

12

Psychology

Humans need to react to changes both within and outside their bodies. The brain is the control centre of the human body. It allows us to sense and perceive, interpret and react to our environment, every second of every day. Our brain controls how we think, feel and behave. Without it we would be unable to solve a difficult maths problem,

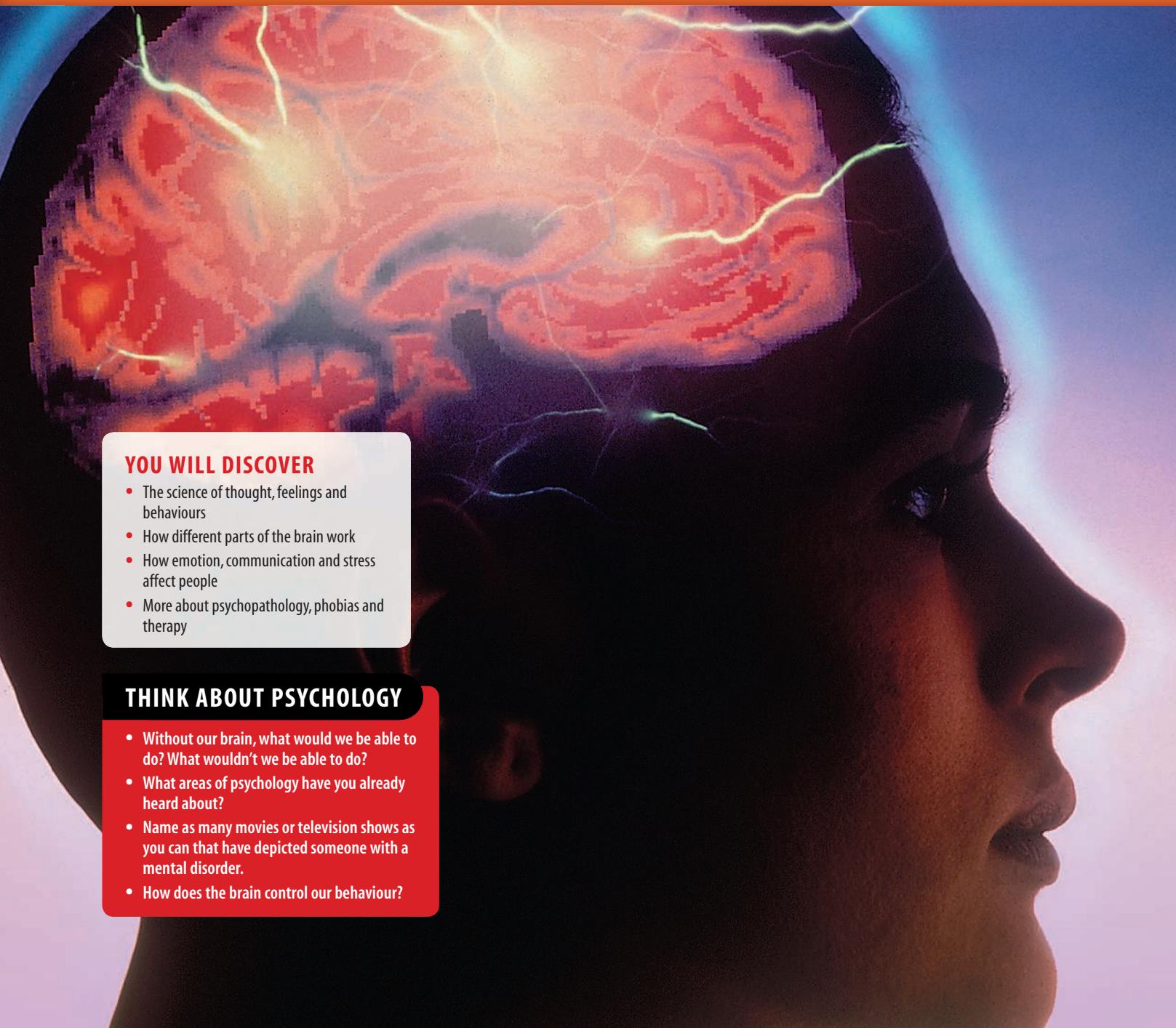
remember our last birthday or sing our favourite song. The branch of science that investigates how our brain influences our thoughts, feelings and behaviours is called psychology. Psychology is a growing science, investigating interesting ideas such as why serial killers kill, why we compete against each other and why stress makes us sick.

YOU WILL DISCOVER

- The science of thought, feelings and behaviours
- How different parts of the brain work
- How emotion, communication and stress affect people
- More about psychopathology, phobias and therapy

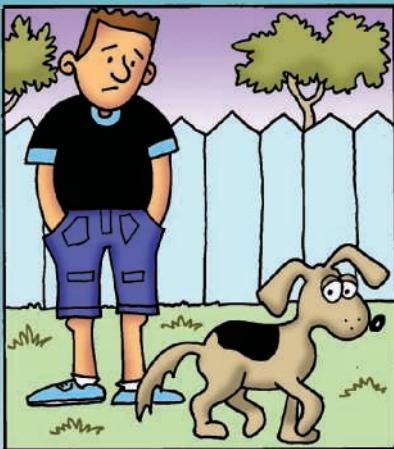
THINK ABOUT PSYCHOLOGY

- Without our brain, what would we be able to do? What wouldn't we be able to do?
- What areas of psychology have you already heard about?
- Name as many movies or television shows as you can that have depicted someone with a mental disorder.
- How does the brain control our behaviour?



Introducing psychology

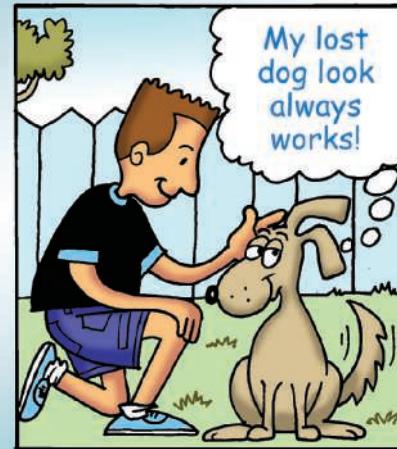
The term **psychology** originated from two Greek terms; *psyche*, which means mind, and *logos*, which means study or knowledge. Therefore, psychology can be explained as the study of the mind. This definition has broadened over time, and the most currently accepted definition of psychology is *the systematic study of thoughts, feelings and behaviours*.



A thought is like a little man inside your head talking to you. For example, you might see a dog walking down the street and you may think 'That dog looks sad. I wonder if he is lost'. Another name for thoughts or mental activity is **cognition**.



A feeling is the **emotion** that you have at any one time. Examples of feelings include sadness, anger, and happiness. Another name for feelings is **affect**.



A behaviour is any observable action. This means anything you do. An example of a behaviour is jumping up and down or patting a dog.

Psychology is a science. This means that everything we know about the mind, thoughts, feelings and behaviours comes from research. Research in psychology is conducted in a systematic and planned way, known as **scientific method**. Information is collected either by directly observing a person or animal's behaviour, or by conducting an experiment. This is similar to other sciences, such as biology or chemistry.

There are also many other ways of explaining human behaviour that are not based on science. Some of these approaches claim to be scientific, but are not. Some have scientific sounding names such as astrology, numerology and palmistry. These types of non-sciences are often referred to as **pseudosciences** (*pseudo* meaning fake).

Working as a psychologist

There are many areas in which **psychologists** can work; however, most psychologists specialise in one or two specific areas. These specialty areas include sport, forensic, health, counselling, clinical, neuropsychology, academic, educational and organisational psychology.

Specialist areas in psychology

Sport psychologist

- ❖ Improving athlete's performance through mental skills training (e.g. goal setting, confidence, imagery)
- ❖ Improving personal development and wellbeing
- ❖ Anxiety management and relaxation
- ❖ Team building and **leadership**
- ❖ Helping athletes recovering from injury



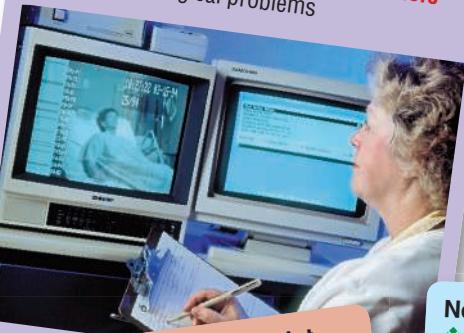
Forensic psychologist

- ❖ Psychological assessment of criminals
- ❖ Determining diminished responsibility and insanity
- ❖ Counselling victims and eye witnesses
- ❖ **Criminal profiling**
- ❖ Researching memory and jury behaviour
- ❖ Expert witness in the courtroom



Clinical psychologist

- ❖ Assessment, **diagnosis** and treatment of severe and non-severe **mental disorders** and psychological problems



Counselling psychologist

- ❖ Counselling less severe psychological problems such as relationship issues, self-esteem, conflicts



Organisational psychologist

- ❖ Assisting in team building, effective management and leadership strategies in the workplace
- ❖ Improving productivity and morale



Academic psychologist

- ❖ Working in universities lecturing, doing research and supervising students doing research



HOW ABOUT THAT!

What is the difference between a psychologist and a psychiatrist?

People who have studied psychology at university and have become experts in the study of thoughts, feelings and behaviours are called psychologists.

Psychiatrists are also experts in these fields, but they are qualified medical doctors who can perform medical procedures and prescribe medicine to treat mental illnesses as well.

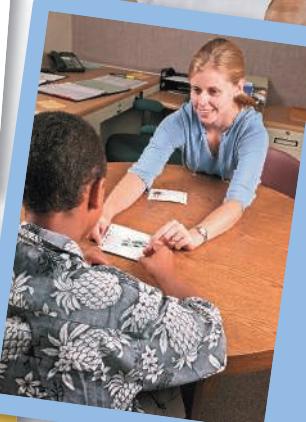
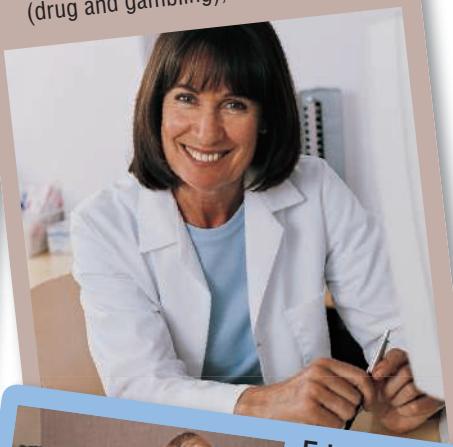
Neuropsychologist

- ❖ Researching the brain and behaviour
- ❖ Rehabilitation of brain injuries (due to traffic accidents and strokes)
- ❖ Illness rehabilitation and research (due to epilepsy and dementia)



Health psychologist

- ❖ Research and health promotion
- ❖ Counselling in health-related areas such as eating disorders, addiction (drug and gambling), self-esteem



Educational psychologist

- ❖ Assisting in learning and developmental issues such as sibling rivalry, bullying, peer pressure, parenting and psychological assessment of learning disabilities

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 What is *psychology*?
- 2 What are the differences between a psychologist and a psychiatrist?
- 3 Name three different types of pseudoscience.

THINK

- 4 Look at each of the different types of psychologists. Name a place each of these psychologists might work.
- 5 State whether each example is a thought, feeling or behaviour:
 - being excited about going on holiday
 - remembering your last birthday
 - singing along to the radio
 - being angry at your brother
 - trying to work out a maths problem in your head
 - sneezing
 - dreaming
 - getting confused because you can't work out a maths problem in your head.

COMMUNICATE

- 6 In a group, discuss for which issues young people (aged 12–18 years) might require a counselling, educational, health and clinical psychologist. Present your ideas to the rest of the class.

The brain

All living animals have nervous systems. Simple animals, such as jellyfish, have very simple nervous systems containing only a few nerve cells. This allows them to do basic survival activities such as eating, breathing and moving, but little else.

Human beings need a more advanced nervous system to be able to perform complex activities such as problem solving, creative thinking, talking, playing football, engaging in relationships, or writing computer programs.

The central nervous system: the brain

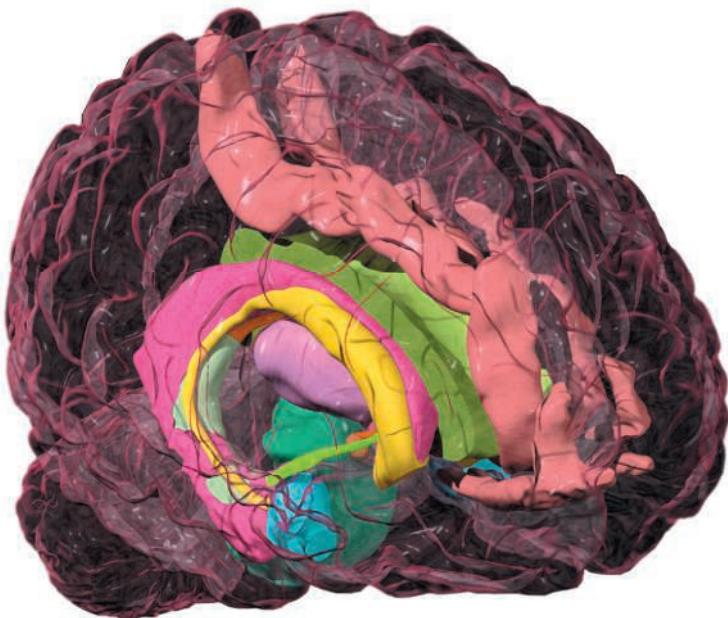
The brain is soft and has the appearance of an oversized, wrinkled walnut. The average brain is the size of a large grapefruit and weighs around 1.5 kilograms. The brain has many functions including controlling movement, thinking, memory and regulating the body's internal state.

The outer layer of the brain, the **cerebral cortex**, is a very important part of the brain. The cerebral cortex is bigger in humans, compared to all other animals. The roles of this part of the brain include problem solving, memory, **personality**, judging, planning, learning, logical reasoning and decision making.

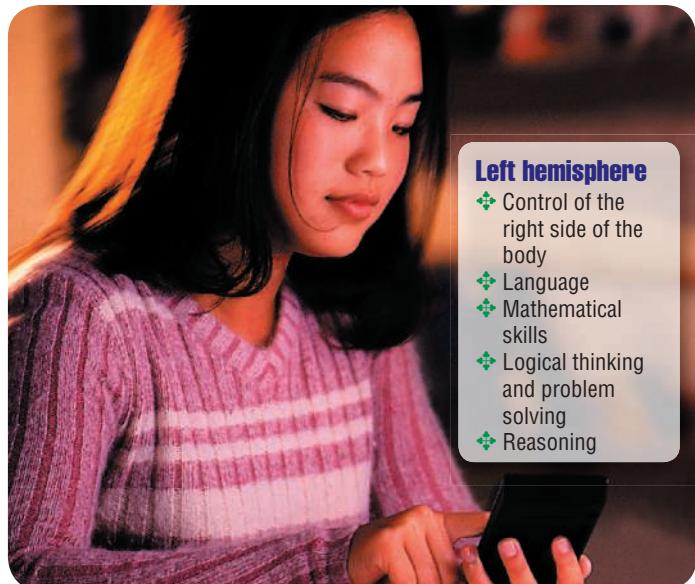
The cerebral cortex is divided into two halves called **cerebral hemispheres**. The left cerebral hemisphere is mainly responsible for the functioning of the right side of the body and the right cerebral hemisphere is mainly responsible for the functioning of the left side of the body.

Each hemisphere also has other specialised functions. For example, the left hemisphere has areas that specialise in the production and comprehension of language, and corresponding areas in the right hemisphere specialise in non-verbal, visual/spatial tasks, such as reading maps and drawing objects.

Despite these types of specialisation, the two hemispheres share information using the **corpus callosum** and function interactively.



The corpus callosum is a bridge of nerve fibres that connects the left and right hemispheres of the brain together.



Left hemisphere

- ❖ Control of the right side of the body
- ❖ Language
- ❖ Mathematical skills
- ❖ Logical thinking and problem solving
- ❖ Reasoning



Right hemisphere

- ❖ Control of the left side of the body
- ❖ Visual/spatial tasks such as doing jigsaw puzzles and reading maps
- ❖ Creativity
- ❖ Music
- ❖ Appreciation of beauty
- ❖ Fantasy and dreams

INQUIRY: INVESTIGATION 12.1

What are your strengths and weaknesses at school?

Do you think that you have:

- (a) a dominant left brain
- (b) a dominant right brain
- (c) a balanced brain?

Take this questionnaire to find out.

Choose the one sentence that is more true (A or B) for each question. Do not leave any blanks, and tick only ONE answer per question.

1. (A) It is fun to take risks.
- (B) I have fun without taking risks.
2. (A) I look for new ways to do old jobs.
- (B) When one way works well, I don't change it.
3. (A) I begin many things that I never finish.
- (B) I finish something before I start something new.
4. (A) I'm not very imaginative in my work.
- (B) I use my imagination in everything I do.
5. (A) I can analyse what is going to happen next.
- (B) I can sense what is going to happen next.
6. (A) I try to find the best way to do something.
- (B) I try to find different answers to problems.
7. (A) My thinking is like pictures going through my head.
- (B) My thinking is like words going through my head.
8. (A) I agree with new ideas before other people do.
- (B) I question new ideas more than other people do.
9. (A) Other people don't understand how I organise things.
- (B) Other people think I organise well.
10. (A) I plan time for doing my work.
- (B) I don't think about the time when I do work.
11. (A) When I am making a hard decision, I choose what I know is right.
- (B) When I am making a hard decision, I choose what I feel is right.
12. (A) I do easy things first, and leave important things until later.
- (B) I do the important things first, and leave the easy things until later.

To score:

Give yourself one point for each time you answered A for questions:

1, 2, 9, 12.

Give yourself one point for each time you answered B for questions:

4, 5, 10, 11.

Add all points up. (Note: Some questions score 0 for middle/equal brain.)

What does this score mean?

If you scored:

- 0–1 Strong left brain
- 2–3 Moderate left brain
- 4–5 Middle/equal brains
- 6–7 Moderate right brain
- 8 Strong right brain

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 Describe the structure of the human brain.
- 2 What are the roles of the left and right hemispheres?

THINK

- 3 Describe two main functions of the nervous system.
- 4 What is the role of the corpus callosum?
- 5 What are the main differences between the left and right hemispheres of the brain?
- 6 Tom was in a car accident. He hit his head, and now he has trouble speaking; however, he has no problems doing jigsaws or reading maps. What part of the brain might Tom have damaged?

THINKING

- 7 Using the following, create a target map on brain dominance. Place the roles of the left hemisphere in the inner ring and the roles of the right hemisphere in the outer ring.
 - Writing the music for song lyrics
 - Balancing incoming and outgoing money from your bank account
 - Painting your fingernails with nail polish
 - Working out how much change you will get when shopping
 - Dancing to music
 - Reading a magazine
 - Discussing your problems with your best friend
 - Singing your favourite song

Intelligence

What do we mean when we use the word **intelligence**?

Do the words 'brainy', 'smart', 'bright' and 'clever' come to mind?

Psychologists' definitions of intelligence range from 'intelligence is what intelligence measures' to definitions such as 'a psychological potential to solve problems or to fashion products that are valued in at least one cultural context'.

A major reason for so many definitions is because intelligence cannot be directly observed. Therefore, psychologists rely on observations of behaviour that they believe to be associated with intelligence.

Although there are many descriptions of intelligence, most of them have common aspects. They typically refer to such features as the ability to learn from experience, to reason, to solve problems, to deal with people and objects, and to adapt effectively to an environment.



Some psychologists believe that intelligence is a single ability or a combination of separate abilities. It is generally accepted that intelligence seems to include a general ability that underlies a wide variety of intelligent behaviour, and also includes other more specific abilities — memory, reasoning, use of language and numeracy — that are probably independent of one another.

In the past, research on intelligence focused on designing and implementing intelligence tests to calculate IQ scores; however, more recently, research does not rely so heavily on intelligence tests. A major reason for this is the recognition that intelligence is broader than what those tests assess. There has been



Intelligent is often used interchangeably with 'smart' or 'brainy'. However, there are many different definitions of intelligence.

a shift towards studying how people solve a problem rather than what their answer actually is.

It is always fun to do an intelligence test to find out your IQ though. Just remember that there are a lot of problems associated with these tests — so you shouldn't take the results too seriously. The average IQ is 100 (a range from 90 to 109). A genius is classified as someone with an IQ of more than 145.

HOW ABOUT THAT!

The Academy Award-winning actress Geena Davis is a member of one of the world's largest High IQ organisations — Mensa. So is Jean Auel, the best-selling author of many books including *Clan of the Cave Bear* and *Valley of the Horses*. Mensa is a group that accepts people of all ages and professions, but they must have an IQ in the top 2% of the population.

Gardner's theory of Multiple Intelligences

One current theory of intelligence was proposed by a psychologist named Howard Gardner. He proposed that we do not have just one intelligence; we have a variety of intelligences. Everyone has a combination of each of these intelligences, but in different quantities. This theory explains individual strengths and weaknesses.

The table below describes each of the intelligences proposed by Gardner.

Type of intelligence	Description of intelligence People who are strong in this intelligence:
Verbal/Linguistic	 <ul style="list-style-type: none">like to read, write and tell stories wellare good at memorising names, places, trivia and learn best by saying, hearing and seeing wordshave highly developed auditory skillsthink in words rather than pictures.
Logical/Mathematical	 <ul style="list-style-type: none">can manipulate numbers, quantities, and operations, the way a mathematician doeslike to do experiments, figure things out, work with numbers, ask questions, and explore patterns and relationshipsare good at math, reasoning, logic and problem solving.
Bodily/Kinaesthetic	 <ul style="list-style-type: none">can control body movements and handle objects skilfullyexpress themselves through movementhave a good sense of balance and eye-hand coordination (e.g. ball play, balancing beams).
Musical/Rhythmic	 <ul style="list-style-type: none">can produce and appreciate musicthink in sounds, rhythms and patternsare good at singing, whistling, playing musical instruments, recognising tonal patterns, composing music and remembering melodies.
Visual/Spatial	 <ul style="list-style-type: none">tend to think in pictures and need to create vivid mental images to retain information. They enjoy looking at maps, charts, pictures, videos and movies, and have a good sense of direction.are good at puzzles, reading, writing, sketching, painting, creating visual metaphors and analogies (perhaps through the visual arts).
Intrapersonal	 <ul style="list-style-type: none">can self-reflect and be aware of their inner state of beingtry to understand their inner feelings, dreams, relationships with others, and strengths and weaknessesare good at recognising their own strengths and weaknesseshave an awareness of their inner emotions.
Interpersonal	 <ul style="list-style-type: none">can relate to and understand otherstry to see things from other people's points of view in order to understand how they think and feelare great organisers and generally try to maintain peace in group settings and encourage cooperation.
Naturalist	 <ul style="list-style-type: none">like to be outside, with animals, geography, and weather; interacting with the surroundingsare good at categorising, organising a living area, planning a trip, preservation and conservation.

It is important to know which intelligences we score high, medium and low on. This knowledge enables us to enhance our strengths, and work on and challenge our weaknesses.

Did you know that even identical twins have different amounts of each intelligence? They are not as identical as we first thought!

UNDERSTANDING AND INQUIRING

REMEMBER

- What is *intelligence*?
- Name and describe Gardner's Multiple Intelligences in your own words.

THINK

- For each Multiple Intelligence, think of three professions that would require this intelligence to be a strength. For example, poets and writers would usually score well on the Verbal/Linguistic intelligence.
- Construct a PMI chart on the issue of measuring intelligence.
 - Spend five minutes brainstorming words that mean *intelligent*. Share your words with the rest of the class.
 - Spend five minutes brainstorming all the stereotypes used about intelligent people.

INVESTIGATE

- Complete an IQ test on the internet. What is your IQ? The average IQ is 100. The range is 90–109.



- 12.2 Multiple intelligences
- 12.3 Types of intelligence

Emotions and communication

We all experience **emotions** such as happiness, anger, fear, interest, disgust, surprise and sadness. We can also recognise these emotions in other people through their behaviours, their facial expressions, body language and what they say. Emotions are partly formed through experience and partly through maturation (genetics).

Emotion is defined as a complex pattern of bodily and mental changes, including physiological **arousal**, feelings, cognitive processes, and behavioural responses to a personally significant situation.

Experiencing emotions

Researchers believe that there are ten basic emotions that humans experience.



Most of these emotions are present in infancy. It is suggested that all other emotions are combinations of these ten basic ones.

EXPRESSING EMOTIONS

Emotions can be expressed verbally as in 'I feel happy today' or non-verbally (communication without words). There are various types of non-verbal communication, including **kinesics** (body language) and **personal space**.

Kinesics

Kinesics is the use of body language, body movements, posture, gestures and facial expressions to communicate information. We all use body language to communicate our thoughts and feelings, although we may not be aware of it at the time. For example, if irritated, we may tense our bodies,

press our lips together and turn away. Facial expressions are usually culturally universal. A smile in China means the same thing as it does in Australia.

Usually we are fairly good at reading other people's non-verbal communication. We read and interpret their facial expressions, body movements and posture.

We all have hard-to-control facial muscles that show our true emotions and that are hard to conceal. Lifting just the inner part of your eyebrows, which few people do consciously, reveals stress and worry. Eyebrows raised and pulled together signal fear. A pretend smile often continues for more than four or five seconds, by which time most real smiles have ended.

It is useful to be able to read feelings that 'leak through' via subtle facial expressions, body movements and posture. Fidgeting, for example, may reveal anxiety or boredom. Lack of eye contact, looking up to the right and touching the face (especially around the mouth) are all well known signs of lying. Next time you are speaking to



Facial expressions tell us a lot about how someone is feeling.



A smile means happiness and lasts a short time. A pretend smile is held for longer.

someone, consciously pay attention to their body language. What are they saying non-verbally? Is it consistent with what they are saying verbally?

Personal space

Personal space is another form of non-verbal communication. It is the small, invisible physical area immediately surrounding our body that is regarded as our own personal territory. The size of our personal space varies according to factors such as our cultural background, mood, who we are with, what we are doing and where we are.

The four different zones of personal space:

Zone	Distance	Interaction activity	People allowed into the zone
Intimate	0–0.5 metres	Informal, physical contact may be involved with someone close, in public or private	Close family and friends, partner, girlfriend/boyfriend
Personal	0.5–1.5 metres	Informal in public, e.g. at a party or at school	Friends
Social	1.5–3.5 metres	More formal talking, e.g. with people at work who are not close friends	People you don't know very well
Public	More than 3.5 metres	Formal talking with someone you don't know, perhaps in large groups or crowds	Strangers

Stress

Many people believe that stress is always bad or that a complete lack of stress is ideal. However, stress affects all of us in varying degrees most of the time. Stress occurs any time that we must change in order to fit in with an environment. Lots of life experiences cause stress, including school pressures, relationship problems, financial issues, travel, sports, a new job, mountain climbing, starting new relationships and other pleasant events.

Your body reacts to stress in the same way every time. Your nervous system causes your body to be alert or aware of the environment. Signs of alertness include increased heart rate, respiration rate, blood pressure and dilation (enlarging) of pupils. Perspiration also increases, your mouth gets dry and your appetite decreases. Do these signs sound familiar?

UNDERSTANDING AND INQUIRING

REMEMBER

- What are the ten basic emotions?
- Describe the four zones of personal space.
- When does stress occur?

THINK

- Is body language culturally universal? Explain.
- Explain how body language tells us about someone's emotional state.
- How can stress be harmful and yet helpful at the same time?

INVESTIGATE

- Research how stress management, aerobic exercise and relaxation can help someone cope with stress. Present your findings in a poster.

COMMUNICATE

- Many young people encounter large amounts of stress. In small groups:
 - Brainstorm the kinds of stressful situations young people may encounter in their life, such as when parents separate. Write these situations onto small pieces of paper.
 - Divide the situations into three categories:
 - Very stressful
 - Quite stressful
 - Slightly stressful.
 - Choose one stressful situation from each category.
 - Answer the following for each of the three stressful situations the group chose:
 - Who could help a young person cope with this situation?
 - Describe a strategy they may use to help young people cope with this situation.

DESIGN AND CREATE

- Starting with the theme 'Emotions' in the centre, create a cluster map to sort the emotions below into positive ones and negative ones.

Happy, sad, guilty, anxious, excited, pleased, apprehensive, confused, contented, bewildered, calm

- Create a PMI chart on stress. Compare your chart with the person sitting next to you. What are the similarities and differences between the two charts?

work
sheet

→ 12.4 Emotions

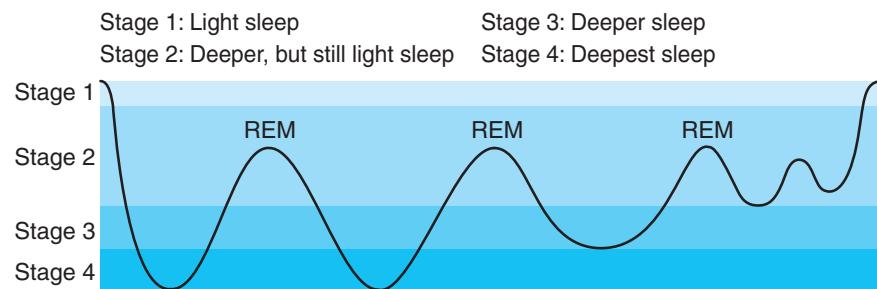
Sleep and sleep disorders

Every animal, including humans, needs sleep. In fact, we sleep for one-third of our lives. Sleep is a very important, complex process that involves four stages and two different types of sleep.

Types of sleep: REM and NREM sleep

Rapid eye movement (REM sleep) occurs throughout the night. This type of sleep involves the eyes moving around rapidly (whilst the eyelids are closed), muscle twitching and irregular breathing. It is during REM sleep that people dream. However, people remember their dreams only if they awaken during this stage of sleep. People sleep for a total of about 90 minutes each night in REM sleep, and periods of REM sleep get longer as the night progresses.

The remainder of a night's sleep is spent in **non rapid eye movement sleep (NREM sleep)**. NREM sleep is divided into 4 stages, from a very light sleep (stage 1) to a very deep sleep (stage 4).



In NREM sleep there is no observable movement of the eyes behind the eyelids, the body is still and there are no bodily movements. NREM sleep occupies 80% of our sleep time and is usually dream-free, but some dreaming may occur in stages 3 and 4.

A sleep cycle starts by going from stage 1, to stage 2, to stage 3, to stage 4 sleep. In the first few cycles of sleep, people spend about 30 minutes in stage 4 sleep. They then go into stage 3 sleep and then stage 2 sleep. Sleepers do not usually go into stage 1 sleep, but go into REM sleep, the second type of sleep. Most people have 4 to 5 sleep cycles each night.

Sleep disorders and phenomena

Sleep problems which disrupt the normal NREM--REM sleep cycle,

Characteristics		What happens to the body?	If woken, how does the person react?	Is the person easily woken?
Stage 1	This is a light sleep, just after we 'doze off'.	The body relaxes, the heart slows down, body temperature drops slightly and breathing can become irregular.	Most people say that they were not fully asleep.	People are often still aware of external noises.
Stage 2	This is deeper, but is still light sleep.	The heart rate reduces further and there is a noticeable drop in body temperature.	Many people report that they were not fully asleep.	People can still react to loud or disruptive external stimuli.
Stage 3	This is a deeper sleep.	Heart rate and breathing tend to be slow, regular and relaxed.	People often report being asleep.	People are less likely to be affected by external stimuli.
Stage 4	This is the deepest stage of sleep.	There is a lower body temperature and a slower heart rate.	People take up to ten minutes to become fully aware of their surroundings.	People are very difficult to wake at this stage of sleep.

Sleep progresses through stages 1, 2, 3, 4, and then through stages 4, 3 and 2 and finally REM sleep. During the night, people go into stage 1 sleep only when they are falling asleep or waking up.

including the onset of sleep, are called **sleep disorders**. Most can be successfully treated. **Insomnia** is one form of sleep disorder.

A **sleep phenomenon** is a normally occurring behaviour at night that usually happens during childhood. Examples of sleep phenomena include sleepwalking, sleep talking, nightmares and night terrors.

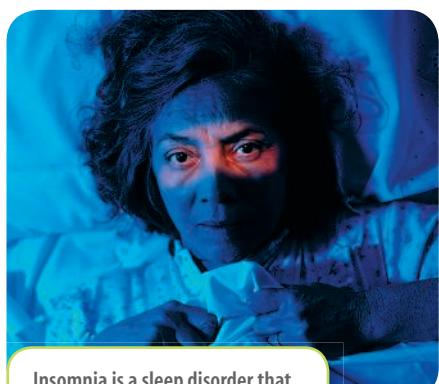
INSOMNIA

There are two types of insomnia:

- (i) difficulty falling asleep (sleep onset)
- (ii) difficulty staying asleep (sleep maintenance).

Insomnia is a disorder which results in a person not getting enough sleep each night. Some **symptoms** of this disorder include the failure to fall asleep within 30 minutes, wakening for longer than 30 minutes during the night, a consistently reduced amount of sleep and constantly feeling tired.

Psychologists believe possible causes of this disorder include stress and anxiety, pain, alcohol or drug use, jet-lag and shift work (a disruption to the normal sleep cycle).



Insomnia is a sleep disorder that causes great distress.

Possible treatments are medication (but not long term), relaxation and meditation, stress management and sleep hygiene

practices. Sleep hygiene practices are regular routines carried out before going to bed, for example, having a warm shower, brushing your teeth and going to the toilet.

SLEEPWALKING

Another name for sleepwalking is **somnambulism**.

Somnambulism is walking while asleep and sometimes conducting routine activities such as dressing or going to the toilet.

Somnambulism occurs most often in children, but is not uncommon in adults during times of high stress. It occurs in stages 3 and 4 NREM sleep (deep sleep) and for between 5–30 minutes at a time. Symptoms include poor coordination and incoherent language. People engaging in sleepwalking are usually unresponsive to the environment, and have a blank stare on their face. They rarely report remembering their night time activities.

NIGHTMARES

A nightmare is an unpleasant dream with content that is frightening and upsetting to the dreamer. Nightmares are remembered vividly, and happen during REM sleep. Common themes in nightmares are helpless terror, threatening situations, escaping and falling. Many people wake during their nightmare because of the upsetting content. The body is stationary, and paralysed (during REM sleep), and there is no indication whether the dream has pleasant or frightening themes. Nightmares occur more commonly in children than adults, and females are twice as likely



Interestingly, there is a myth that it is dangerous to wake someone who is sleepwalking. In reality, it is difficult to wake sleepwalkers because they are in a deep sleep, but it is not dangerous.

to have nightmares as males. Nightmares happen at times of high stress, fatigue or personal trauma; however, experts are not entirely sure why people have nightmares.

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 Describe the four stages of sleep. Draw a diagram to show the progression through each stage during the night.
- 2 What is a sleep phenomenon? Name and describe one sleep phenomenon.
- 3 When do nightmares and sleepwalking usually occur?

THINK

- 4 What is the difference between a sleep disorder and a sleep phenomenon?
- 5 What is the difference between REM and NREM sleep?

ICT

- 6 Research narcolepsy. Find out the symptoms, causes and treatment of this disorder and present your findings in a PowerPoint presentation.

Psychopathology

Many people use the word 'crazy' to describe a behaviour that is abnormal, bizarre or different. Clinical psychologists investigate, diagnose and treat these behaviours. They are often signs or symptoms of underlying mental disorders or **psychopathology**. A mental disorder is a significant impairment in psychological functioning. These psychological problems can be grouped into broad categories with common symptoms.

Symptoms, diagnosis and prevalence

There are three important terms that need to be understood when discussing mental disorders. Symptoms or signs are the characteristics that allow a psychologist to diagnose a mental disorder. A diagnosis involves putting a label on a set of symptoms. This is similar to what happens when you go to the doctor if you are feeling unwell. For instance, Sally goes to her doctor because she has a cough, runny nose and sore throat (symptoms), so the doctor labels or diagnoses her illness as a cold. Similarly, Jake goes to a psychologist because he is sad, has feelings of hopelessness and has trouble getting out of bed (symptoms). The psychologist may diagnose Jake as suffering from major **depression**.

The word **prevalence** refers to how common a disorder is within the community. Prevalence can be expressed as either a percentage or a proportion. For example, the prevalence of **phobias** is between 9–11% of the community, and one in every 100 people suffers from **schizophrenia**.

PHOBIAS

A phobia is an intense, irrational fear and avoidance of an activity, a situation or a particular object such as a needle, spider or snake. People affected by phobias realise that their fears are unreasonable and



excessive, but they cannot control them.

A phobia interferes with a person's ability to function normally in everyday situations. For example, someone with agoraphobia (a fear of open spaces) finds it very difficult, if not impossible, to go to the letterbox or to go out shopping.

Some other phobias are:

- ablutophobia (a fear of washing or bathing)
- acrophobia (a fear of heights).

Phobias can be associated with nearly any object or situation. Everyone has a few fears but these are not necessarily phobias. Common fears are a fear of heights, closed spaces, or bugs and crawly things. A phobic disorder differs from such common fears in that it produces overwhelming anxiety and a need to escape the object or situation.



Phobias, such as claustrophobia (a fear of confined spaces), are treated by psychologists.

Symptoms of phobias include vomiting, running, fainting, sweating uncontrollably, an increased heart rate, nausea and hot flushes. For a phobic disorder to exist, the person's fear must disrupt his or her daily life. Phobias are one of the most common mental disorders. About 11% of all adults experience phobic disorders during their lifetime.

Phobias can be treated using **antianxiety drugs** or therapy. Therapies aim to associate the feelings of being calm and relaxed with the presence of the feared object, so eventually the person is no longer afraid of the object. A combination of therapies is usually successful in treating and curing phobias.

BIPOLAR DEPRESSION

Bipolar depression is a depressive disorder where the individual sufferer has extreme mood swings between **mania** (elevated mood) and depression (feelings of being sad and worthless), usually separated by days or weeks of normal moods.

When the person is manic, they will typically be full of energy

with thoughts and feelings racing. They may talk loudly, function on minimal sleep, lack inhibitions, take large risks and lose their temper easily. People going through a manic episode can find themselves in trouble because they may engage in alcohol and drug consumption, and expensive shopping sprees.

When a person is depressed, their symptoms include feeling sad, worthless, helpless; a withdrawal from social relationships; difficulty in concentrating; diminished interest in pleasurable activities; neglect of appearance; and decreased energy and motivation.

Bipolar depression is usually experienced by individuals before age 30. Approximately 1.2% of the Australian population is diagnosed with bipolar depression in a lifetime. Bipolar depression occurs equally in males and females and it is more likely to run in families. This suggests that genetic factors may be involved in bipolar disorder. Many people suffering from this disorder are treated using counselling drug therapy.



After displaying mood swings from aggression to extreme happiness during the making of *Zoolander*, Ben Stiller was quoted as saying 'I have not been an easygoing guy. I think it's called bipolar manic depression. I've got a rich history of that in my family'.

Famous people who have suffered from bipolar depression include Buzz Aldrin (astronaut), Virginia Woolf (author), Francis Ford Coppola (movie director), Axl Rose (singer in Guns N' Roses) and Ben Stiller (actor).

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 What does the word prevalence mean? What is the prevalence of phobias?
- 2 What are the treatment options for phobias?
- 3 What is the difference between a fear and a phobia?
- 4 Research the symptoms, prevalence and support available for one of the following disorders. Present your findings in a PowerPoint presentation.
 - Catatonic schizophrenia
 - Post traumatic stress disorder

HEALTH

- 5 Organise a Mental Health Week in your school to promote acceptance of mental disorders among your schoolmates. You could include activities such as poster presentations about various mental disorders and organise guest speakers to give talks.

- 6 (a) Create a PMI chart on the issue of labelling people with mental disorders.
(b) Form groups of six and compare the charts.
(c) Divide the six students into two groups of three. One group of three is the Affirmative side and the other group of three is the Negative side.
(d) Develop arguments for or against the topic *Labelling people with mental illness is dangerous*.
(e) Debate the topic above in front of the class.

Treatment of mental disorders

One of the earliest explanations of abnormal behaviour related it to supernatural causes. People believed that anyone behaving differently was possessed by the devil or practised witchcraft. The treatment of demonic possession and supernatural behaviour included elaborate prayer rites, forcing the affected to drink terrible tasting concoctions and brews, flogging, drowning and starvation.

In the fourteenth century, people with mental disorders were put into asylums and were chained or tortured. The treatment of mental disorders has greatly changed since then.

HOW ABOUT THAT!

Luckily for the mentally ill, treatment of mental disorders has changed substantially over time. Originally the mentally ill were housed in large mental asylums (such as Mont Park and Larundel), but today the patients are placed in home-like surroundings and have the service of physicians who are skilled in the treatment of the diseases.

In the past, people were housed in mental asylums. One famous asylum or sanitarium was Kellogg's Battle Creek Sanitarium, in Michigan. This sanitarium was of the health spa/hospital variety. Kellogg's cornflakes were invented at this institution.



Present treatment of mental disorders

Only acutely ill patients need to be inpatients in psychiatric wards of hospitals. One major reason why patients are able to live among society, rather than locked up in hospitals, is due to the development of drugs. These drugs have allowed patients to be released sooner and cope more effectively within the community.

Today, treatment of mental disorders occurs in two

main ways: **psychological therapies** such as counselling and **behaviour therapy**; and biomedical therapies such as drugs and medication. Psychologists tend to specialise in psychological therapies, and doctors and psychiatrists specialise in biomedical therapies.

PSYCHOLOGICAL THERAPIES

Psychological therapies involve structured interaction (usually verbal) between a professional and a client with a problem.

There are different types of psychological therapies; the most common being cognitive and behavioural therapies.

Cognitive therapies assume that the way we think about things affects our feelings and behaviours. So, if we change what we think about issues that are causing us concern, then we can decrease the concern we are feeling. Cognitive therapists try various methods to teach people more constructive ways of thinking.



Counselling of patients may occur in hospitals, clinics or private practices.

Instead of trying to alleviate distressing behaviours by resolving a presumed underlying problem, behaviour therapy applies well-established learning principles to eliminate the unwanted behaviour. For example, to treat phobias behaviour therapists replace problem thoughts and maladaptive behaviours with more constructive ways of thinking and acting. This type of therapy is called **systematic desensitisation**.

BIOMEDICAL THERAPIES

Another way of treating mental disorders is by physically changing the brain's functioning — by altering its electrochemical transmissions with drugs.

The most common drugs used to treat mental disorders are **antipsychotic drugs** (to treat schizophrenia), antianxiety drugs (to treat anxiety), and antidepressant drugs (to treat depression).

Along with cognitive and behavioural therapies and medication, the most important treatment for mental illness today is the acceptance and understanding of such illnesses by society. The government has

implemented a National Mental Health Strategy that aims to:

- promote the mental health of the Australian community
- prevent the development of mental disorders
- reduce the impact of mental disorders on individuals, families and the community
- assure the rights of people with mental illness.

Other campaigns implemented by the government include beyondblue (the National Depression Initiative), Kids Help Line, Lifeline, and better access to psychiatrists and psychologists through the Medical Benefits Scheme.

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 Describe how people with mental disorders were treated in the past.
- 2 How are mental disorders treated today?
- 3 What are the three main types of drugs used to treat mental disorders today?
- 4 What is the difference between cognitive and behavioural therapies?

THINK

- 5 How has the development of drugs to treat mental disorders allowed people to live among society, rather than being hospitalised?

INVESTIGATE

- 6 *beyondblue* is a government initiative aimed at educating the community about depression. Use the **beyondblue** weblink in your eBookPLUS to investigate two ways that the community is educated about depression in young people. Present your findings in a brochure.

eBookplus



Groups and social psychology

We like spending time with others, and feel lonely if we don't. Our social system is structured so that we are members of many different **groups**. We belong to groups such as family, friends, work colleagues, school, sporting teams, religious and community groups. We are also members of groups automatically on the basis of personal characteristics such as sex, age and nationality.

What is a group?

Are two people waiting in line at the supermarket a group? What about the crowd at a football match? According to social psychologists, a group is any collection of two or more people who interact with and influence one another, and who share a common goal or purpose. Therefore, the two people in line at a supermarket are not classified as a group if they do not communicate with each other. Similarly, members of a crowd at a football match do not all communicate with each other, and so are not classified as a group either. These examples are known as a **collective** — an assemblage of people who have minimal contact with each other.

Why do people join groups?

We join groups to meet our needs. One need is the desire to associate and be involved with others. This is known as **affiliation**. Affiliation tells us about other people's attitudes and feelings, and provides us with a source of information to which we can compare our own attitudes and feelings.

Another reason humans join a group is to give a sense of **self identity**. Self identity is a personal awareness of ourselves, or knowing where we 'fit in' in society.

People also join groups to perform tasks and attain goals that cannot be achieved as an individual. For example, the captain of a football team cannot win on his own. He needs his team-mates to play the match with him in order to win.



People in a crowd at a concert do not all interact with each other, and so are classified as a collective not a group. Members of the band interact together when playing, so they are classified as a group, not a collective.

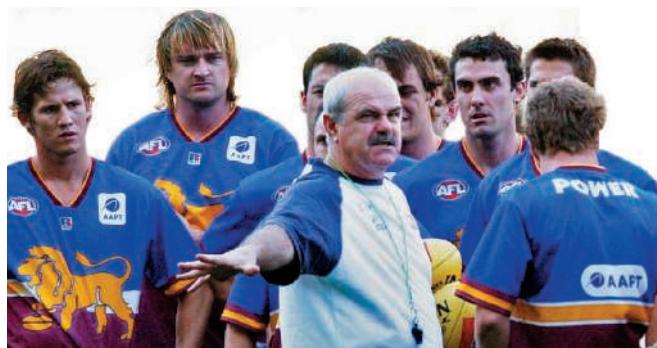
Leadership of a group

Within a group, one or more members often carry a higher level of power or **status** than other members. Status refers to the importance of an individual's position within a group. Leadership involves an individual or group with high power and status directing a group.

Leaders have a very influential role in society. They are often in powerful positions and can significantly affect the beliefs, attitudes and behaviours of the group members. There are three different leadership styles that leaders use to exert their power.

DEMOCRATIC LEADERSHIP

This style of leadership is balanced between being task- and people-oriented. Democratic leaders encourage all group members to participate in decision-making. They support the opinions of the group and promote cohesiveness, attainment of



Leigh Matthews, coach of the AFL team the Brisbane Lions who won three consecutive AFL premierships, credited the wins to the cohesive team effort and the talents of individual team members. His **democratic leadership** style was demonstrated through his ability to get the team members to work together as a unit.

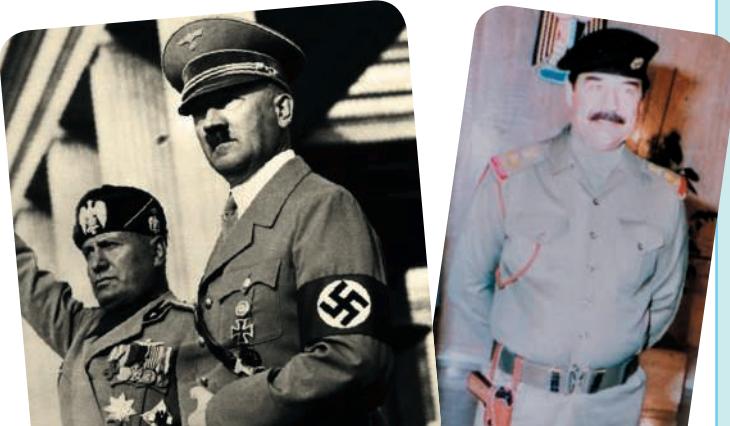
goals and ownership of decisions. Group members are satisfied because they feel that their opinions are acknowledged by the group.

LAISSÉZ-FAIRE LEADERSHIP

This is a person-oriented leadership style where leaders are friendly and helpful, but have no direct control over the group. Instead, the group members have the control. The leader supports the group and wants them to have a good time — regardless of the outcome. This type of leadership is ineffective as goals are seldom reached, but group members are happy because their opinions are heard.

AUTOCRATIC LEADERSHIP

This is a task-oriented leadership style where the leader makes the decisions for the group and has complete control of them. These leaders emphasise the importance of completing the task through the use of rewards and punishment. Often, individual members are dissatisfied because their opinions have not been heard. People who have employed this type of leadership include Saddam Hussein, Hitler and **cult** leaders.



Hitler and Saddam Hussein both employed an **autocratic leadership** style. Saddam Hussein, Iraq's former leader, made many decisions that affected the lives of the Iraqis and the rest of the world.

Cults

A cult is led by an all-powerful and charismatic leader who is seen as the guiding spirit. Members of a cult are devoted to the leader, an idea or object. A cult usually has a religious basis, separates itself from the rest of society, and it may abuse the rights of the members.

A cult controls its members in different ways. These forms of control include: not allowing members to think for themselves apart from the group; allowing them to accept only what they are told; breaking relationships with friends and

relatives outside the group and forcing them to unquestioningly submit to the group's teachings and directions — breaking their own free will. This control of members may occur by means of intimidation and the heavy use of guilt.

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 What is the difference between a group and a collective?
- 2 What are the three leadership styles?
- 3 How do cult leaders exercise their control?

THINK

- 4 Which of the following is least likely to be classified as a *group*?
 - (a) A queue of people waiting to enter a concert
 - (b) Your class at school
 - (c) People stuck in an elevator for two hours
 - (d) Six teachers sitting in the staff room talking
- 5 Which of the following is least likely to be classified as a *collective*?
 - (a) Spectators at the AFL Grand Final
 - (b) People in a cinema watching a movie
 - (c) People stuck in an elevator for two hours
 - (d) People sitting in a hospital waiting room
- 6 Which of the following is the result of an autocratic leadership style?
 - (a) The group is satisfied with the result of the group's task, and the task is complete.
 - (b) The group is not satisfied with the result of the group's task, and the task is complete.
 - (c) The group is not satisfied with the result of the group's task, and the task is not completed.
 - (d) The group is satisfied with the result of the group's task, and the task is not completed.
- 7 Think of an example, other than the ones already mentioned, for each leadership style.

INVESTIGATE

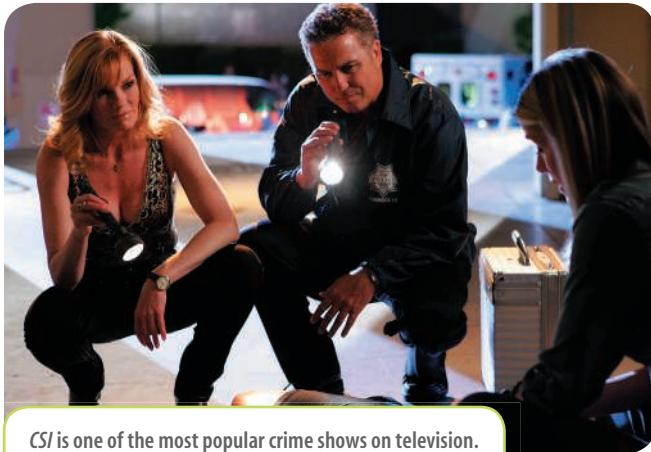
- 8 Research a cult such as the Manson Family on the internet. Identify how the members were coerced into the group and any other interesting information you can find.
- 9 Create a PMI chart of the autocratic leadership style.
- 10 Explain how belonging to a group, such as a peer or sporting group, may have an important impact on a young person's sense of personal identity.

work
sheet

12.5 The ten best songs, ever!

Forensic psychology

Do you like watching *CSI*, *Forensic Investigators* and other crime shows on television? These shows demonstrate how evidence is collected and how crimes are solved. The actual collection of evidence is done by scientists, but forensic psychologists also play an important role in the apprehension of perpetrators (catching the person who committed the crime).



CSI is one of the most popular crime shows on television.

What is forensic psychology?

Forensic psychology involves applying psychological knowledge and principles to legal issues. Forensic psychology investigates many aspects of crime such as the reliability of evidence and eye-witness testimony, the role of human memory, decision-making, particular group decision-making (as in juries) and questions of the general credibility of witnesses.

What do forensic psychologists do and where do they work?

The work undertaken by a forensic psychologist is varied and may include: working with the police; building criminal profiles; assessing a criminal's state of mind and whether they are sane or not; assessing whether the person is mentally fit to enter a plea (guilty or not) or stand trial; giving advice or an expert opinion to a court; assessing and treating people who are the victims of crime or witnesses of crime; providing treatment to offenders in prison; assessing the **dangerousness** of an offender (that is, whether they are likely to re-offend or not); and conducting research in areas of forensic psychology,

such as personality characteristics of stalkers, jury behaviour and so on. Forensic psychologists usually work with the police at jails or in law courts.

DANGEROUSNESS

Forensic psychologists may need to determine if a person is dangerous or not. Dangerousness describes the likelihood of a person committing a serious act of violence, with little provocation. Assessing dangerousness means making a prediction about whether the person will be violent in the future.

CRIMINAL PROFILING

Another role of a forensic psychologist may be to provide a criminal profile of a perpetrator. Criminal profiling is a technique used to assist in the identification and apprehension of a likely offender for a particular crime. A criminal profile is a portrait or picture of a particular offender: the physiological characteristics such as sex, race, body build, height, weight, left or right handedness; psychological characteristics such as intelligence level, personality, aggressiveness; and personal details such as employment status, socio-economic status, marital status, clothing preference, where they live, car type or preference.

Sometimes when police are investigating the death of someone, they notice that behaviours or clues are similar to a past murder. They are then able to link the murders. Someone who kills multiple people over time is known as a serial killer.



SERIAL KILLERS

The leading authority on serial killers is the FBI, the United States Federal Bureau of Investigation. The FBI has studied serial killers methodically and has

compiled vast amounts of information concerning the killers themselves, their methods, and their motivations on a criminal profiling database.

Personality characteristics that seem to be more common in serial killers, compared to other people, include impulsiveness, low self-esteem, poor social skills, competitive and aggressive behaviour, a lack of remorse and guiltlessness. An inherent sadistic nature is another part of the serial killer psyche, along with a fascination for violence, injury and torture.

Famous serial killers include Charles Manson, Jeffrey Dahmer, Ted Bundy, Son of Sam, Martyn Bryant, John Wayne Gacy, and The Boston Strangler.

THE POLYGRAPH

In some countries, a polygraph (commonly called a lie detector) is used to determine if an accused person is telling the truth or not. It is often the role of a forensic psychologist to administer the **polygraph**.

People tell lies and deceive others for many reasons. Most often, lying is a defence mechanism used to avoid trouble with the law, a boss or authority figures. Sometimes you can tell when someone is lying, but other times it may not be so easy. Polygraphs are instruments that monitor a person's physiological reactions. These instruments do not, as their nickname suggests, detect lies. They can only detect whether deceptive behaviour is being displayed.

A polygraph instrument measures a person's **arousal**. Arousal refers to how alert or aware someone is of the environment. A person's heart rate, blood pressure, respiratory rate and electrodermal activity (sweatiness, in this case of the fingers) are measured and compared to normal levels. The more



The Galvanic skin resistance is measured. This is the amount of sweat on the skin. The more sweat on the skin, the higher the arousal and the less resistance it has to electrical currents.

aroused someone becomes when asked about a crime, the more likely the person is lying.

Results from the polygraph are not allowed as evidence in Australian courts because it does not measure lies. Other conditions such as nervousness, stress, headaches, muscular problems and even the common cold can cause an increase in a person's arousal. Polygraphs can also be cheated.

HOW ABOUT THAT!

How to cheat the polygraph test

One way of cheating the polygraph test is by hurting yourself — by stepping on a pin, clenching a muscle very tightly or biting your lip — when asked questions. The experience of pain also increases arousal, so the person operating the polygraph machine may think the person is just a highly anxious person, rather than a lying murderer!

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 Describe where forensic psychologists may work.
- 2 Describe the role of a forensic psychologist.
- 3 Decide whether the following are true or false.
 - (a) Forensic psychologists collect evidence at the scene of a crime
 - (b) Forensic psychologists work with police while developing the criminal profile of a suspect
 - (c) The best predictor of dangerousness is a history of violent behaviour towards others
 - (d) The polygraph measures lies
 - (e) The results of polygraph tests are inadmissible as evidence in a court of law in Australia

THINK

- 4 Explain why the polygraph is inadmissible in court.
- 5 What is the difference between a forensic psychologist and a forensic scientist?

DESIGN AND CREATE

- 6 Research a famous serial killer. Identify their crimes and how they were caught. Present your findings in a poster.

INVESTIGATE

- 7 Research the role of forensic scientists, including ballistics experts, forensic serologists and forensic entomologists. What are the differences between each of these scientists?
- 8 Create a PMI chart of the use of criminal profiling in the apprehension of perpetrators of crime. Compare your chart with that of the person sitting next to you.

LOOKING BACK

- 1 Which of the following is NOT a behaviour?
(a) Blinking
(b) Going for a walk
(c) Laughing
(d) Having a toothache
- 2 A major difference between a psychologist and a psychiatrist is that:
(a) a psychologist is allowed to perform medical procedures whereas a psychiatrist is not.
(b) there are fewer areas of specialisation in psychology than there are in psychiatry.
(c) a psychologist is allowed to prescribe certain types of medication, whereas a psychiatrist can prescribe all types of medication.
(d) a psychiatrist is allowed to prescribe medication whereas a psychologist is not.
- 3 True or false?
Psychiatrists spend six years on average at university, while psychologists spend 11 years on average.
- 4 Why is astrology considered to be non-scientific?
- 5 Describe the role of an organisational psychologist.
- 6 What is the role of the corpus callosum in the brain?
- 7 The cerebrum is divided into two halves; the left and the right cerebral hemispheres. These hemispheres have specialised functions.
(a) Name two functions of the left hemisphere.
(b) Name two functions of the right hemisphere.
- 8 Describe the two main functions of the central nervous system.
- 9 Match the occupations to the Multiple Intelligences.
(Note: There may be multiple matches):
- | | |
|----------------------|---------------|
| Naturalist | Journalist |
| Interpersonal | Ballet dancer |
| Bodily/Kinaesthetic | Guitarist |
| Verbal/Linguistic | Psychologist |
| Logical/Mathematical | Ecologist |
| Visual/Spatial | Accountant |
| Musical/Rhythmic | Pilot |
- 10 Psychologists use the term personality to refer to an individual's:
(a) temperament, mood and ability to relate to others.
(b) distinct mix of changing physical attributes, behaviour and thought patterns.
(c) relatively unchanging, unique, psychological characteristics and behaviour patterns.
(d) all of the above.
- 11 Gardner's theory of Multiple Intelligences proposes that everybody has:
(a) just one type of intelligence.
(b) a combination of two different types of intelligence.
(c) all of the intelligences but in different quantities.
(d) different types of intelligences, except for identical twins.
- 12 List two types of non-verbal communication; give an example of each type.
- 13 There are four zones of personal space; describe the size and the activities that might occur in the intimate zone.
- 14 In an adult, REM sleep constitutes approximately what percentage of the total time spent asleep?
(a) 20%
(b) 30%
(c) 40%
(d) 50%
- 15 _____ is the inability to get enough sleep.
(a) Pseudoinsomnia
(b) Hypersomnia
(c) Somnolence
(d) Insomnia
- 16 Briefly describe two symptoms of insomnia.
- 17 Which of the following is most likely to be classified as a group?
(a) A queue of people in a supermarket
(b) A sports team
(c) A line of people waiting for a train
(d) Four students standing in a canteen queue
- 18 Which of the following is least likely to be classified as a collective?
(a) The spectators at a cricket match
(b) The people in a cinema watching a movie
(c) Six people talking at a party
(d) People sitting in a tram



- 19 The type of work that may be undertaken by a forensic psychologist could include:
(a) enhancing sporting performance through mental skills training.
(b) giving advice or an expert opinion to a court.
(c) helping couples to communicate more effectively.
(d) assessing an individual's career potential.
- 20 Forensic psychologists are most likely to be employed by:
(a) schools.
(b) large corporate banks.
(c) the police.
(d) debt-collection agencies.

- 21** The term *dangerousness* refers to:
- the likelihood of a person committing a serious act of violence.
 - the likelihood of a person stalking another person.
 - whether or not the alleged offender is able to understand what they have been charged with.
 - having a mental disorder or intellectual disability at the time of committing the offence.
- 22** Describe how the polygraph works.
- 23** True or false?
- Multiple murderers who commit crimes over time are called serial killers.
 - The FBI collects and keeps many criminal profiles in a database that is used to solve other crimes.
 - One way of cheating the polygraph is to put a pin in your shoe and hurt yourself when answering the irrelevant questions.
 - The results of a polygraph can be used as evidence in Australian courts.
 - The polygraph measures lies.
- 24** Investigate the mental disorder depression. Answer the following questions:
- What is the prevalence?
 - What are the symptoms?
 - What is the treatment?
 - What is the relationship between depression and suicide?
 - How were mental disorders treated pre-nineteenth century?
 - Name five drugs that are used to treat mental disorders.
- 25** Are there any other methods of lie detection, besides the polygraph?
- 26** There are many ways of testing intelligence. Use the internet to research two of these methods and find out the differences between them.
- 27** Some professions have higher stress-related illnesses and problems than others. For example, police officers suffer from a high rate of stress-related diseases because their jobs are often unpredictable; they are often put under life-threatening pressure; and they are often unable to control the situations in which they find themselves. Chronic stress sometimes leads to burnout, or a period of time when a person is completely drained — physically, mentally and emotionally. Prolonged stress also leads to a suppression of the body's immune system, which makes us more susceptible to illness and disease. For example, stressed people become ill because their immune system can't fight colds and flu like it normally would when they are not stressed.

People react differently to different stressful situations. Our interpretations about how well we can cope with a situation impact on how well we actually deal with it.

There are, however, simple methods of reducing a difficult experience into a more manageable experience. These include stress management, relaxation, social support, counselling and aerobic exercise.

Research how one of these may be used to reduce stress.



GLOSSARY

- affect:** any experience associated with a feeling or emotion
- affiliation:** the desire to associate with other people in relationships, friendships and groups
- antianxiety drug:** a drug used to reduce the experience of anxiety
- antipsychotic drug:** a drug used to treat schizophrenia, by reducing the number of symptoms
- arousal:** a state of physical or psychological alertness, or awareness of the environment
- autocratic leadership:** emphasises the importance of completing the task through the use of rewards and punishment
- behaviour therapy:** a therapy that aims to change a person's behaviour through learning
- bipolar depression:** a form of depression characterised by episodes of mania and depression
- cerebral cortex:** the outer layer of the cerebrum in the human brain
- cerebral hemispheres:** the brain is divided into two halves; the left and right half or hemisphere
- cognition:** mental processing of information, also known as thinking
- cognitive therapy:** a psychological therapy dealing with what we are thinking and how this affects our emotions and behaviour
- collective:** an assemblage of people who have minimal contact with each other
- corpus callosum:** a bridge of nerve fibres that connects the left and right hemispheres of the brain
- criminal profiling:** a technique used to assist in the identification and apprehension of a likely offender for a particular crime
- cult:** a group that professes great devotion to a person, idea or object
- dangerousness:** the likelihood of a person committing a serious act of violence, with little provocation
- democratic leadership:** encourages all group members to participate in decision making, with the leaders supporting the opinions of the group to promote cohesiveness, attainment of goals and ownership of decisions
- depression:** a mood state often resulting in a mental disorder, usually characterised by sadness, hopelessness and despair
- diagnosis:** the process of identifying and classifying a mental illness using symptoms, assessment and examinations
- emotion:** a personal experience that involves subjective feelings
- forensic psychology:** a branch of psychology that applies legal knowledge and issues to psychology
- group:** a collection of two or more people who interact with each other and share a common goal or purpose
- insomnia:** a sleep disorder that is characterised by lack of sleep and poor quality sleep
- intelligence:** 'the global capacity to act purposefully, to think rationally, and to deal effectively with the environment'
- kinesics:** a form of non-verbal communication
- leadership:** involves an individual or group, with high power and status, directing a group
- mania:** a psychological feeling of intense excitement and ecstasy
- mental disorder:** any disabling behavioural, cognitive or mental health problem that decreases a person's level of functioning in society
- non rapid eye movement sleep (NREM sleep):** a stage of sleep that is characterised by no eye movement. Eighty per cent of sleep is spent in NREM sleep.
- personality:** a group of stable personality characteristics unique to an individual, determining a person's thoughts, feelings and behaviours
- personal space:** the space around oneself when interacting with others
- phobia:** an intense and irrational fear of an object or situation that affects everyday functioning
- polygraph:** a lie detector that measures skin resistance, heart rate, blood pressure and respiration
- prevalence:** how common a disorder occurs in the community
- pseudoscience:** a fake science, not based on scientific method
- psychiatrist:** a person who completes a medical degree and then a postgraduate degree in psychiatry
- psychological therapy:** involves structured interaction (usually verbal) between a professional and a client with a problem, such as counselling
- psychologist:** a professional qualified in psychology
- psychology:** the systematic study of thoughts, feelings and behaviours
- psychopathology:** the study of mental illness
- rapid eye movement (REM sleep):** a stage of sleep that is characterised by rapid, spontaneous movements of the eyes. Dreaming occurs during this stage.
- schizophrenia:** a mental disorder characterised by a split from reality, delusions and hallucinations
- scientific method:** a systematic approach to planning, undertaking and analysing research
- self identity:** a personal awareness, or knowing where we fit in society
- sleep disorder:** a sleep problem that interferes with the normal NREM-REM sleep cycle. Examples include difficulty falling asleep, staying asleep or waking up.
- sleep phenomenon:** a normal occurrence during sleep, such as sleepwalking or sleep talking
- somnambulism:** sleepwalking. This occurs during stages 3 and 4 NREM sleep.
- status:** the importance of an individual's standing or position in a group
- symptom:** characteristics that indicate a mental disorder exists
- systematic desensitisation:** a behaviour therapy treating phobias. Relaxation is repeatedly linked with the feared object until the person is not afraid of it any more.

ACKNOWLEDGEMENTS

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