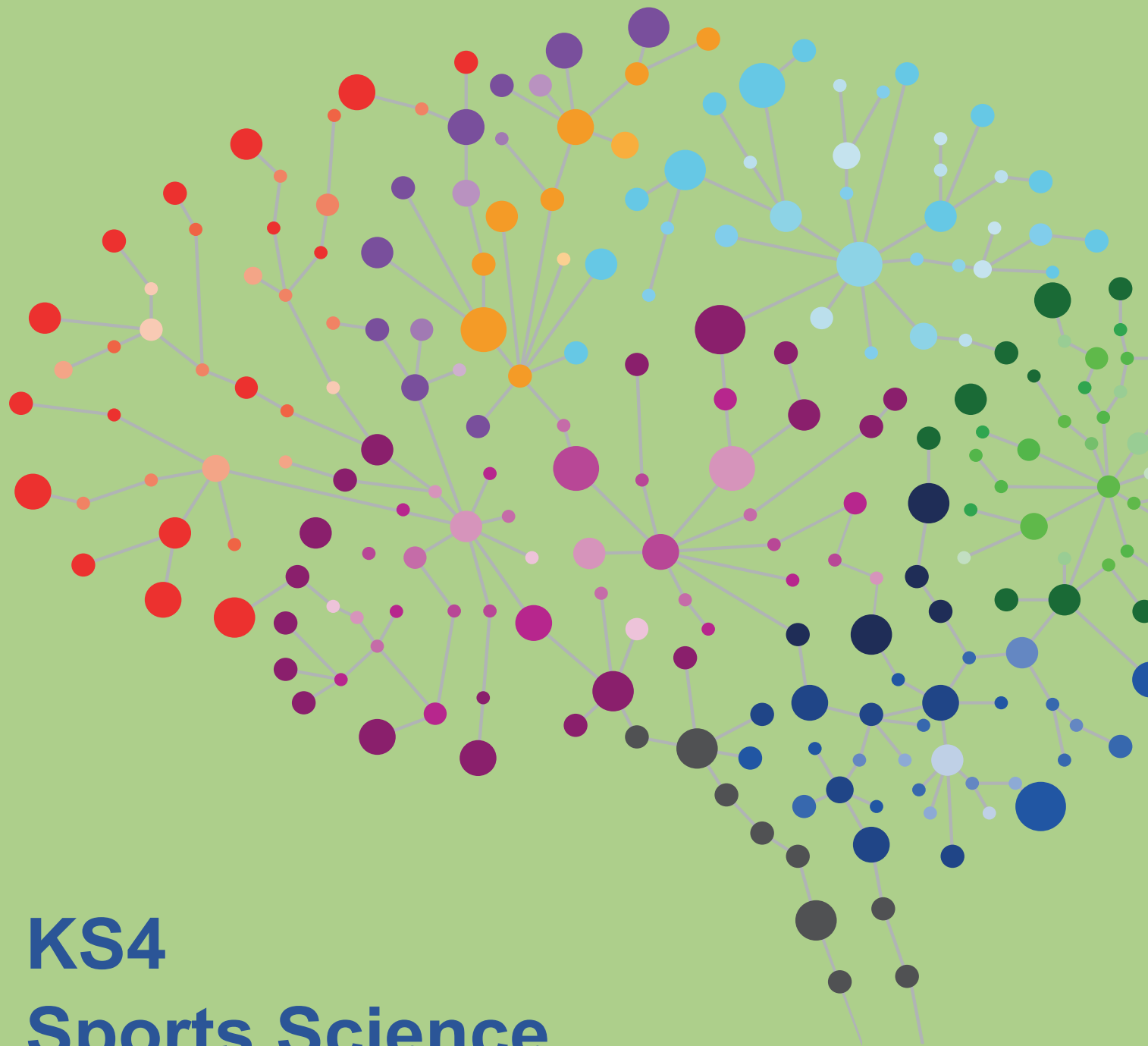




KS4

Sports Science

Knowledge Book

Name: _____

Teacher: _____

Form: _____



Saint Benedict
A Catholic Voluntary Academy



Love, Belief, Integrity, Knowledge



OUR VALUES

**BE WHO GOD MEANT YOU TO BE AND YOU
WILL SET THE WORLD ON FIRE.**

LOVE

As we know we are loved by God, we will learn to love ourselves and care for our own body mind and soul.

We will show love to one another by being patient and kind, not by being rude, boastful or proud.

As one body in Christ, we will ensure that no member of our community is left out or left behind

BELIEF

We will encourage one another and build each other up.

We will let our light shine, making the world a better place for all.

KNOWLEDGE

We will value knowledge: intelligent hearts acquire knowledge, the ears of the wise seek knowledge.

INTEGRITY

We will always strive to make the right choice even when this is the harder path to take.

We will live and work sustainably.

**AT SAINT BENEDICT
WE DEVELOP THE
CHARACTER OF OUR
COMMUNITY THROUGH
OUR CURRICULUM AND
CULTURE.**

Respect

What is Respect?

Showing respect is an important part of life, and how you maintain relationships.

Three types of respect:

1. Respect Yourself
2. Respect Others
3. Respect the Planet

Why is respect important?

Receiving respect from others is important because it helps us to feel safe and to express ourselves. Respecting others helps maintain a peaceful world and encourages others to be better people. Showing respect to our planet allows us to maintain it for future generations.

Key words	Definitions
Respect	Due regard for the feelings, wishes and rights of others
Honour	The quality of knowing and doing what is morally right
Dignity	Sense of pride and self respect
Relationships	The way two or more people or groups connect and behave towards each other
Worthiness	The quality of being good enough

1

Rules and Sanctions

Build up a loving community

Key word	
Conduct	The way in which a person behaves.
Unacceptable	Something that is not suitable or appropriate.
Boundaries	The limits of something.
Sanction	A penalty or action taken when a rule or law has been broken.
Consistent	Acting in the same way overtime to be fair.

Behaviour

Rules and sanctions are things which guide our behaviour. We follow rules and regulations to be fair and consistent. Sanctions occur if we do not follow rules or deliberately break them.

Preparation for life

All aspects of life require us to follow rules. There are rules in school; rules in your family and home; rules to follow when crossing the road and using the bus and so on. Structure and rules allow us all to know what is acceptable and how to conduct ourselves. Rules reassure us

The law

We are all bound by the rules of the law. If we break the law, we face a raft of different sanctions. Ultimately, having rules in schools is about a lifelong understanding about what is right and what is wrong.

2

Kindness

Key word

Empathy	Understand and share feelings of others
Compassion	Concern for misfortune of others
Compliment	Praise or congratulate others
Considerate	Thoughtfulness and sensitivity to others
Generous	Being liberal with things

Treat others how you would want to be treated yourself.

What is Kindness?

The quality of being friendly, generous and considerate

What does it mean to be kind?

To have empathy/sympathy, be compassionate, looking for good in people.

Why is it important to be kind?

Makes you feel happy, feel good about yourself

Builds strong relationships

Inspires others

How can we show kindness?

Smile

Hold the door open for somebody

Say something nice (compliment)

Invite somebody sat on their own to join you

Manners

Listen to somebody

3

Emotions

Key Words

Feelings	An emotional state or reaction.
Relationships	The state of being connected with someone else.
Instinct	A fixed pattern of behaviour.
Intuitive	Using what you feel to be true even without conscious reasoning.
Reaction	Something done, felt or thought in response to a situation or event.
Identification	The act or process of identifying someone or something.

Work and play in harmony

What are emotions?

Emotions are biological states associated with the nervous system.

Thoughts, feelings, behavioural responses, and relationships all generate emotions.

An instinct or, intuitive reaction or feeling can create emotions

Identifying feelings

Making sense of what and how you feel is not always easy. To do this, we need to regularly check in with ourselves, making time to think about the feelings we are having and naming them. To do this, we need to think about our daily lives which may help us to see patterns of behaviour.

Not all feelings or emotions are bad or negative!

It is important to recognise when you feel happy; relaxed and good about yourself. Knowing what has led to these feelings can help us identify things we do not like which may cause us negative feelings.

4

Verbal Communication

Treat each other with dignity and justice

Key Words	
Clarity	Vocal clarity means you do not speak too fast or too slowly. You consider carefully the words you mean and whether your listener can understand you.
Honesty	Honesty is speaking the truth.
Respect	Respect means that you accept somebody for who they are, even when they are different from you or you do not agree with them.
Appropriate	fitting the practical or social requirements of the situation.
Tone	a quality in the voice that expresses your feelings or thoughts, often towards the person being spoken to or the subject being spoken about
Courtesy	politeness, good manners, or consideration for other people.

What is verbal communication?

Verbal communication is the use of words to share information with other people.

What does it mean to communicate effectively?

Every time you verbally interact with someone you are aiming to develop your understanding of the world; you may be wishing to obtain information, respond to a request or offer support or guidance to another. In every one of these exchanges you are representing your tutor, your family and most importantly yourself.

Why is it important to communicate effectively?

All young people need to develop good speech, language and communication skills to reach their full potential.

Speech, language and communication underpin the basic skills of literacy and numeracy and are essential for you to understand and achieve in all subjects.

How can we communicate effectively?

Make eye contact

Speak honestly

Consider your role within the school

Consider the role of the person you are speaking to

Think carefully why you need to speak to the person you are addressing

Where necessary adapt as your conversation develops

5

Manners

Key Words	
Manners	A person's words or way of behaving towards others.
Respect	A regard for the feelings, wishes, or rights of others.
Listen	To take in what you hear.
Harmony	A time of behaving in one way to produce a pleasing effect.
Vocabulary	The range of words that we know and use.
Gratitude	The quality of being thankful; readiness to show appreciation for and to return kindness.

Loving...harmony...dignity

Treat your neighbour as yourself

The way in which we behave and speak towards others, reflects in their actions and words towards us.

Show the best side of yourself

When you speak to others, always show respect; be polite and thankful. Use the words 'please, thank you, sorry and pardon' when communicating with others.

Manners are for every situation

Every interaction has space for the use of manners: speech, emails, messages. Often when we get upset or angry we don't use manners.

However it does calm a situation if you do.

6

Change

Key Words	Definition
Change	Make or become different
Organised	Make arrangements or preparations for an event or activity
Opportunity	A time set of circumstances that make it possible to do something
Coping	To deal effectively with something difficult
Embrace	Accept (a belief, theory or change) willingly and enthusiastically
Strategies	A plan of action designed to achieve a long term or overall aim

Develop potential to the full

Find the positive

Don't allow yourself to become negative about the changes in your life. Change is good, keep repeating it.

Feeling vulnerable

Facing change can be very overwhelming, leaving you feeling very emotional. Make it your mission to be proactive and respond to it positively.

Talk about it

It's good to talk about change in your life. Focus on problems, solutions and the positives that change will bring. Try to avoid focussing on the negatives and letting emotions take over.

Study Skills – Ways to learn and remember

Self quizzing (look, cover, write)



Read through the information in the knowledge book that you want to learn



Cover the information up



Write down as much as you can remember



Use the knowledge book to;

- a) Correct any mistakes
- b) Add any information that you forgot

1

Study Skills – Ways to learn and remember

Spacing



Complete a self quiz of the information you want to learn



Wait for a day or 2 (depending on the deadline)



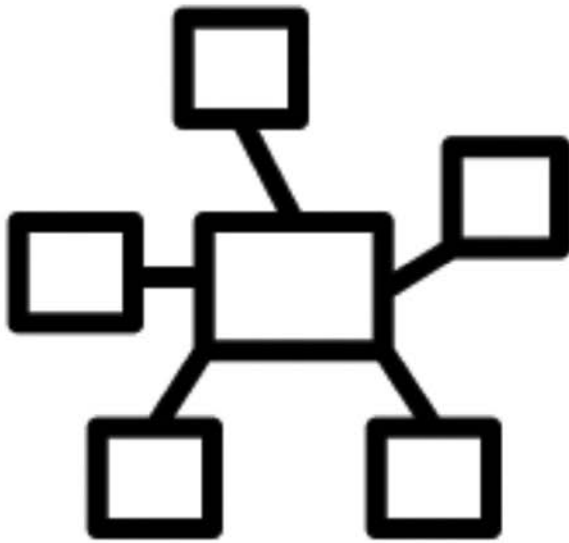
Repeat the self quiz.

The more times you can repeat this process, the more you will be able to remember without the book

2

Study Skills – Ways to learn and remember

Elaboration



Think about the topic that you are studying

Ask questions such as who, what, why, where, when how. Try to find the answers

See how these ideas connect - a mind map will be useful for this

3

Study Skills – Ways to learn and remember

Concrete Examples

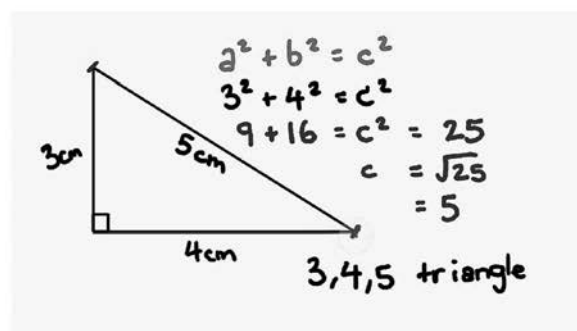


Pythagoras theorem example

If you tried to explain Pythagoras's theorem to someone verbally, it would be quite hard to understand.

By using a concrete example that shows exactly how to use Pythagoras theorem, it is much easier to remember, understand and use

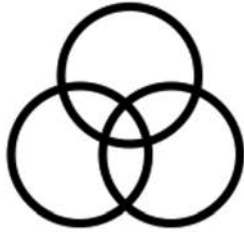
A concrete example is an clear example of an abstract idea



4

Study Skills – Ways to learn and remember

Interleaving



Research says we will actually learn more effectively if we mix our study skills up rather than using the same techniques all the time

1. Try to use different study skills rather than just one technique.

2. When revising for exams, prepare a revision timetable and try to revise more than one subject during a session

5

Study Skills – Ways to learn and remember

Dual Coding



As well as **writing** information down, **create an icon/ drawing** too for individual facts. This helps your brain to remember the information

6

Contents - Learning Outcome 1 – Different factors which influence the risk and severity of injury

- | | |
|---|--|
| 1. Intrinsic and Extrinsic risk factors | 7. Intrinsic risk factors – PRI overview table |
| 2. Extrinsic risk factors – CEET overview table | 8. Intrinsic risk factors - Psychological factors |
| 3. Extrinsic risk factors – Coaching/ Instructing / Leading | 9. Intrinsic risk factors – Reasons for aggression |
| 4. Extrinsic risk factors - Environmental factors | 10. Intrinsic risk factors – Mental strategies |
| 5. Extrinsic risk factors – Equipment | 11. Intrinsic risk factors - Individual variables |
| 6. Extrinsic risk factors - Type of activity | 12. Intrinsic risk factors - Individual variables |

Year 11

Contents – Learning outcome 2 – Warm up and cool down routines

13. Warm up components
14. Stages of the warm up examples
15. Benefits of a warm up
16. Cool down components and benefits
17. Stage 2 cool down with examples

Year 11

Contents - Learning outcome 3 – Different types and causes of sports injuries

- 18. Acute or Chronic?
- 19. Acute Injuries – Soft tissue injuries
- 20. Acute Injuries – Soft tissue injuries
- 21. Acute Injuries – Hard tissue injuries
- 22. Acute Injuries – other injuries
- 23. Chronic injuries – Soft tissues / overuse injuries
- 24. Chronic injuries – Soft tissues / overuse injuries

Year 11

Contents – Learning outcome 4 – Reducing risk, treatment and rehabilitation of sports injuries and medical conditions

- | | |
|--|---|
| 25. Safety checks | 32. PRICE |
| 26. Strategies to reduce risk of injuries and medical conditions | 33. X ray and types of treatment |
| 27. Responding to injuries – Action plan and Emergency Action Plan (EAP) | 34. Responding to injuries and medical conditions |
| 28. Responding to injuries – SALTAPS | 35. Responding to injuries and medical conditions |
| 29. SALTAPS in action | 36. Psychological Responses to sports injuries and medical conditions |
| 30. Responding to injuries - DRABC | |
| 31. DRABC in action | |

Year 11

Contents – Learning outcome 5 – Causes, symptoms and treatment of medical conditions.

- | | |
|---|---|
| 37. Common medical conditions – Asthma | 42. Common medical conditions – Epilepsy |
| 38. Common medical conditions – Asthma | 43. Common medical conditions – Epilepsy |
| 39. Common medical conditions – Diabetes | 44. Common medical conditions – Sudden Cardiac Arrest (SCA) |
| 40. Common medical conditions - Diabetes | 45. Common medical conditions – Hypothermia |
| 41. Common medical conditions – Diabetes - Monitoring | 46. Common medical conditions – Heat exhaustion |
| | 47. Common medical conditions – Dehydration |

Year 11

Extrinsic factors - CEET

1. Coaching and supervision
2. Environmental
3. Equipment
4. Type of Activity

Intrinsic factors - PRI

1. Psychological factors
2. Reasons for Aggression
3. Individual variables

Extrinsic Factors	Consideration 1	Consideration 2	Consideration 3	Consideration 4	Consideration 5
C oaching/ Instructing/Leading	Knowledge of technique / rules/ regulations	Experience	Communication	Supervision	Ethical standards/ behaviour
E nvironment	Weather / temperature conditions	Playing surface (natural and artificial) and surrounding area	Human interaction 1. Other participants 2. Officials 3. Spectators		
E quipment	Protective Equipment	Performance Equipment	Clothing	Footwear	
T ype of Activity	Contact Sports	Non-Contact Sports			

2

Year 11

Extrinsic factors - CEET**1. Coaching / Instructing / Leading**

Knowledge of technique / rules/ regulations	Can lead to injury as participants could high tackle a person in rugby which can lead to a neck injury or concussion. Using the correct shaped hockey stick to avoid injuries if the stick is too hooked
Experience	If you are inexperienced and try a somersault on a trampoline can lead to an injury. If a coach does not have the experience on how to instruct a big group could lead to an injury due to lack of control
Communication	Poor communication could lead to an injury if pupil don't listen when to throw and collect a javelin in lessons
Supervision	If participants are not supervised they could get injured through silly behaviour e.g. getting hit on the head with a hockey stick
Ethical standards/ behaviour	If a participant is injured and the other team play on they may cause an injury through collision – so teams will kick the ball out if someone is injured

3

Year 11

Extrinsic factors - CEET

2. Environmental factors

Weather / Temperature conditions	Can cause injury for example the heat could cause sun stroke and cause participants to become de-hydrated or the rain could cause a pitch to be slippery
Playing surface (natural / artificial) and surrounding area	Can cause injury due to ice on a netball court or billboards or spectators around the playing area can cause collisions and therefore injuries. Astro turf can cause burns to the skin and grass can have unseen potholes
Human interaction	
• Other performers / participants	Can cause injury as collisions can occur in netball or rounders when going for the ball
• Officials	Umpired or referees can collide with participants
• spectators	Spectators could be on the field of play or too close and collide or get hit with a piece of performance equipment e.g. a ball

4

Year 11

Extrinsic factors CEET

3. Equipment

Protective equipment	e.g. shin pads worn by footballers, helmet worn by a cyclist. Protecting bones, body parts, and vital organs from injury
Performance equipment	e.g. hockey stick, football, and rock climbing harness. Items used to perform a sport
Clothing	e.g. cotton socks for trampolining or light weight t-shirt for marathon runners. Skiers would need warm clothes to prevent hypothermia.
Footwear	e.g. football boots, spikes for athletics, astro turf shoes to prevent slipping, well fitting trainers for marathons

5

Year 11

Extrinsic factors - CEET

4.Type of activity

Contact sport	Such as rugby, boxing and football they have a different chance of injury such as broken bones and concussion due to the nature of the sport
Non-contact sports	Such as lawn green bowls, tennis, and skiing have a different chance of injury such as sprain or strains due to the nature of the sport

6

Intrinsic Factors										
P psychological Factors	Motivation	Arousal	Anxiety / stress	Confidence	Aggression • Direct • channelled					
R easons for aggression	Level of performance	Retaliation	Pressure to win (performer, coach, spectators)	Decisions of officials	Performance enhancing drugs	M ental Strategies for aggression 1. Mental rehearsal 2. Imagery 3. Selective attention				
I ndividual Variables	Gender	Nutrition /hydration	Fitness levels	Experience	Previous / recurring injuries	Sleep	Age	Weight	Technique / ability	Medical conditions

7

Year 11

Intrinsic factors - PRI

Motivation	Lack of motivation could cause injury as the performer will not commit to an activity e.g. a boxer could not dodge a punch and get punched Over motivation could cause performers to make poor decisions e.g. over commit to a rugby tackle causing an injury
Aggression • Direct • Channelled	Aggression can have a negative or positive effect on the risk of injury Aggression with contact against someone e.g. punching someone in football or rugby leading to a broken nose No intent to harm hitting a tennis ball hard, spiking a volleyball
Arousal	If a performer becomes too aroused they may make wrong decision e.g. when to rugby tackle or lash out when frustrated. Under arousal can lead to lack of confidence and making the wrong decision.
Anxiety/ Stress	If a performer becomes too stressed their anxiety will increase and they then may be worried or nervous which could cause mistakes and injury e.g. somersault in gymnastics
Confidence	Being over confident could cause you to over estimate your ability and get hurt e.g. performing a dive from a high diving board

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Year 11

Intrinsic factors - PRI

2. Reasons for aggression

Level of performance	If your performance is going badly may get frustrated or if you are playing a particular sport at a high level you may be more aggressive to perform at your best
Retaliation	e.g. if a bad football tackle was made this may make you angry and become more aggressive and could cause an injury through bad decisions or a collision
Pressure to win (performer/ coach/ spectators)	When pressure mounts to win it may make you angry or more determined but this can cause you to become more aggressive and maybe go for a ball you might not normally causing a collision or fall
Decision of officials	When decision from umpires or referees don't go your way it can make you angry and make your decision making poor
Performance enhancing drugs	Drugs such as anabolic steroids can cause your mood swings and make you angry so you can cause an injury from side effects and being too aggressive by either punching something or someone or trying to lift to higher weight by over estimating your ability.

9

Year 11

Intrinsic factors - PRI

Mental Strategies

Mental rehearsal	Where the performer pictures themselves executing a skill and practises the skill in their mind, focusing on the specific stages and correct technique. A trampolinist may mentally rehearse a backward somersault before performing the move.
Imagery	Imagery means using all of your senses (e.g., see, feel, hear, taste, smell) to rehearse your sport in your mind.
Selective attention	Selective attention is the ability to ignore irrelevant sensory information, and pay attention to relevant information. For example in basketball, an athlete must concentrate on the basket while shooting a free throw rather than being distracted by noise from the crowd.

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Year 11

Intrinsic factors - PRI

3. Individual variables

Gender	Men tend to be stronger than women and women tend to be more flexible so its important that women don't lift the same weights as men without training and the same for men attempting the splits
Age	As you get older your physical strength decreases and you become more prone to injuries and young adults are not as strong as adults e.g. rugby is played in age groups
Experience	With experience come greater skill level so more difficult technique which can lead to mistakes and injury e.g. in trampolining trying a somersault
Nutrition / hydration	It is important the right nutrients are eaten to recover and replace nutrients used. e.g. protein to build and repair muscle. Water so athletes don't become dehydrated
Sleep	Lack of sleep risk injuries as you will not be focused and your judgement could be impaired so you make bad decisions e.g. when to tackle

11

Year 11

Intrinsic factors - PRI

3. Individual variables

Weight	Weight can effect injury as higher percentage of fat can means excess pressure on joint and ligaments cause tears
Fitness levels	Fitness levels can means that you are not able to meet the demands of sport or everyday life. A beginner runner could not complete marathon without injury.
Technique / ability	If you use the incorrect technique or try to perform an action above your ability you could get injured e.g. throwing a shot putt instead of pushing it.
Medical conditions	Conditions such as asthmas, diabetes may mean that you have to mange these conditions during sport to ensure you take part safely
Previous / reoccurring injuries	Can increase the risk of injuries occurring again either due to weaknesses or common cause. e.g. over use or a strain from using the wrong technique

12

Year 11

Warm up components (4 Stages)

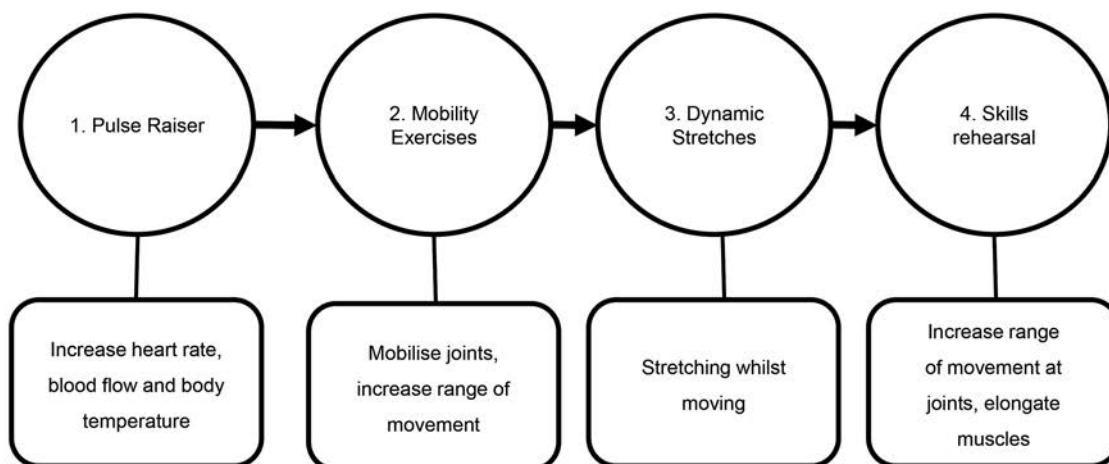
1. Pulse raiser	Raising the heart rate	e.g. running, jogging, skipping, swimming
2. Mobility	Moving your joint through a full range of movement (ROM)	e.g. circling arms, ankles or wrist. Hips rotation, leg swings
3. Dynamic stretches	Stretching whilst moving	e.g. lunges, open and closing the gate, leg swings, squats,
4. Skills rehearsal	Practise a skill to be used in the activity	e.g. passing a ball, somersault in trampolining, kicking a conversion in rugby, hitting ball in hockey, dribbling the ball

13

Year 11

Linking the benefits of each stage of the warm up

The 4 stages of the warm up showing examples of what you might do at each stage.



14

Year 11

Benefits of a warm up

Physiological

1. Increase muscle temperature
2. Increase heart rate
3. Increase pliability of ligaments and tendons
4. Increase blood flow and oxygen to muscles
5. Increase muscle contraction speed
6. Increase flexibility of muscles and joints



Psychological

1. Heighten or control arousal levels e.g. getting into the zone, settle nerves
2. Increase motivation
3. Mental rehearsal
4. Increase concentration / focus
5. Increase confidence

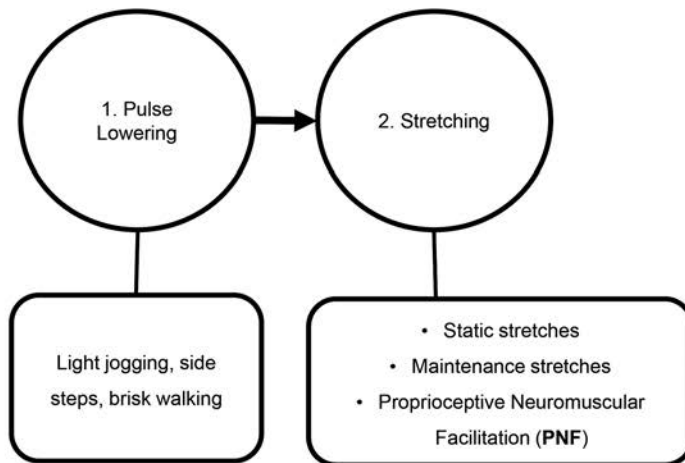


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Year 11

Stages of the cool down with examples

The 2 stages of the cool down showing examples of what you might do at each stage.



Benefits of a cool down

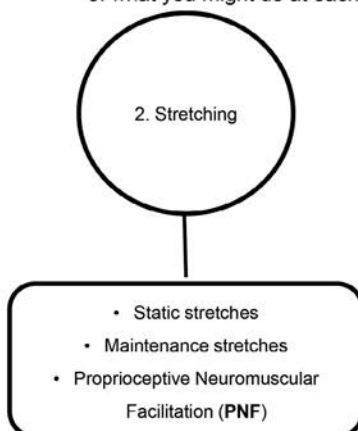
1. Gradually lowers body temperature
2. Gradually lowers heart rate
3. Helps prevent blood pooling
4. Remove waste products such as lactic acid
5. Circulates blood and oxygen
6. Reduces risk of Delayed Onset of Muscle Soreness (DOMS)
7. Gradually reduces breathing rate

16

Year 11

Stage 2 of the cool down with examples

The 2 stages of the cool down showing examples of what you might do at each stage.



Stretches

Maintenance stretch



Return your muscles back to normal length e.g. hamstring stretch for a runner holding for 10-15 seconds

Static stretch



A stretch that is held still e.g. triceps stretch which is held for 20-45 seconds

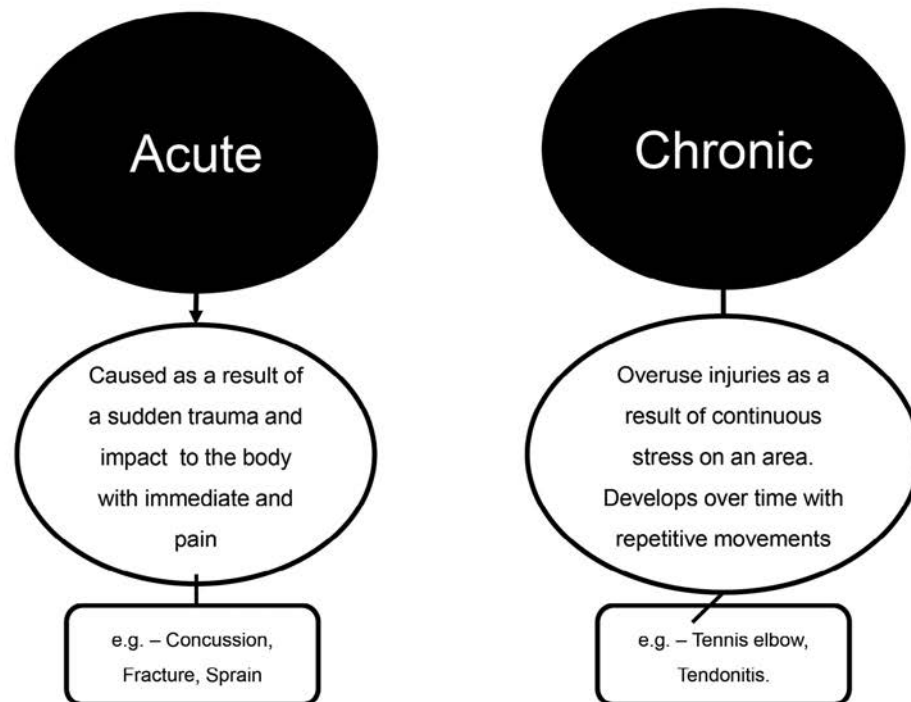
Proprioceptive neuromuscular facilitation (PNF)



Stretch that increases the range of motion. You stretch a muscle then hold and then apply more force to stretch that muscle further.

17

Injuries – Acute or Chronic?



18

Year 11

Acute Injuries (sudden trauma)

Caused as a result of a sudden trauma to the body e.g. hard rugby tackle, being hit by a ball

Results in sudden pain and usually swelling with loss of function from an immediate impact e.g. hitting the floor

Soft Tissue Injuries

Injury	Explanation	Causes	Treatment
Sprain	Tear to ligaments	Uncontrolled movement like slipping twisting, or over stretching	RICE
Sprain	Torn Anterior Cruciate Ligament (ACL)	Suddenly slowing down, changing direction Pivoting with your foot firmly planted. Landing awkwardly from a jump. Stopping suddenly Receiving a direct blow to the knee or having a collision, such as a football tackle	RICE or surgery and rehab depending on severity
Strain	Tear to muscles fibres or tendons	Uncontrolled movement like slipping twisting, or over stretching	RICE

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Year 11

Acute Injuries (sudden trauma)

Soft tissue injuries

Injury	Explanation	Causes	Treatment
Abrasion / Grazes	Grazes and cuts	Falling or tripping onto a hard or rough ground, or rubbing against equipment, clothing or the ground	Plaster or bandage
Contusion (bruises)	Bruise	Colliding with another player or piece of equipment, or falling, tackling, or tripping	RICE
Blister	Small bag of fluid under the skin	When skin rub against poorly fitting shoes, or badly fitting socks, or gripping a piece of equipment too tightly – more likely in hot weather due to sweating	Plaster or dressing
Cuts / lacerations	Cut to skin	Fall on the floor, struck by a piece of equipment, struck by someone body part e.g. elbow to the eye	Plaster or dressing and RICE

20

Year 11

Acute Injuries (sudden trauma)

Hard tissue injuries

Injury	Explanation	Causes	Treatment
Fracture	Open – broken bone comes through the skin Closed – broken bone stays under the skin	Sudden trauma like a sudden fall, bad landing, or impact with another player in a collision or tackle	Hospital treatment and will need sling / plaster cast
Dislocation	Bone comes out of the joint	Sudden trauma like a sudden fall, bad landing, or impact with another player in a collision or tackle	Hospital treatment and maybe sling or splint

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Year 11

Acute Injuries (sudden trauma)

Other injuries

Concussion

Is caused by an acute injury but can also be a chronic condition depending on the length or the injury

Possible links to onset of dementia and Alzheimer's as a long term consequence

Causes:

Impact to the head from either a collision or contact with the ground, a person, or a piece of equipment

Symptoms:

Loss of consciousness

Dizziness

Nausea or vomiting

Loss of memory

Loss of balance

Headaches

Treatment:

Medical assistance

Temporary pain relief

May miss physical activity depending on severity e.g. rugby players are not allowed to return to the field after a concussion and may have to miss several games depending on their recovery

22

Year 11

Chronic Injuries (Overuse)

Also known as overuse injuries and are as a result of continuous stress on an area e.g. Achilles tendon, shin splints or tennis elbow

These injuries tend to develop gradually over a period of time from repetitive movements

Soft Tissue Injuries / Overuse Injuries

Injury	Explanation	Causes	Treatment
Tendonitis			
Achilles	Injury to the tendons at the back of the heel	Overuse that involves pain, restricted movement and maybe some inflammation and swelling. Cant walk if has completely ruptured.	RICE and or hospital treatment
Rotator cuff	Injury to the shoulder joint	Overuse that involves pain, restricted movement and maybe some inflammation and swelling.	RICE and rehab
Patellar	Injury to the knee	Overuse that involves pain, restricted movement and maybe some inflammation and swelling.	RICE and stretching

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Year 11

Chronic Injuries (Overuse)

Also known as overuse injuries and are as a result of continuous stress on an area e.g. Achilles tendon, shin splints or tennis elbow

These injuries tend to develop gradually over a period of time from repetitive movements

Soft Tissue Injuries / Overuse Injuries

Injury	Explanation	Causes	Treatment
Lateral epicondylitis (Tennis elbow)	Injury to the tendons at the elbow	Overuse that involves pain, restricted movement and maybe some inflammation and swelling	RICE
Medial epicondylitis (Golfers elbow)	Injury to the tendons at the elbow	Overuse that involves pain, restricted movement and maybe some inflammation and swelling	RICE
Shin splints	Pain in the shin or front of lower leg	Overuse and usually brought on by exercise involves pain, restricted movement and maybe some inflammation and swelling	RICE
Stress Fracture	Crack in a bone	Continuous overuse of same body part e.g. the shin in a long jump or foot for a marathon runner	RICE and or splint , hospital treatment

24

Year 11

Safety Checks

Risk assessments

Control measure for the removal of hazards and reduce risk e.g. all equipment is put away, no one is to walk under trampoline or goals and nets are weighted down so they do not fall over

Characteristics of individual / group

Medical conditions, age of group, physical capabilities of group, experience

Size of group

Is the space big enough

25

Year 11

Strategies to help prevent risk of sports injuries and medical conditions

Medical assessments

Par-Q questionnaire and medical assessments done to ensure participants don't have any conditions that could cause injuries e.g. Heart conditions

Screening

This is carried out by looking for medical conditions e.g. an ECG done to detect irregular heart beats

National Governing body (NGB) policies

E.G. no heading is to be coached to under 18 in football according the FA

26

Year 11

Responding to injuries and medical conditions

Action Plan

Organisations have to have an action plan of how to respond to injuries or medical conditions

This is so everyone participant is safe

The action plan is there so that people in charge know what to do in an emergency

Having an action plan reduces the risk of minor injuries becoming more serious

Emergency Action Plan (EAP)

1) Emergency Personnel

First aider, first responder, coach

2) Emergency Communication

Emergency telephone contact information, emergency numbers e.g.999, location of nearest hospital

3) Emergency Equipment

First aid kits, evacuation chair, or inhaler

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Year 11

Responding to injuries and medical conditions

SALTAPS – on field assessment routine

S – See

A – Ask

L – Look

T – Touch

A – Active

P – Passive

S – Strength

See

Ask if anyone saw what happened, stop the activity check the injured person

Ask

Ask the injured player what happened and how they feel, ask them where it hurts and ask them about the injury e.g. what type of pain is it?

Look

Look for signs of the injury such as bleeding, bruising, swelling or deformity, if possible compare the injured limb to the opposite one to look for any differences

Touch

Examine the injured area for pain and tenderness, feel for abnormalities

Active

Can the performer move the limb themselves. Does it hurt to move? Can they manage non-weight-bearing movement?

Passive

Can you move the limb/joint through the full range of movement noting the injured person's reaction

Strength

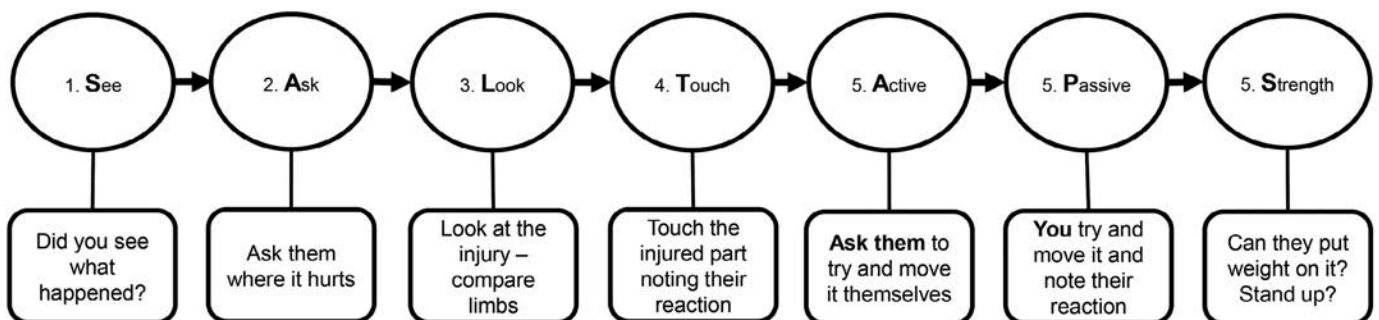
Can the performer support their own weight? Are they able to get up following the injury? Can they play on?

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Year 11

Responding to injuries and medical conditions

SALTAPS – on field assessment routine in action



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Year 11

Responding to injuries and medical conditions

DRABC

D – Danger

R – Response

A – Airway

B – Breathing

C – Circulation

Danger

Ensure the area is safe for yourself, others and the patient

Response

Check for a response by asking their name, squeeze shoulders

Airway

Open mouth – clear airway and place in the recovery position

Breathing

Check for breathing – look, listen, feel – if not breathing CPR should be given

Circulation

Check for bleeding

Recovery position

Performers who are breathing and have no other life-threatening conditions

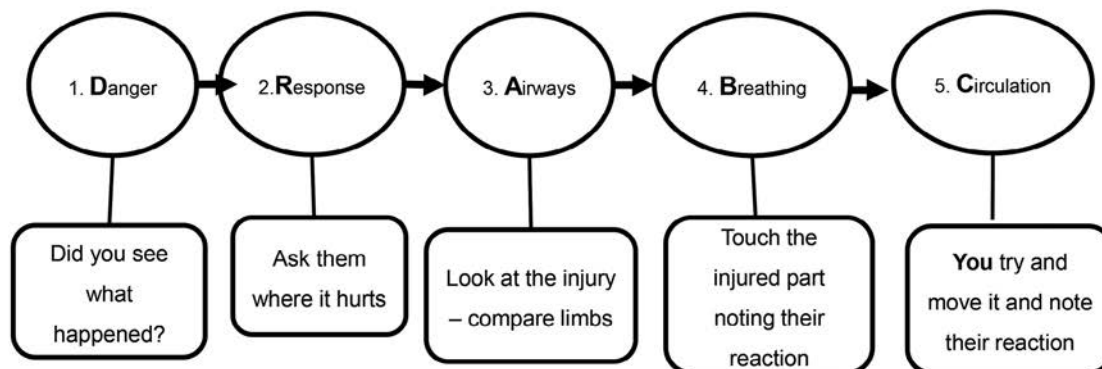


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Year 11

Responding to injuries and medical conditions

DRABC



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Year 11

Responding to injuries and medical conditions

PRICE

For acute injuries, soft tissue injuries and treatment straight away

P – Protection

Protect the injury from further damage

R – Rest

Stop the activity and stop using the injured part and try and keep their weight off it

I – Ice

Ice should be applied to reduce swelling and pain

C – Compression

Bandage the injured part to reduce swelling and help support the injured area

E – Elevation

Keep the injured limb above the level of the heart to reduce blood flow to the injured area to help reduce swelling

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Year 11

Responding to injuries and medical conditions

X-Ray

To look at bones and joints for any abnormalities (injuries) e.g. suspected fractures and dislocations

Treatments

- | | |
|----------------------------|--|
| 1. Massage | 7. Pain killers |
| 2. Ultrasound | Ibuprofen |
| 3. Electrotherapy | 8. Support |
| 4. Hydrotherapy | Kinesiology taping / neoprene / bandaging |
| 5. Cryotherapy | 9. Immobilisation |
| 6. Contrast therapy | Cast / splint / sling |

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Year 11

Responding to injuries and medical conditions

Treatments

Treatment	Explanation	Injuries treated
Massage	Increase blood flow to the area and release tension in muscles	Increase blood flow to the area and release tension in muscles
Ultrasound	Decreases muscles spasm and tightness and promotes healing tissue	Decreases muscles spasm and tightness and promotes healing tissue
Electrotherapy	Controlled electrical stimulation that is targeted	Controlled electrical stimulation that is targeted
Hydrotherapy	Exercise in the water to take weight of the body	Exercise in the water to take weight of the body
Cryotherapy	Ice is applied to the injury to reduce blood flow so reduce swelling	Ice is applied to the injury to reduce blood flow so reduce swelling

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Year 11

Responding to injuries and medical conditions

Treatments

Treatment	Explanation	Injuries treated
Pain Killers e.g., Ibuprofen	Reduces the feeling of pain, and swelling.	Any injury
Support e.g., Kinesiology taping Neoprene Bandaging	Reduces movement, Stabilises, reduces swelling, and allows injured area to move with support Tape that sticks to skin Adjustable strapping secured usually by Velcro Strapping using bandage	Soft tissue injuries Torn tendons or ligament Strain or sprains Stress fractures Minor broken bones e.g., fingers
Immobilisation e.g., Cast Splint Sling	Keeping the injured are protected by not allowing movement Plaster is used to keep injury protected and still Hard cover that provides support and protection Hold injured joint to take pressure of injured area, elevate injured area to reduce swelling	Fractures, dislocations, shin splints, sprains

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Year 11

Physiological responses to injuries and medical conditions

Anger	Disengagement
Frustration	Denial
Depression	Stress
Anxiety	Aggression
Isolation	Lack of confidence
Irritations'	Worry
Lack of motivation	

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Year 11

Common medical condition- Asthma

Asthma

Common lung condition

Breathing difficulties

Affects all ages

Can develop over time

Causes / Triggers

Environment

Pollen or dust mites

Pollution such as smoke, chemical fumes, aerosols

Infections e.g. common cold

Cold air

Exercise

Breathing in cooler air due to running

Drier air being breathed in due to exercise

Pollen outside if exercising outside

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Year 11

Common medical condition- Asthma

Symptoms

Coughing

Wheezing

Shortness of breath

Tightness of chest

Whistling or squeaky sound in your chest when you breathe

Treatment

Reassurance

Inhaler / nebuliser

Keeping them calm

Emergency services if needed and the asthma attacks continues, or the patient gets worse

Asthma attacks

Unable to talk

Frequent coughing

Whistling or wheezing when breathing

Shortness of breathe

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Year 11

Common medical conditions - Diabetes

Type 1 diabetes

Insulin dependant as you are unable to make insulin to lower blood sugar levels so insulin is injected

Type 2 diabetes

Non-insulin dependant as you either cannot produce enough insulin or your insulin does not work effectively. Controlled through diet and medication usually develops with older age and associated with being overweight through lifestyle.

Symptoms

Increased thirst

Going to the toilet lots

Extreme tiredness

Weight loss

Prone to infections

Cuts and wounds take longer to heal

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Year 11

Common medical conditions - Diabetes

Age

Type 1 diabetes

Occurs in children and young adults but can occur at any age.

Type 2 diabetes

Develop at any age but mostly occurs in middle aged and older people

Lifestyle

Type 1 diabetes

Caused by genes and it is through viruses

Type 2 diabetes

Physical inactivity, high blood pressure, family history or being overweight or obese

Treatment

Insulin or glucose

Emergency services if patient becomes unconscious

Medication if they have some

Lifestyle change

Diet

Exercise

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Year 11

Common medical conditions – Monitoring

Hypoglycaemia

A person's blood sugar level is too low (hypo)

This person needs to eat or drink something sweet or sugary to rise levels

Hyperglycaemia

A person's blood sugar level is too high

This person needs to take medication to lower insulin levels.

Monitoring

Test the blood by taking a small blood sample. This involves pricking the finger and putting the sample into a machine called a blood glucose monitor and it reads the blood sugar levels

Or

A blood glucose monitor is placed under the skin to continually measure the blood sugar levels automatically.

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Year 11

Common medical conditions- Epilepsy

Condition of the nervous system in which brain activity becomes abnormal

Symptoms

Symptoms effect different parts of the body eyes, mouth and limbs

Seizures

Periods of unusual behaviour and sensations

Loss of awareness

Eyes – staring blankly and fluttering

Mouth – biting tongue and random noises

Limbs – stiffness and jerking movements

Seizure symptoms can include:

Staring blankly and loosing awareness

Repeatedly shaking their arms and legs

Unconsciousness and not remembering

Lose of control of your bowel or bladder

Falling down and muscle stiffness

Strange sensations such a rising feeling in the tummy

and unusual taste, smells and tingling feelings

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Year 11

Common medical conditions- Epilepsy

Common causes and triggers

Severe head injuries – stroke, brain tumour or lack of oxygen at birth

Anxiety / stress – increased through situations such as exam stress

Tiredness / lack of sleep – fatigue causes weakness or exhaustion

Treatment

Anti – epileptic drugs (AEDs)

Ketogenic diet

Emergency Care Plan

Call 999 if seizure lasts more than 5 minutes or is a first seizure

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Year 11

Common medical conditions- Sudden Cardiac Arrest (SCA)

Common causes

Underlying genetic heart conditions

Intense physical activity

Sudden trauma

Symptoms

Unconscious

Breathing difficulties

Treatment

Defibrillators – a machine that send sends an electric shock to re

-start the heart

Lifestyle changes – not smoking , maintaining a healthy eight and only drinking alcohol in moderation

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Year 11

Other medical conditions - Hypothermia

Causes

Body temperature below 35 degrees

Prolonged exposure to cold / wet conditions

Symptoms

Shivering

Blue lips / skin

Slurred speech

Tiredness / confusion

Slow breathing

Treatment

Remove wet clothing / wrap in blankets and cover head

Give a warm and sugary non – alcoholic drink

45

Year 11

Other medical conditions - Heat Exhaustion

Causes

Body temperature of 38 degrees or above

Strenuous physical activity

Not enough water intake

Symptoms

Excessive sweating

Headaches / dizziness

Being very thirsty

Feeling or being sick

Rapid pulse and / or breathing

Treatment

Move to a cool place / cool the skin

Get them to drink plenty of water

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Year 11

Other medical conditions - Dehydration

Causes

Loss of bodily fluids

Symptoms

Feeling thirsty

Fatigue

Dark yellow urine and infrequent urination

Dry mouth / lips

Treatment

Drink plenty of water

Rehydration sachets

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INDEPENDENCE: DIAGNOSIS – THERAPY - TEST

NAME: CLASS:

TOPIC:

DIAGNOSIS: The thing I don't understand

THERAPY: Where am I going to learn about this?

Which of the templates will I use to transform the information?

TEST: 5 questions someone can ask me about my new understanding.



INDEPENDENCE: DIAGNOSE

NAME: CLASS:

SUBJECT:

Be clear about what you know and what you don't know before you begin.

First, use a contents page or a topic list for the subject you are going to revise.

Then, fill in the following table – the topics, and how well you know them.

Next, prioritise. Which topics will you revise first? Spend time studying the topics which will make the biggest difference to your results.

Topic	Knowledge	Priority
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	
	Know it/Sort of know it/Don't know it	

Finally, use the **diagnosis – therapy – test** worksheet to plan your independent study.



INDEPENDENCE: PRIORITISE, REDUCE, CATEGORISE, EXTEND

NAME:

CLASS:

TOPIC:

Take a section of text and do the following:

Prioritise: write out the three most important sentences. Rank 1-3 in terms of importance. Justify your decision.

Reduce: reduce the key information to 20 words.

Categorise: sort out the information into three categories. Give each category a title which sums up the information.

Extend: write down three questions you would like to ask an expert in this subject.



INDEPENDENCE: RANKING TRIANGLE

NAME:

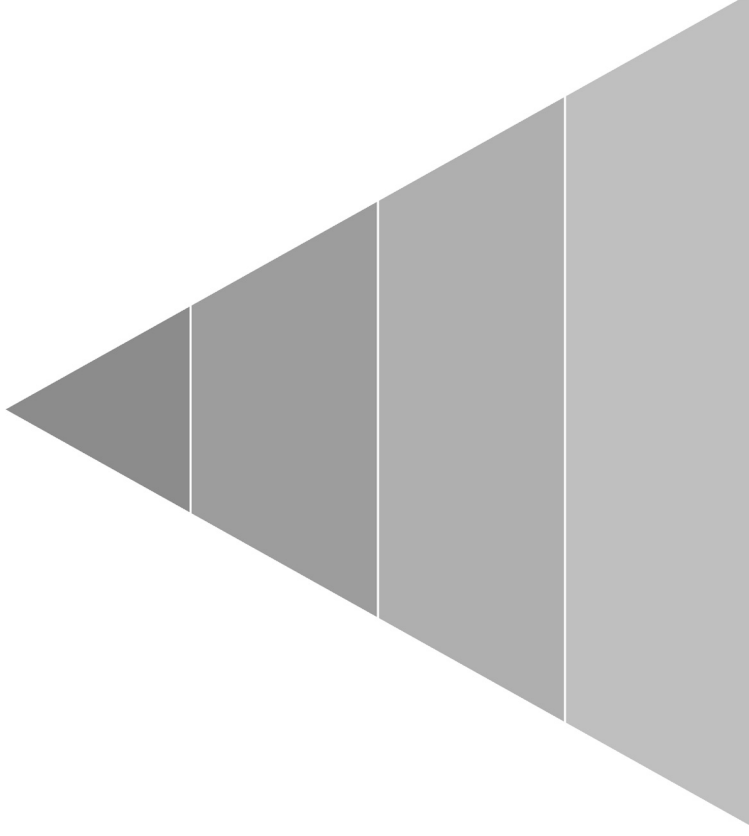
CLASS:

TOPIC:

The most important information goes at the top.

The least important information goes at the bottom.

Justify WHY. Why is it the most important? Why is it the least important?





INDEPENDENCE: QUIZZING

NAME: CLASS:

TOPIC:

Read the text and transform it into 10 questions to ask someone.

Question	Answer
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Question stems:

- State... Explain... Suggest...
- Describe... Evaluate... Compare...



INDEPENDENCE: BOXING UP

NAME: CLASS:

TOPIC:

Take a section of text. Read it and put your thoughts about the text into different boxes.

Needs a boost: 3 things I did not know:
Almost there: 3 things I understand better now:
I've got these: 3 things I already knew:



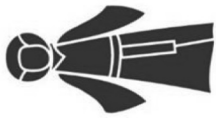
INDEPENDENCE: OTHER IDEAS

Steps → flow chart Transform a sequence of steps into a flow chart or a diagram.

Flow chart → steps Transform a flow chart or a diagram into a sequence of steps.

Look, cover, write, check Cover a list of key words. Write them down. Check which ones you have got right. Repeat until you get them all right.

Link key words Take three words from a topic. Link them together in a sentence or a diagram. Repeat until all the key words have been linked.



INDEPENDENCE: Pictionary

NAME:

CLASS:

TOPIC:

Transform the material into 6 pictures – one per paragraph or one per key piece of information. The pictures should represent the information so that they can act as a reminder of what the text said. Underneath each picture, explain your thinking.

1.	2.	3.

4.	5.	6.

