Honiton Community College

www.honitoncollege.com

NEWSLETTER

Friday 15th January 2021

Students Benefit From Free Laptops

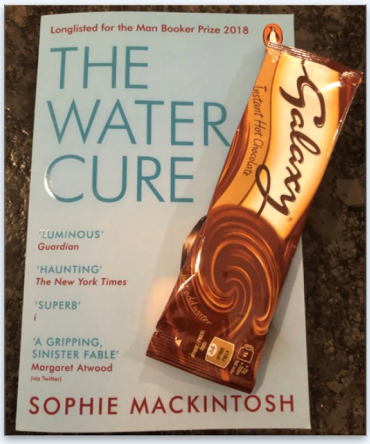
We are pleased to announce that we have bid for more laptops from the Department for Education, and they were delivered to the College at the end of last week. Our dedicated ICT Team have been busily setting the new laptops up on our systems and issuing them. As always, we could do with more! We know that there are some wonderful community leaders helping us to find some and have even received offers of funding for laptops from members of our community!

If you feel you could fund a laptop for a student in need (or part fund even), or have a spare device that you would be happy to donate, please contact ictsupport@honitoncollege.devon.sch.uk. Please be aware we will need to wipe the laptop back to default and if it cannot be upgraded to the latest version of Windows - which we must do for security reasons - we will dispose of the device through a computer recycling company.

Mrs J Hill Assistant Principal

Director of Additional Needs - SENDCo/Designated Teacher for Looked After Children

Lockdown Fun in Sixth Form



As we firmly believe in getting the balance right between academic work and extra-curricular activities, this week we have launched the " Book & Hot Choc " group.

One of our Year 12s has chosen the 1st title. Students opt in if they like the look of the title chosen for the month; they get sent a copy of the book to read with the hot choc sachet from us, and then they can join in a group discussion (via TEAMs of course!) in a few weeks for a friendly catch-up .

Thank you to Ms Flynn who suggested this it's a real opportunity to explore the many different genres of literature.

Back by popular demand is the start of the weekly TEAMs quiz with sixth formers and their tutors.

There are also are more lockdown tutor challenges which range from crazy, fun and life skills topics.

How fast can you put a duvet cover on ??

With everyone's wellbeing being of key importance, it is important not to lose sight of the non-academic curriculum as well.

I will keep the newsletter updated with how the students are getting on.

University Offers & Apprenticeships

Despite it being a very unusual year for the Year 13s and exploring their next steps, students have continued with their applications to University with many already receiving their offers.

A range of universities and courses has been chosen – most of which has been done via virtual open days and research. Not an easy undertaking! Credit needs to go to all of our Year 13s keeping their VISION at this time, their next steps with many now also applying for the top apprenticeships that are being advertised.

There are a few more months to go but they remain positive and determined to gain the qualifications they set out to achieve to get them to the next step.

Well done all!

Exeter University Scholars

15 of our Year 12 students were delighted with the news that they had been successful in their application for the Exeter University Scholars Programme.

This programme will deliver both subject specific university lectures and generic skills to prepare them for their next steps at University. Subjects that the students will be following include business, law and politics, engineering, english and creative writing, geography, geography and environmental science, languages and culture, medical and allied healthcare professions, politics and international relations, sociology and criminology and sport and health sciences and psychology.

Many of our Alumni have followed this Programme with great success and we wish them all luck when they start their journey with this top University.

The Programme will be delivered remotely to begin with and then hopefully followed by sessions both at the Exeter and Cornwall campuses.

Selena Burroughs, Director of Post 16

ACTION CALENDAR: HAPPIER JANUARY 2021

"Happiness is when what you think, what you say, and what you do are in harmony" - Gandhi

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
				1 Find three good things to look forward to this year	2 Make time today to do something kind for yourself	3 Do a kind act for someone else to help to brighten their day
4 Write a list of things you feel grateful for in life and why	5 Look for the good in others and notice their strengths	6 Take five minutes to sit still and just breathe	7 Learn something new and share it with others	8 Say positive things to the people you meet today	9 Get moving. Do something physically active (ideally outdoors)	10 Thank someone you're grateful to and tell them why
11 Switch off all your tech 2 hours before bedtime	12 Connect with someone near you - share a smile or chat	13 Be gentle with yourself when you make mistakes	14 Take a different route today and see what you notice	15 Eat healthy food which really nourishes you today	16 Get outside and notice five things that are beautiful	17 Contribute positively to a good cause or your community
18 Focus on what's good, even if today feels tough	19 Get back in contact with an old friend you miss	20 Go to bed in good time and give yourself time to recharge	21 Take a small step towards an important goal	22 Try out something new to get out of your comfort zone	23 Plan something fun and invite others to join you	24 Put away digital devices and focus on being in the moment
25 Decide to lift people up rather than put them down	26 Say hello to a neighbour and get to know them better	27 Challenge your negative thoughts and look for the upside	28 Ask other people about things they've enjoyed recently	29 Use one of your personal strengths in a new way	30 Count how many people you can smile at today	31 Write down your hopes or plans for the future

ACTION FOR HAPPINESS

CAREERS INFORMATION

It's really important to set ourselves goals and plan for the future. At times like this it can be hard to motivate ourselves and work towards the next step in our careers and learning journey.

Below are some practical ways to keep you motivated and on top of your game when it comes to preparing for the future. Take a look and see what you can do to learn more about a career you are maybe interested in or find out more about yourself and what careers would suit you.

There are also online courses/activities to enhance your employability skills and make you stand out from the crowd.

Mrs H Bown, Careers Lead and Head of Life Skills

Years 9 and above should have already signed up to the following websites in your life skills lessons.

Lower Year students - please sign up using our College email address and start exploring.

There are some great quizzes you can do to see which career would suit you and a search information toolkit where you'll find out further information (such as working hours, pay etc) on virtually any job in the country
https://www.careerpilot.org.uk/

Try the jobs quiz at the bottom left of the screen
https://www.careerpilot.org.uk/job-sectors

This is a new government campaign to set aside one hour a week to learn new skills. Check out these free online courses or see if you can find some more of your own.
https://nationalcareers.service.gov.uk/find-a-course/the-skills-toolkit

Virtual opportunities to enhance your career and gain understanding. This includes:
Medical
Health and Social Care
STEM
Digital
Law
Education
Public services
Hair and beauty
Business
Biodiversity & conservation
General employability
https://resources.careersandenterprise.co.uk/resources/virtual-opportunities

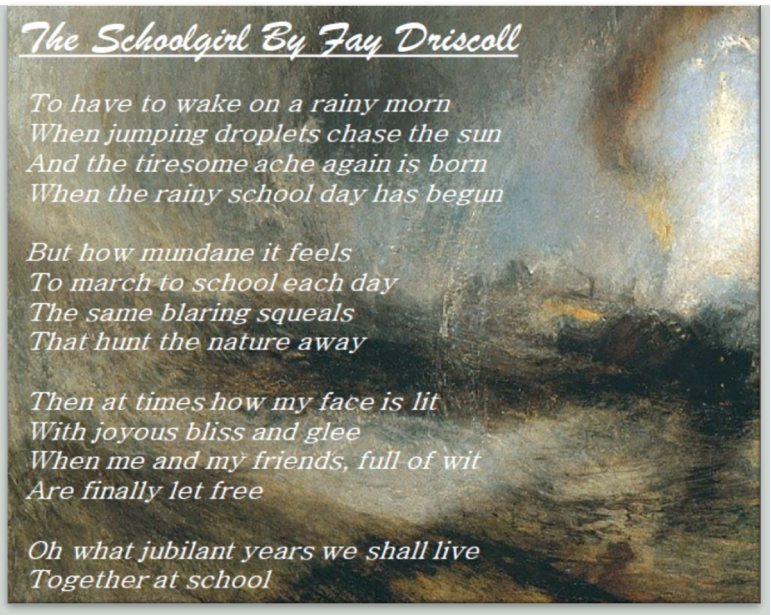
Or check out one of my favourite websites to look at, with your parents to help you understand your next steps.
https://www.theparentsguideto.co.uk/

Don't forget to check out the careers section of our website which is updated regularly with information and opportunities.
https://www.honitoncollege.com/lifeskillsandcareers

English Department

Miss Daw's Year 7 started their Blended Learning doing some work on William Blake.

This is an original poem entitled, The Schoolgirl, by Fay Driscoll. Fay has written this in the style of William Blake's poem, The Schoolboy, wherein a boy talks about how he longs to be as free as a bird, and not attending school! Someone who would have been pleased with a Lockdown in the 19th century!


The Schoolgirl By Fay Driscoll

To have to wake on a rainy morn
When jumping droplets chase the sun
And the tiresome ache again is born
When the rainy school day has begun

But how mundane it feels
To march to school each day
The same blaring squeals
That hunt the nature away

Then at times how my face is lit
With joyous bliss and glee
When me and my friends, full of wit
Are finally let free

Oh what jubilant years we shall live
Together at school

SCIENCE DEPARTMENT COMPETITION

– to win cash for yourself and HCC ***Closing date 19th March 2021***

We invite students from Years 7-11 to take part in the annual MiSAC competition. This year it is to produce information for a social media website for teenagers about fungi and climate change called 'What you didn't know about climate change.' Entries will need to be hardcopy pages: 2 x single sided A4 (or one A3 split in half) either hand or computer drawn.

Briefly you'll have to: explain the concept of climate change and its effects, how the activities of fungi affect climate change and how fungi themselves are influenced by climate change.

HCC can submit up to 10 entries from Years 7-9, and up to 10 entries from Years 10-11.

First prize is £100 for the winning student, and £250 for the college, more prizes are available. **Entries will be judged on scientific merit, do not copy and paste things from the internet, research is highly recommended! If you don't win... you still get a certificate.**

Although you can work in groups of up to 4 – *currently we encourage you to work on your own*, unless you are able to work on the same electronic copy and email it to each other.

For more details including the rules, prizes, what to include in your work, and useful websites for research please visit the poster page:

http://www.misac.org.uk/PDFs/Misac-competition-2021.pdf

And here is the main website address: http://www.misac.org.uk/competition.html

If you are unable to access the materials online, please contact Mrs. Shorter.

If you would like to take part, need help or further information, email Mrs Shorter

RShorter@honitoncollege.devon.sch.uk

- Please don't be put off by any scientific words you may not understand – ask for guidance.

A reminder about the deadline will be sent out nearer the closing date, and all entries will be made through the College.

SPORT & PE
Honiton Community College

#DevonVirtualGames

Congratulations to all the students that took part in the Devon Virtual Games Rowing competition throughout the autumn term. In total, 46 students received certificates for taking part, which is an excellent achievement.

In addition, Rebecca Firth and Charlotte Edmonston achieved a gold with Rebecca also gaining the "most improved" award, Bethany Sanders and Aimee Morton received a silver and Isobel Pollard received a bronze. All these students will receive a certificate and a medal when they return to College.

Well done to all and please get involved with the next set of Virtual Games events on your return.

Mr T Skelding, Sports Academy/PE Highly Able Coordinator

TAKE THE CHALLENGE

The Sport & PE department invites you to take part in a variety of exciting challenges throughout this half term. All you have to do is follow the information below to explore, practice and develop your skills in a range of different sports and activities.

There will be new challenges provided every week.

Why not challenge your friends and family too?

We look forward to seeing how you get on.

Are you up for the challenge?

#stayhomestayactive
@PEatHome1

EXPLORE

Find any ball that bounces. How many ways can you move the ball around your body?

Bright ideas:
- Move the ball around your waist
- Move the ball around one leg, then the other
- Move the ball in a figure of 8 between your legs.
- Can you go in both directions?
- Can you close your eyes when you are doing these practices?

PRACTISE

How many times can you complete a figure of 8 in 1 minute?
If you can do this challenge in one direction, try it in the opposite direction!

What positive thoughts can you think about whilst completing your challenge?

DEVELOP

Can you develop a game to help others improve the accuracy of moving the ball from hand to hand?

Can you create a set of rules for your game?

When describing your game, can you use the key words:
PRECISION
BALANCE
DEXTERITY

English Challenge!
Can you learn how to spell the following words?

PRECISION
BALANCE
DEXTERITY

Do you know the definition for these words? If not, look them up!

Basketball is a sport played at the Olympic Games, but do you know:
- When men first played basketball at the Olympics?
- When women first played basketball at the Olympics?
- When wheelchair basketball was first introduced at the Paralympic Games?

Parent's Tip!
Complete the challenge with both hands – which one do you find it easier to use?

@KESSPB
@awhitehousePE
@SarahLayPE

Where can I go to take part in more basketball?
https://cobbasketball.co.uk/

Make sure you have enough room to complete the tasks!

KS3

#stayhomestayactive

@PEatHome1

EXPLORE

Find any ball that bounces. How many ways can you bounce the ball off a wall?

Bright ideas:
- Bounce off the wall and catch with two hands.
- Bounce with one hand and catch with two hands.
- Bounce with one hand and catch with the other.

How many other ways can you catch the ball off the wall?

PRACTISE

Mark a spot on an outside wall or use a hoop if you have one. How many times can you hit the mark with your shot or get the ball in the hoop in one minute? Try using both hands – which is more challenging?

Work with your family members to create a team score – each member of the family has 30 seconds each to score as many points as they can!

DEVELOP

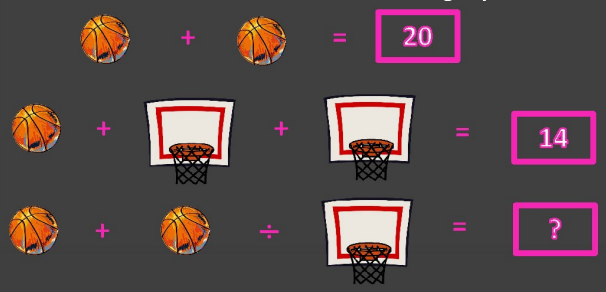
Can you develop your own practice to help others improve their shooting?
What are the key things they will need to remember to become an expert?

Can you write a persuasive letter to your local MP on why you think their should be more basketball courts open for young people?

Remember to use emotive language, hyperbole, opinions and rhetorical questions!

Maths Challenge!

Can you work out the value of each item and the solution to the final answers to the following equation?



Parent's Tip!
Stand closer to the wall to make this practice more accessible! For a challenge, stand further away!

@KESSPB
@awhitehousePE
@SarahLayPE

Where can I go to take part in more basketball?
https://cobbasketball.co.uk/

Make sure you have enough room to complete the tasks!

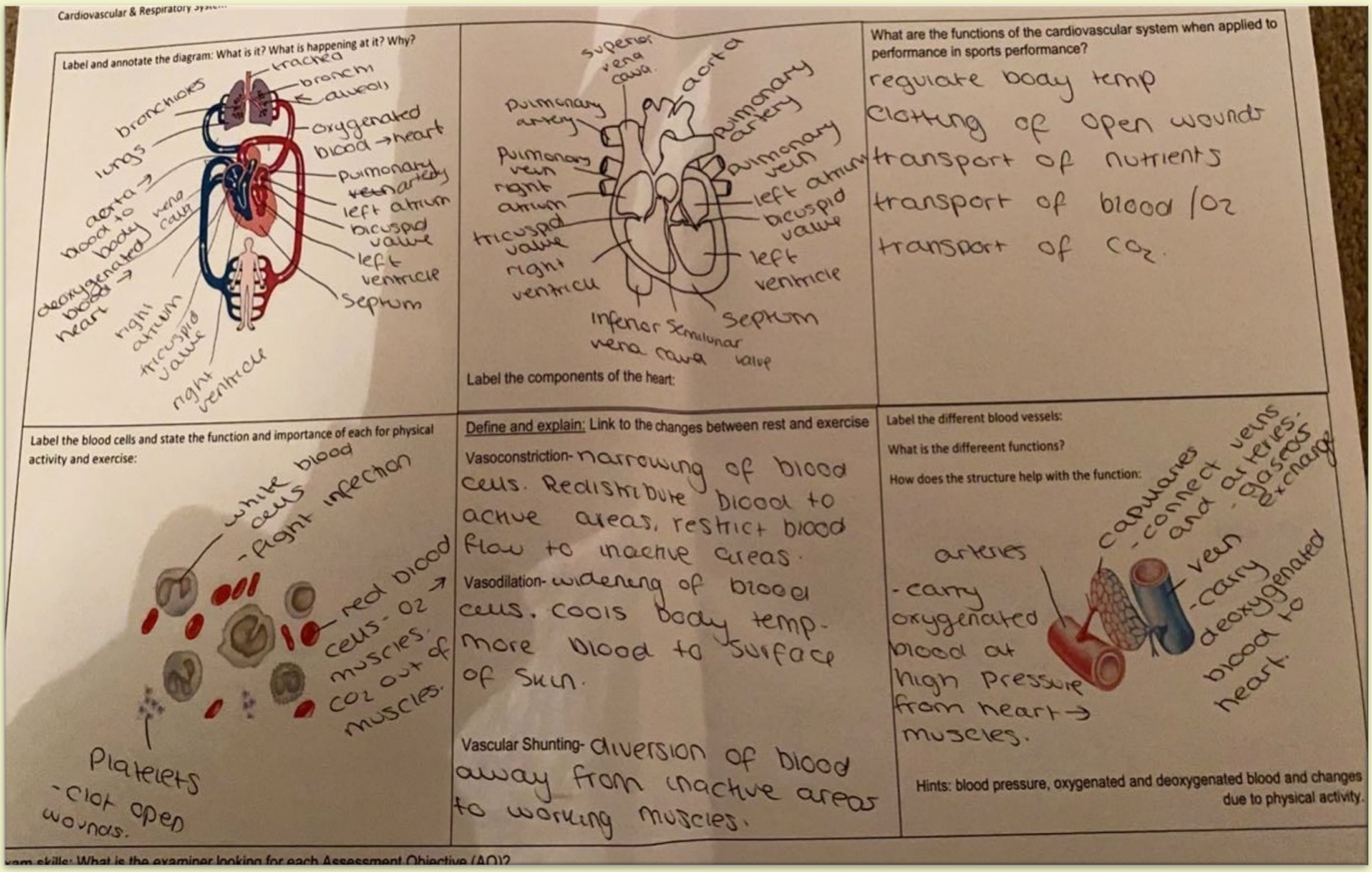
KS4

SPORT SCIENCE

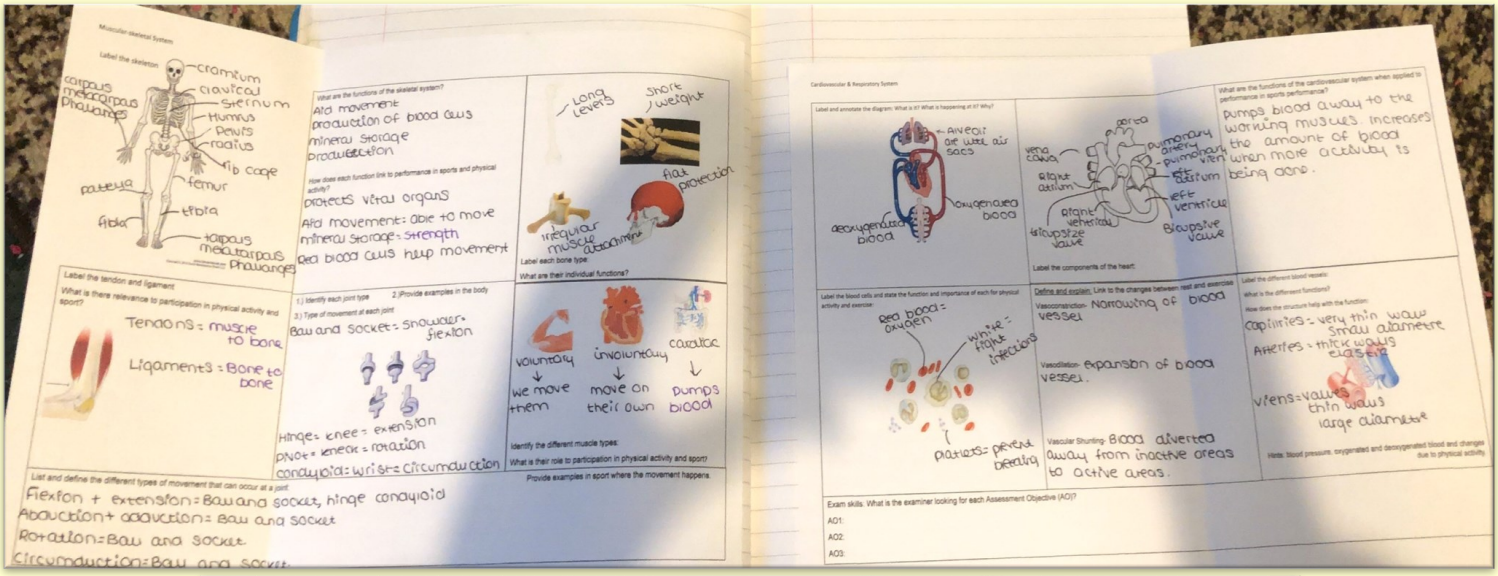
Year 11 Sport Science students have been looking at sport psychology, health, fitness and well-being as part of their remote learning. We have been looking back at revision topics for the skeletal, muscular, respiratory and cardiovascular systems.

Examples of students work: Imogen Court, Ella Mussen, Zara Maynard and Chloe-Mae Outram.

Mr A Taylor, Head of Sport & PE



SPORT SCIENCE



Muscular skeletal System

Label the skeleton

cranium, clavicle, sternum, humerus, pelvis, radius, rib cage, femur, tibia, fibia, tarsals, metatarsals, phalanges

carpus, metacarpus, phalanges

What are the functions of the skeletal system?

Aid movement
production of blood cells
mineral storage
production

How does each function link to performance in sports and physical activity?

protects vital organs
Aid movement: able to move
mineral storage: strength
Red blood cells help movement

Long levers / short weight

flat protection

irregular muscle attachment

Label each bone type:

What are their individual functions?

Label the tendon and ligament

What is there relevance to participation in physical activity and sport?

Tendons = muscle to bone

Ligaments = Bone to bone

1.) Identify each joint type 2.) Provide examples in the body

3.) Type of movement of each joint

Ball and Socket = Shoulder, flexion

Hinge = knee = extension

pivot = neck = rotation

condyloid = wrist = circumduction

voluntary → we move them

involuntary → move on their own

cardiac → pumps blood

Identify the different muscle types:

What is their role to participation in physical activity and sport?

Provide examples in sport where the movement happens.

List and define the different types of movement that can occur at a joint

Flexion + extension = Ball and socket, hinge condyloid

Abduction + adduction = Ball and socket

Rotation = Ball and socket

Circumduction = Ball and socket

Cardiovascular & Respiratory System

Label and annotate the diagram: What is it? What is happening at it? Why?

Alveoli are well air sacs

oxygenated blood

deoxygenated blood

aorta, vena cava, pulmonary artery, pulmonary vein, right atrium, left atrium, right ventricle, left ventricle, tricuspid valve, bicuspid valve

What are the functions of the cardiovascular system when applied to performance in sports performance?

pumps blood away to the working muscles. increases the amount of blood when more activity is being done.

Label the components of the heart:

Label the blood cells and state the function and importance of each for physical activity and exercise:

Red blood = oxygen

white = fight infections

platelets = prevent bleeding

Define and explain: Link to the changes between rest and exercise

Vasoconstriction- Narrowing of blood vessel

Vasodilation- expansion of blood vessel.

Vascular Shunting- Blood diverted away from inactive areas to active areas.

Label the different blood vessels:

What is the different functions?

How does the structure help with the function:

capillaries = very thin walls small diameter

Arteries = thick walls elastic

Veins = valves thin walls large diameter

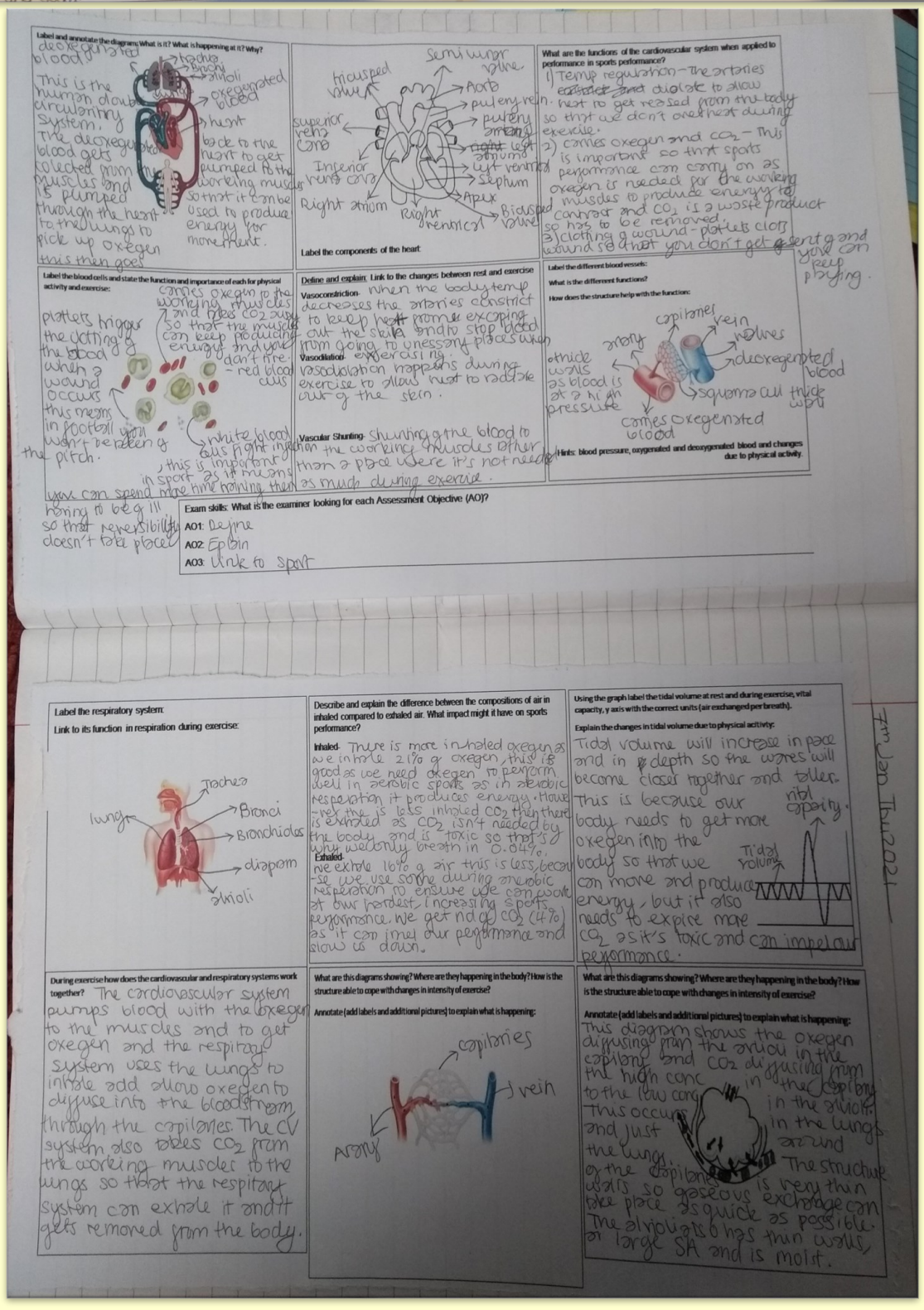
Hints: blood pressure, oxygenated and deoxygenated blood and changes due to physical activity.

Exam skills: What is the examiner looking for each Assessment Objective (AO)?

AO1:

AO2:

AO3:



Label and annotate the diagram: What is it? What is happening at it? Why?

deoxygenated blood

This is the human double circulatory system. The deoxygenated blood gets collected from the muscles and is pumped through the heart to the lungs to pick up oxygen this then goes back to the heart to get pumped to the working muscles so that it can be used to produce energy for movement.

hydrogen, binary, alveoli, oxygenated blood, heart

Label the components of the heart:

tricuspid valve, semilunar valve, aorta, pulmonary vein, pulmonary artery, right atrium, left atrium, left ventricle, septum, apex, right ventricle, bicuspid valve, superior vena cava, inferior vena cava

What are the functions of the cardiovascular system when applied to performance in sports performance?

1) Temp regulation - The arteries ~~constrict and~~ dilate to allow heat to get passed from the body so that we don't overheat during exercise.

2) carries oxygen and CO_2 - This is important so that sports performance can carry on as oxygen is needed for the working muscles to produce energy to contract and CO_2 is a waste product so has to be removed.

3) clotting & wound - platelets clot wound so that you don't get ~~a~~ sent off and you can keep playing.

Label the blood cells and state the function and importance of each for physical activity and exercise:

carries oxygen to the working muscles and takes CO_2 away so that the muscles can keep producing energy and you don't tire.

platelets trigger the clotting of the blood when a wound occurs this means in football you won't be taken off the pitch.

- red blood cells

white blood cells fight infection

this is important in sport as it means you can spend more time training then training to be ill so that reversibility doesn't take place

Define and explain: Link to the changes between rest and exercise

Vasoconstriction- When the body temp decreases the arteries constrict to keep heat from escaping out the skin and to stop blood from going to unessary places when exercising.

Vasodilation- exercising. vasodilation happens during exercise to allow heat to radiate out of the skin.

Vascular Shunting- Shunting of the blood to the working muscles rather than a place where it's not needed as much during exercise.

Label the different blood vessels:

What is the different functions?

How does the structure help with the function:

capillaries, vein, veins, deoxygenated blood, artery, arteries walls as blood is at a high pressure, squamous cell thick walls, carries oxygenated blood

Hints: blood pressure, oxygenated and deoxygenated blood and changes due to physical activity.

Exam skills: What is the examiner looking for each Assessment Objective (AO)?

AO1: Define

AO2: Explain

AO3: Link to sport

Label the respiratory system:

Link to its function in respiration during exercise:

trachea, lungs, Bronci, Bronchioles, diaphram, alvioli

Describe and explain the difference between the compositions of air in inhaled compared to exhaled air. What impact might it have on sports performance?

Inhaled- There is more inhaled oxygen as we inhale 21% of oxygen, this is good as we need oxygen to perform well in aerobic sports as in aerobic respiration it produces energy. However there is less inhaled CO_2 then there is exhaled as CO_2 isn't needed by the body and is toxic so that's why we only breath in 0.04%.

Exhaled- we exhale 16% of air this is less because we use some during aerobic respiration to ensure we can work at our hardest, increasing sports performance. We get rid of CO_2 (4%) as it can impact our performance and slow us down.

Using the graph label the tidal volume at rest and during exercise, vital capacity, y axis with the correct units (air exchanged per breath).

Explain the changes in tidal volume due to physical activity:

Tidal volume will increase in pace and in depth so the waves will become closer together and taller. This is because our body needs to get more oxygen into the body so that we can move and produce energy, but it also needs to expire more CO_2 as it's toxic and can impact our performance.

vital capacity

Tidal volume

During exercise how does the cardiovascular and respiratory systems work together? The cardiovascular system pumps blood with the oxygen to the muscles and to get oxygen and the respiratory system uses the lungs to inhale add allow oxygen to diffuse into the bloodstream through the capillaries. The CV system also takes CO_2 from the working muscles to the lungs so that the respiratory system can exhale it and it gets removed from the body.

What are this diagrams showing? Where are they happening in the body? How is the structure able to cope with changes in intensity of exercise?

Annotate (add labels and additional pictures) to explain what is happening:

capillaries, vein, Artery

What are this diagrams showing? Where are they happening in the body? How is the structure able to cope with changes in intensity of exercise?

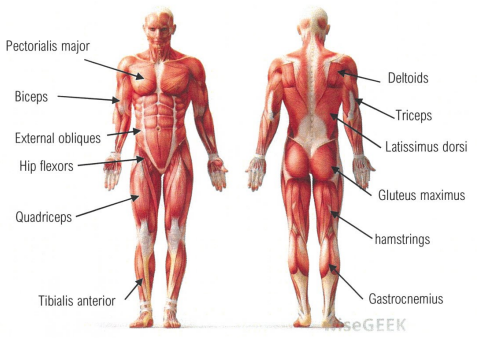
Annotate (add labels and additional pictures) to explain what is happening:

This diagram shows the oxygen diffusing from the alvioli in the capillary and CO_2 diffusing from the high conc in the capillary to the low conc in the alvioli. This occurs in the lungs and just around the lungs. The structure of the capillary is very thin walls so gaseous exchange can take place as quick as possible. The alvioli also has thin walls and large SA and is moist.

Fri Jan Thu 2021

REVISION SHEETS

Muscular-skeletal System



Label the muscles of the body

State the different movement at each voluntary muscle and provide specific sporting examples when this movement occurs:

- flexion = at the knee when a player is preparing to kick a football
- extension = at the knee when following through after kicking a football
- abduction = at the shoulder when reaching sideways to intercept a netball
- adduction = at the hip in the crossover leg action when throwing a javelin
- rotation = at the shoulder when swimming front crawl
- circumduction = at the shoulder when swimming butterfly
- plantar flexion = at the ankle when a ballerina points her toes
- dorsi-flexion = at the ankle when an athlete jumps hurdles

Define the term antagonistic pair:

Antagonistic pairs of muscles create opposing movements at the joints

State the different antagonistic pairs in the body and the movement they produce:

Biceps and triceps = they produce flexion and extension at the elbow

Quadriceps and hamstrings = they produce flexion and extension at the knee

Gastrocnemius and tibialis anterior = plantar flexion and dorsi-flexion at the ankle

Hip flexors and gluteus maximus = flexion and extension at the hip

Muscle Fibre Types

Identify the muscle type:

Colour/ blood supply:

Fatigue rate:

Aerobic/ Anaerobic:

Speed of contraction:

Energy released:

Explain how the different muscle fibres are used in a game of football: when, where, how, what…

The three different muscle fibres are used at different times within the football match. Type 1 slow twitch fibres are used for when a player is jogging between having the ball or going in for a tackle. This is because slow twitch fibres are good in endurance activities and are able to keep going without tiring, which is good for playing a 90-minute match.

Type 2a muscle fibre types are used when a football player has to sprint down the pitch to try to get to the ball or to back up a teammate when scoring a goal. This is because type 2a is a fast twitch fibre and produces high force, but also medium endurance so is more resistant to fatigue that type 2x but not as resistant to fatigue than type 1.

Type 2x muscle fibre types are used to when a football player in going into a tackle, a short sprint in to score a goal or going in for a header. This is because it is good for explosive actions requiring power, strength and speed. These muscle types are only good for a short, explosive action so would only be used for a few seconds in a match.

Analyse how the skeletal and muscular system work together to allow participation in physical acidity and sport:

The muscular and skeletal system work together to produce movement of the limbs and the body. The muscles contract to pull on bones to produce movements. Joints are able to move in a variety of directions to allow us to perform a range of sporting movements.

For example:

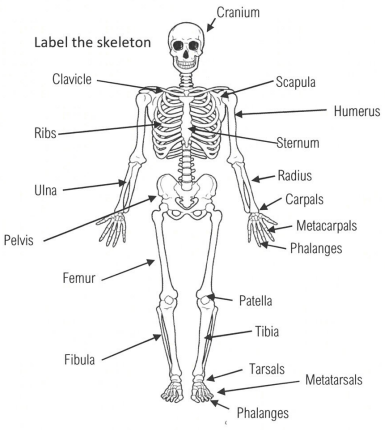
While shooting in netball flexion and extension occur at the elbow. This is using the humerus, radius and ulna and the muscles used are the biceps and triceps.

This shows that to perform the body needs both the muscular system and the skeletal system to perform.

Exam skills: What is the difference between a describe command word and explain command word?

Muscular-skeletal System

Label the skeleton

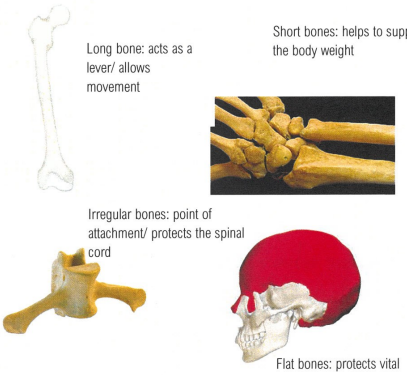


What are the functions of the skeletal system?

- Protection of vital organs
- Muscle attachment
- Joints for movement
- Calcium and phosphorus storage
- Blood cell production

How does each function link to performance in sports and physical activity?

- It protects vital organs so when you get hit in a tackle you don't get badly injured
- For muscle attachment to pull on bones when they contract for movement
- Bones and joints act as levers and generate force for movement
- Calcium and phosphorus are stored to help strengthen bones
- Store red blood cells for carrying oxygen, white blood cells to help fight infection and platelets to help clot the blood

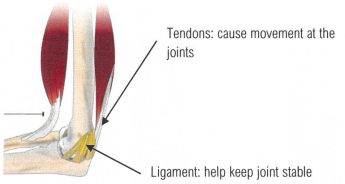


Label each bone type:

What are their individual functions?

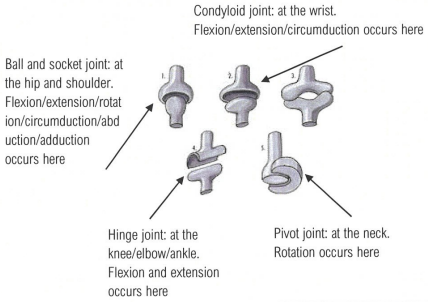
Label the tendon and ligament

What is there relevance to participation in physical activity and sport?



1.) Identify each joint type 2.)Provide examples in the body

3.) Type of movement at each joint



Voluntary muscle: we move them when we want to, choose how we want them to perform

Cardiac muscles: contacts the heart to pump blood around the body

Involuntary muscles: they contract automatically when required to by the body. Used for vascular shunting.

Identify the different muscle types:

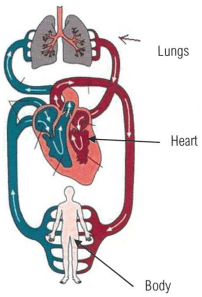
What is their role to participation in physical activity and sport?

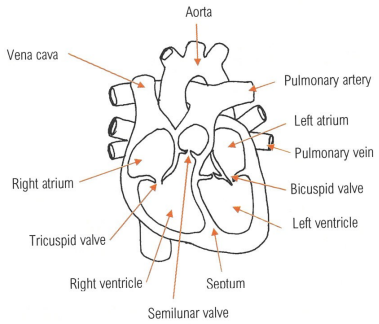
List and define the different types of movement that can occur at a joint:

Provide examples in sport where the movement happens.

Label and annotate the diagram: What is it? What is happening at it? Why?

1. Oxygenated blood is pumped from the heart to the body.
2. Deoxygenated blood is returned to the heart.
3. The deoxygenated blood is pumped to the lungs
4. The blood becomes oxygenated in the lungs
5. This is pumped back to the heart and the cycle starts again





Label the components of the heart:

What are the functions of the cardiovascular system when applied to performance in sports performance?

The cardiovascular system transports oxygen around the body in the blood. It is carries to the working muscles and vital organs and oxygen is needed in energy production for physical activity.

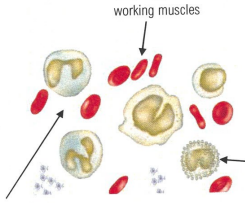
Carbon dioxide is a by-product during energy production. The cardiovascular system takes carbon dioxide away from the muscles to get rid of it from the body.

Nutrients are broken down from the food we eat and transported to the body in the blood. Athletes need macronutrients and micronutrients in order to perform well.

Platelets are transported in the blood to help clot wounds at the site and for a scab to prevent blood loss. Clotting blood is needed if a performer falls and grazes their knee so they can carry on playing.

The body will try to regulate body temperature. When the temperature rises the blood vessels vasodilate to increase blood flow so heat can radiate from the skin. When the temperature drops the blood vessels vasoconstrict so less het is lost through the skin by radiation

Label the blood cells and state the function and importance of each for physical activity and exercise:



Define and explain: Link to the changes between rest and exercise

Vasoconstriction-

The blood vessels are constricted to make them smaller. The body gives off signals which cause the blood vessels that supply the inactive areas to constrict, reducing the blood flow to these areas.

Vasodilation-

The blood vessels are dilated to make them bigger. The body gives off signals which cause the blood vessels to supply the active areas to dilate, increasing blood flow to these areas.

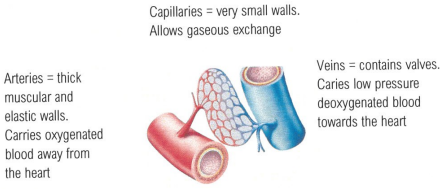
Vascular Shunting-

Blood is diverted away from inactive areas to the working muscles. Blood can be shunted away from the stomach. Therefore it is important that digestion is complete before exercise begins.

Label the different blood vessels:

What is the differeent functions?

How does the structure help with the function:



Hints: blood pressure, oxygenated and deoxygenated blood and changes due to physical activity.

Exam skills: What is the examiner looking for each Assessment Objective (AO)?

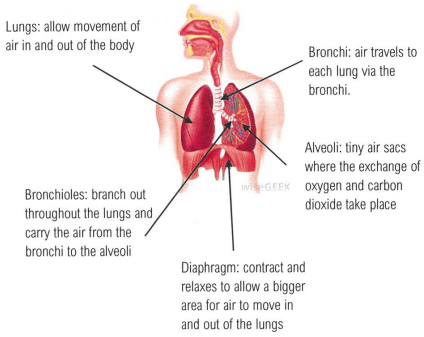
AO1:

AO2:

AO3:

Label the respiratory system:

Link to its function in respiration during exercise:



Describe and explain the difference between the compositions of air in inhaled compared to exhaled air. What impact might it have on sports performance?

Inhaled-

Nitrogen = 78%

Oxygen = 21%

Carbon dioxide = 0.04%

More oxygen is inhaled and less carbon dioxide.

Exhaled-

Nitrogen = 78%

Oxygen = 16%

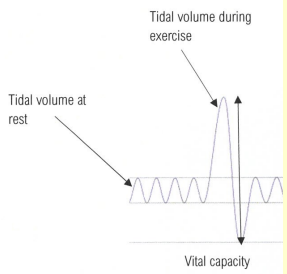
Carbon dioxide = 4%

Although there is less oxygen and more carbon dioxide compare to the inhaled air. There is still more oxygen over the amount of carbon dioxide.

Using the graph label the tidal volume at rest and during exercise, vital capacity, y axis with the correct units (air exchanged per breath).

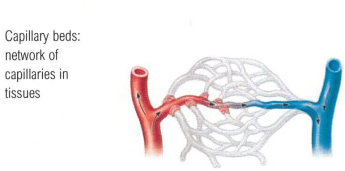
Explain the changes in tidal volume due to physical acitivty:

The tidal volume increases while taking part in exercise. This is because the lungs are breathing in more oxygen to be supplied to the working muscles



What are this diagrams showing? Where are they happening in the body? How is the structure able to cope with changes in intensity of exercise?

Annotate (add labels and additional pictures) to explain what is happening:



What are this diagrams showing? Where are they happening in the body? How is the structure able to cope with changes in intensity of exercise?

Annotate (add labels and additional pictures) to explain what is happening:

During exercise how does the cardiovascular and respiratory systems work together?

The cardiovascular and respiratory system work together to get oxygen to the working muscles and to remove and carbon dioxide from the body.

During exercise the muscles need more oxygen in order to contract and they produce more carbon dioxide as a waste product. To do this the heart rate increases which increases the rate that oxygen is transported from the blood to the working muscles and carbon dioxide is transported from the working muscle to the lungs.

As the breathing rate increases more oxygenated blood is being pumped to the working muscles and more deoxygenated blood is being pumped back to the lung to be reoxygenated.

Key Words: Make a Wordle