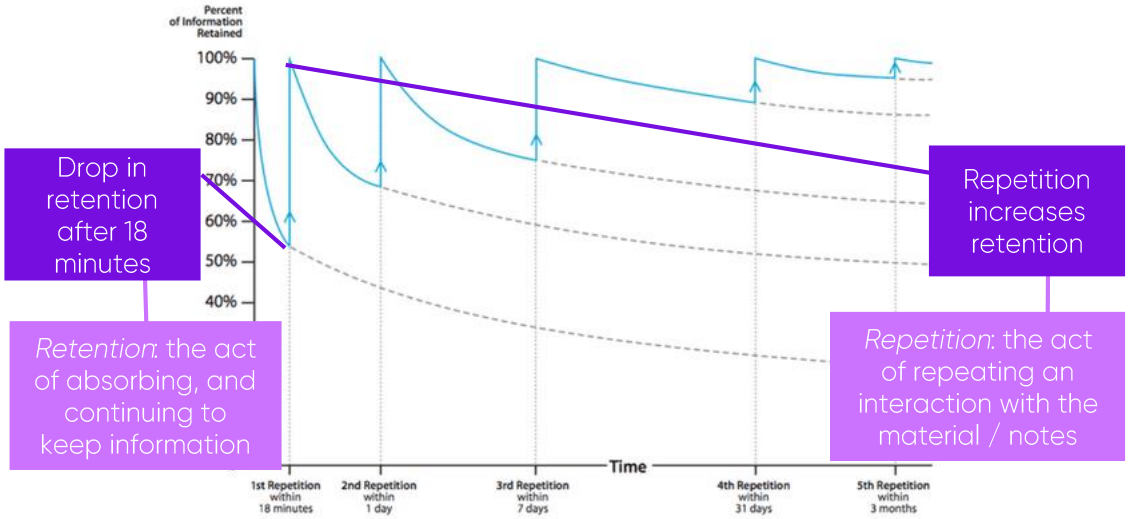
- What dementia is, the different types of dementia and subsequent symptoms
- Positive approaches and perspectives on living with dementia
- Ways that society can help
- What participatory arts are and examples of activities
- The benefits that participatory arts can have for people with dementia
- Your predictions for the future of participatory arts for dementia, based on the literature you have been presented in this pack.

University Study Skills
Cornell Notes

Why is good note taking important?

If it feels like you forget new information almost as quickly as you hear it, even if you write it down, that's because we tend to lose almost 40% of new information within the first 24 hours of first reading or hearing it.

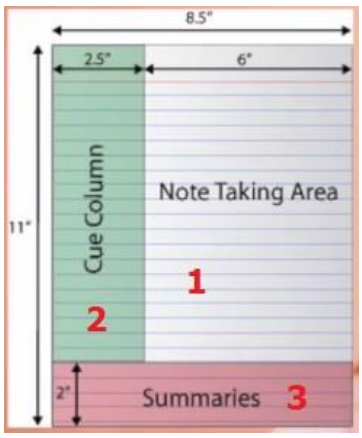
If we take notes effectively, however, we can retain and retrieve almost 100% of the information we receive. Consider this graph on the rate of forgetting with study/repetition:



Learning a new system

The Cornell Note System was developed in the 1950s at the University of Cornell in the USA. The system includes interacting with your notes and is suitable for all subjects. There are three steps to the Cornell Note System.

Step 1: Note-Taking



1. <u>Create Format</u>: Notes are set up in the Cornell Way. This means creating 3 boxes like the ones on the left. You should put your name, date, and topic at the top of the page.

2. <u>Write and Organise</u>: You then take your notes in area on the right side of the page. You should organise these notes by keeping a line or a space between 'chunks' /main ideas of information. You can also use bullet points for lists of information to help organise your notes.

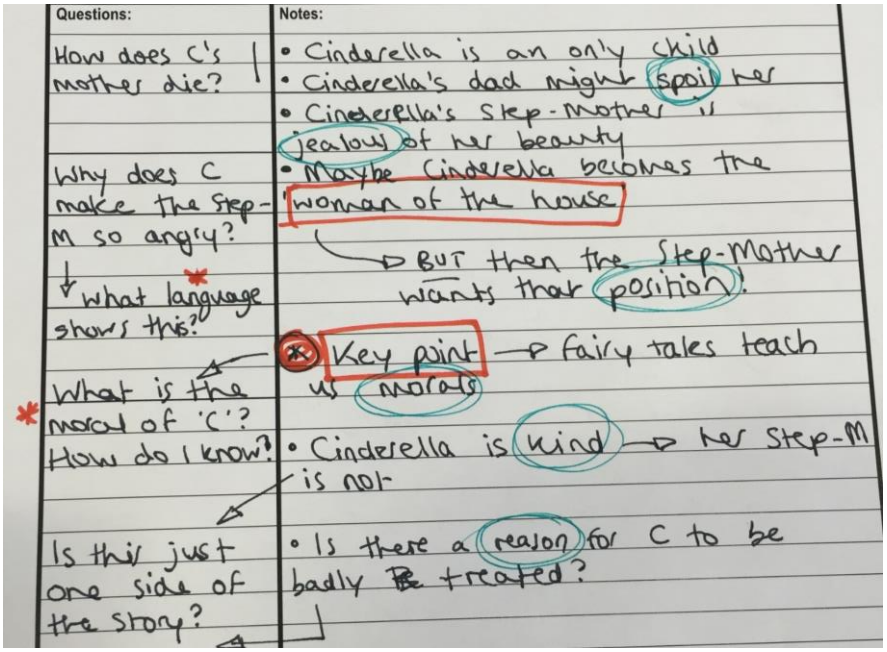
Step 2 Note-Making

1. Revise and Edit Notes: Go back to box 1, the note taking area and spend some time revising and editing. You can do this by: highlighting 'chunks' of information with a number or a colour; circling all key words in a different colour; highlighting main ideas; adding new information in another colour

2. Note Key Idea: Go to box 2 on the left hand side of the page and develop some questions about the main ideas in your notes. The questions should be 'high level'. This means they should encourage you to think deeper about the ideas. Example 'high level' questions would be:

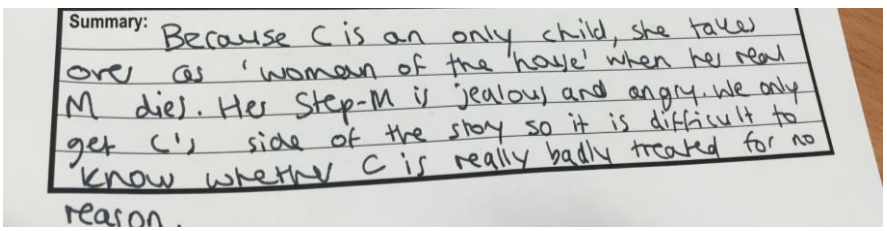
- Which is most important / significant reason for...
- To what extent...
- How does the (data / text / ideas) support the viewpoint?
- How do we know that...

Here is an example of step 1 and step 2 for notes on the story of Cinderella:



Step 3 Note-Interacting

1. Summary: Go to box 3 at the bottom of the page and summarise the main ideas in box 1 and answer the essential questions in box 2.



Give the Cornell Note Taking System a try and see if it works for you!

University Study Skills
Key Instruction Words

These words will often be used when university tutors set you essay questions - it is a good idea to carefully read instruction words before attempting to answer the question.

Analyse – When you analyse something you consider it carefully and in detail in order to understand and explain it. To analyse, identify the main parts or ideas of a subject and examine or interpret the connections between them.

Comment on – When you comment on a subject or the ideas in a subject, you say something that gives your opinion about it or an explanation for it.

Compare – To compare things means to point out the differences or similarities between them. A comparison essay would involve examining qualities/characteristics of a subject and emphasising the similarities and differences.

Contrast – When you contrast two subjects you show how they differ when compared with each other. A contrast essay should emphasise striking differences between two elements.

Compare and contrast – To write a compare and contrast essay you would examine the similarities and differences of two subjects.

Criticise – When you criticise you make judgments about a subject after thinking about it carefully and deeply. Express your judgement with respect to the correctness or merit of the factors under consideration. Give the results of your own analysis and discuss the limitations and contributions of the factors in question. Support your judgement with evidence.

Define – When you define something you show, describe, or state clearly what it is and what it is like, you can also say what its limits are. Do not include details but do include what distinguishes it from the other related things, sometimes by giving examples.

Describe – To describe in an essay requires you to give a detailed account of characteristics, properties or qualities of a subject.

Discuss – To discuss in an essay consider your subject from different points of view. Examine, analyse and present considerations for and against the problem or statement.

University Study Skills
Key Instruction Words

Evaluate – When you evaluate in an essay, decide on your subject's significance, value, or quality after carefully studying its good and bad features. Use authoritative (e.g. from established authors or theorists in the field) and, to some extent, personal appraisal of both contributions and limitations of the subject. Similar to **assess**.

Illustrate – If asked to illustrate in an essay, explain the points that you are making clearly by using examples, diagrams, statistics etc.

Interpret – In an essay that requires you to interpret, you should translate, solve, give examples, or comment upon the subject and evaluate it in terms of your judgement or reaction. Basically, give an explanation of what your subject means. Similar to **explain**.

Justify – When asked to justify a statement in an essay you should provide the reasons and grounds for the conclusions you draw from the statement. Present your evidence in a form that will convince your reader.

Outline – Outlining requires that you explain ideas, plans, or theories in a general way, without giving all the details. Organise and systematically describe the main points or general principles. Use essential supplementary material, but omit minor details.

Prove – When proving a statement, experiment or theory in an essay, you must confirm or verify it. You are expected to evaluate the material and present experimental evidence and/or logical argument.

Relate – To relate two things, you should state or claim the connection or link between them. Show the relationship by emphasising these connections and associations.

Review – When you review, critically examine, analyse and comment on the major points of a subject in an organised manner

University Guidance

Exploring Careers and Study Options

- ✓ Find job descriptions, salaries and hours, routes into different careers, and more at https://www.startprofile.com/
- ✓ Research career and study choices, and see videos of those who have pursued various routes at http://www.careerpilot.org.uk/
- ✓ See videos about what it's like to work in different jobs and for different organisations at https://www.careersbox.co.uk/
- ✓ Find out what different degrees could lead to, how to choose the right course for you, and how to apply for courses and student finance at https://www.prospects.ac.uk/
- ✓ Explore job descriptions and career options, and contact careers advisers at https://nationalcareersservice.direct.gov.uk/
- ✓ Discover which subjects and qualifications (not just A levels) lead to different degrees, and what careers these degrees can lead to, at http://www.russellgroup.ac.uk/media/5457/informed-choices-2016.pdf

Comparing Universities

- ✓ https://www.whatuni.com/
- ✓ http://unistats.direct.gov.uk/
- ✓ https://www.thecompleteuniversityguide.co.uk/
- ✓ Which? Explorer tool – find out your degree options based on your A level and BTEC subjects: https://university.which.co.uk/

UCAS

- ✓ Key dates and deadlines: https://university.which.co.uk/advice/ucas-application/ucas-deadlines-key-application-dates
- ✓ Untangle UCAS terminology at https://www.ucas.com/corporate/about-us/who-we-are/ucas-terms-explained
- ✓ Get advice on writing a UCAS personal statement at https://www.ucas.com/ucas/undergraduate/getting-started/when-apply/how-write-ucas-undergraduate-personal-statement
- ✓ You can also find a template to help you structure a UCAS statement, at https://www.ucas.com/sites/default/files/ucas-personal-statement-worksheet.pdf
- ✓ How to survive Clearing: https://university.which.co.uk/advice/clearing-results-day/the-survivors-guide-to-clearing

Subject Guidance

Psychology at University

- ✓ Psychology looks at the ways people think, act, react, and interact. It is the study of human (and animal) behaviour, and the thoughts and emotions that influence behaviour
- ✓ Courses can focus on scientific research and/or applied psychology. Many course providers will therefore offer research facilities for studying perception, developmental psychology, cognition, and behavioural neuroscience, as well as for the applied side, such as studying neurorehabilitation, education, and health.
- ✓ You can find out more about different courses and entry requirements by exploring the UCAS Biology Guide online: https://www.ucas.com/ucas/subject-guide-list/psychology

A Deeper Look Into Dementia and Arts

- ✓ **Listen:** A song performed by Chris Mann called 'Remember Me (An Anthem for Alzheimer's Disease). The dancer in the music video expresses the experience of someone living with dementia. If you are inspired by this song or dance, create your own: 'Remember Me' by Chris Mann
- ✓ **Read:** 'Creative Approaches in Dementia Care' book edited by Hilary Lee and Trevor Adams. This book can be found on Amazon and in other bookstores.
- ✓ **Browse:** The Alzheimer's Society website has a wide range of pages that have influenced some of the material in this pack. Further articles, webpages and guidance can be found throughout the website: https://www.alzheimers.org.uk/
- ✓ **Watch:** Watch the award winning 'Still Alice' movie, where Julianne Moore portrays an academic who is diagnosed with early on-set Alzheimer's disease. https://www.imdb.com/title/tt3316960/ ' Still Alice'

During and after watching the movie, consider some of the following:

- ✓ Do you think Alice's family respond in the right way?
- ✓ What are her relationships like with her family and how do they change?
- ✓ Are there any activities that Alice can do/cannot do well?
- ✓ How do the arts play a role in Alice's life?

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www.access-ed.ngo

@_AccessEd

hello@access-ed.ngo

100 Black Prince Road
London, SE1 7SJ

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