FURZE PLATT SENIOR SCHOOL

3.1.1.2 Physical activity and sport upon health and fitness & The Cardiac Cycle

TASTER LESSON 2026

Starter and Research/summarize

- Fun Little starter then some independent research.
- From the research can you condense the process into 5 bullet points (we will go through this in more depth together).

Starting Number = 14

- **1. World Cup Caps:** The record for the most career World Cup match appearances by an England player (Peter Shilton).
- 👉 **Answer: 17**
- **2. Mr Corbett's Pace:** To the nearest minute, Mr Corbett's personal best 5k running time.
- 👉 **Answer: 21** *(Higher)*
- **3. Golden Boot:** The record for the most total World Cup goals scored by an England player (Lineker/Kane).
- 👉 **Answer: 10** *(Lower)*
- **4. Heart Anatomy:** The number of valves in the human heart that you are required to know for A-Level PE.
- 👉 **Answer: 4** *(Lower)*
- **5. Mr Tipp's Links:** Mr Tipp's current official handicap in golf.
- 👉 **Answer: 28** *(Higher)*
- **6. Years of Hurt:** As of right now in 2026, the number of years of "hurt" since England's lone 1966 trophy.
- 👉 **Answer: 60** *(Higher)*
- **7. Midweek Domination:** The exact possession % England dominated with during their 0-0 draw against Ghana this week.
- 👉 **Answer: 79** *(Higher — 78.8%)*
- **8. Snooker Perfection:** The traditional, ultimate "maximum break" a player can score in a standard frame of snooker.
- 👉 **Answer: 147** *(Higher)*
- **9. Darts "Big Fish":** The absolute highest possible three-dart checkout score to finish a leg in professional darts.
- 👉 **Answer: 170** *(Higher)*
- **10. Dimple Aerodynamics:** To maximize lift and reduce drag, the exact average number of dimples on a regulation golf ball.
- 👉 **Answer: 336** *(Higher)*

Getting to know each other

- Why do you want to study A-Level?
- Which area within PE do you find most interesting?
- What is your favourite sport?
- What sub-topic within PE do you find most challenging?

How does A Level PE work?

There are...

- 2x exam papers

- 1x NEA that includes a practical assessment **and** a piece of written coursework

Paper 1

2 hours | 105 marks | 35% grade

Section A: Applied anatomy and physiology

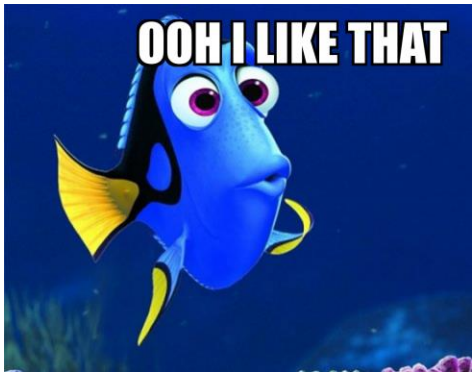
- Cardiovascular System
- Respiratory System
- Neuromuscular System
- Planes & Axis
- Energy Systems

Section B: Skill Acquisition

- Skill continuum & transfer of skil
- Skill classifications
- Theories of learning
- Guidance & feedback
- Memory models
- Information processing

Section C: Sport & Society

- Globalisation of sport
- Pre-industrial revolution
- Industrial revolution
- Post World War II
- Sociology



Paper 2

2 hours **105 marks** **35% grade**

Section A: Exercise physiology & biomechanics

- Diet & nutrition
- Training methods
- Injury prevention & Rehabilitation
- Biomechanical Principles
- Levers
- Linear Motion, Angular Motion & Projectile Motion
- Fluid Mechanics

Section B: Sports Psychology

- Personality
- Attitudes
- Arousal, Anxiety & Aggression
- Motivation
- Social Facilitation
- Group Dynamics
- Goal setting
- Attribution theory
- Confidence
- Leadership
- Stress

Section C: Sport & Society & Technology

- Development of elite performers
- Ethics in sport
- Violence in sport
- Drugs in sport
- Sport & the law
- Commercialisation
- Technology

NEA

1) Practical Performance in 1 sport = ***45 marks***

2) Coursework - Written analysis of your own sporting performance discussing strengths and weaknesses and using theoretical concepts to provide a cause = ***45 marks***

Make sure you know the course.

Exam board – AQA

A level Physical Education

- Textbook QR:

Spec – Download:

Specification Booklet

- Each of you should get a copy for September.
- Highlight topics as we cover them as a class.
- Buy the book!!

Technical Language

- This is key to success at A level.

- Ensuring the use of correct technical language in exams is essential.

Glossary (Back of book)

- Make the back of your book the home of key terminology and definitions.
- This will be very useful to refer to throughout the year/course.

Complete the following table…

Term	Definition
Health	
Fitness	
Physical activity HR	
Stroke Volume	
Cardiac output	
Systole	
Diastole	

- **Health:** A state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.
- **Fitness:** The ability to meet the physical demands of the environment.
- **Physical Activity Heart Rate:** The elevated number of heart contractions per minute in response to the increased metabolic demands of muscular work, regulated by neural, hormonal, and chemical changes.
- **Stroke Volume:** The volume of blood ejected from the left ventricle of the heart per beat (measured in ml).
- **Cardiac Output:** The volume of blood pumped out of the left ventricle of the heart per minute (measured in l/min). HRxSV=Q
- **Systole:** The phase of the cardiac cycle where the heart muscle (ventricles) contracts and actively pumps blood out into the arteries.
- **Diastole:** The phase of the cardiac cycle where the heart muscle relaxes and allows the chambers to fill with blood.

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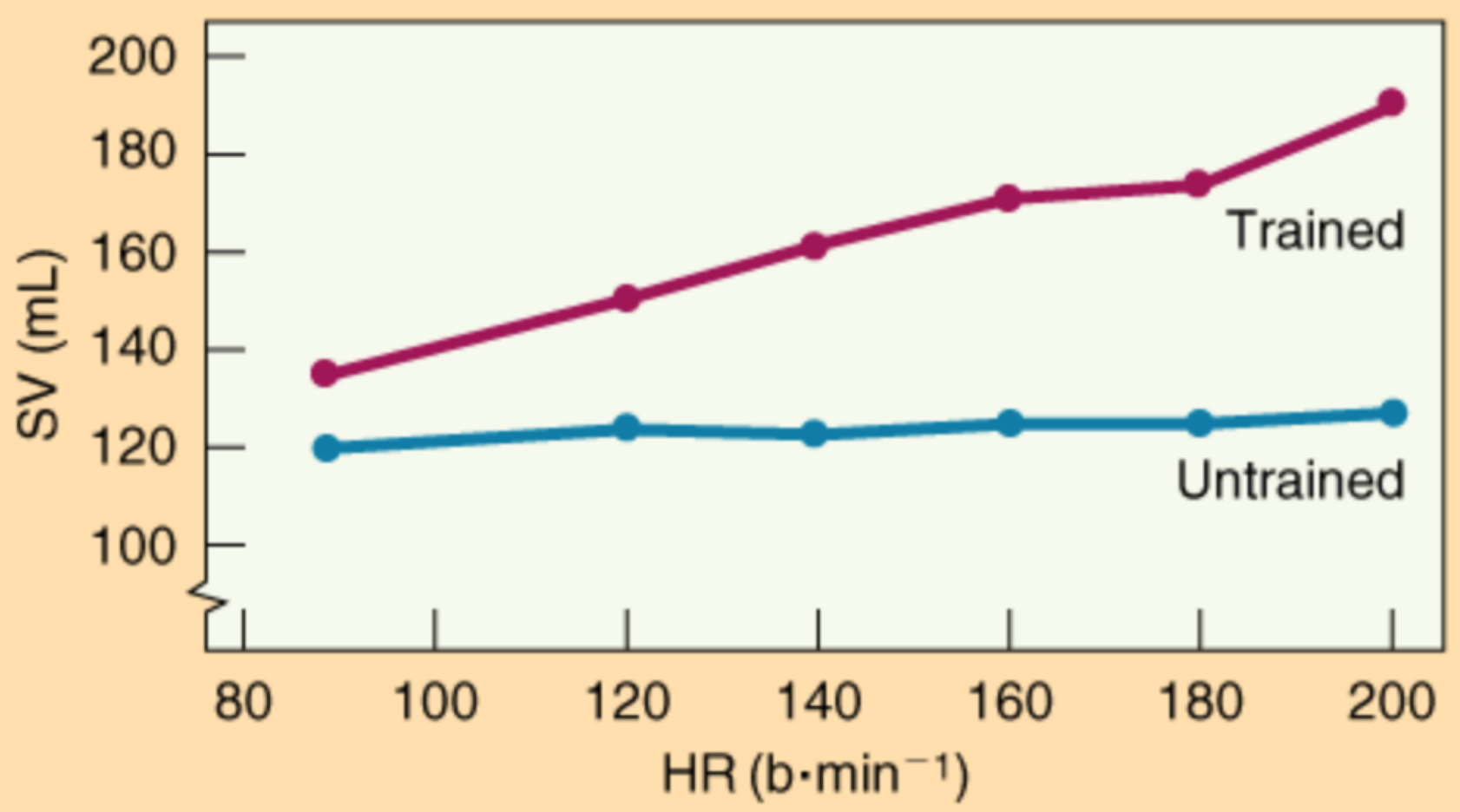
Term	Definition
Heart disease	
High blood pressure	
Cholesterol	
Stroke	

- **Heart Disease:** Narrowing of the coronary arteries due to fatty deposits (atherosclerosis), reducing blood flow to cardiac muscle.
- **High Blood Pressure:** Hypertension; a chronic condition where blood forces against artery walls are consistently too high (140/90 mmHg+).
- **Cholesterol:** A blood lipid; excess LDL (bad) causes arterial plaque buildup, while HDL (good) removes it to protect arteries.
- **Stroke:** Sudden blockage (ischemic) or rupture (haemorrhagic) of a blood vessel leading to the brain, cutting off oxygen.

So what is the impact of physical activity and sport on health?

List key point from the video that answer the above question.
Stretch and Challenge task – use technical terminology where the video has simplified terms. E.g ‘more capillaries grow’ you put ‘capillerisation’.

So what is physical activity and sports' impact on fitness?



Back to basics – label

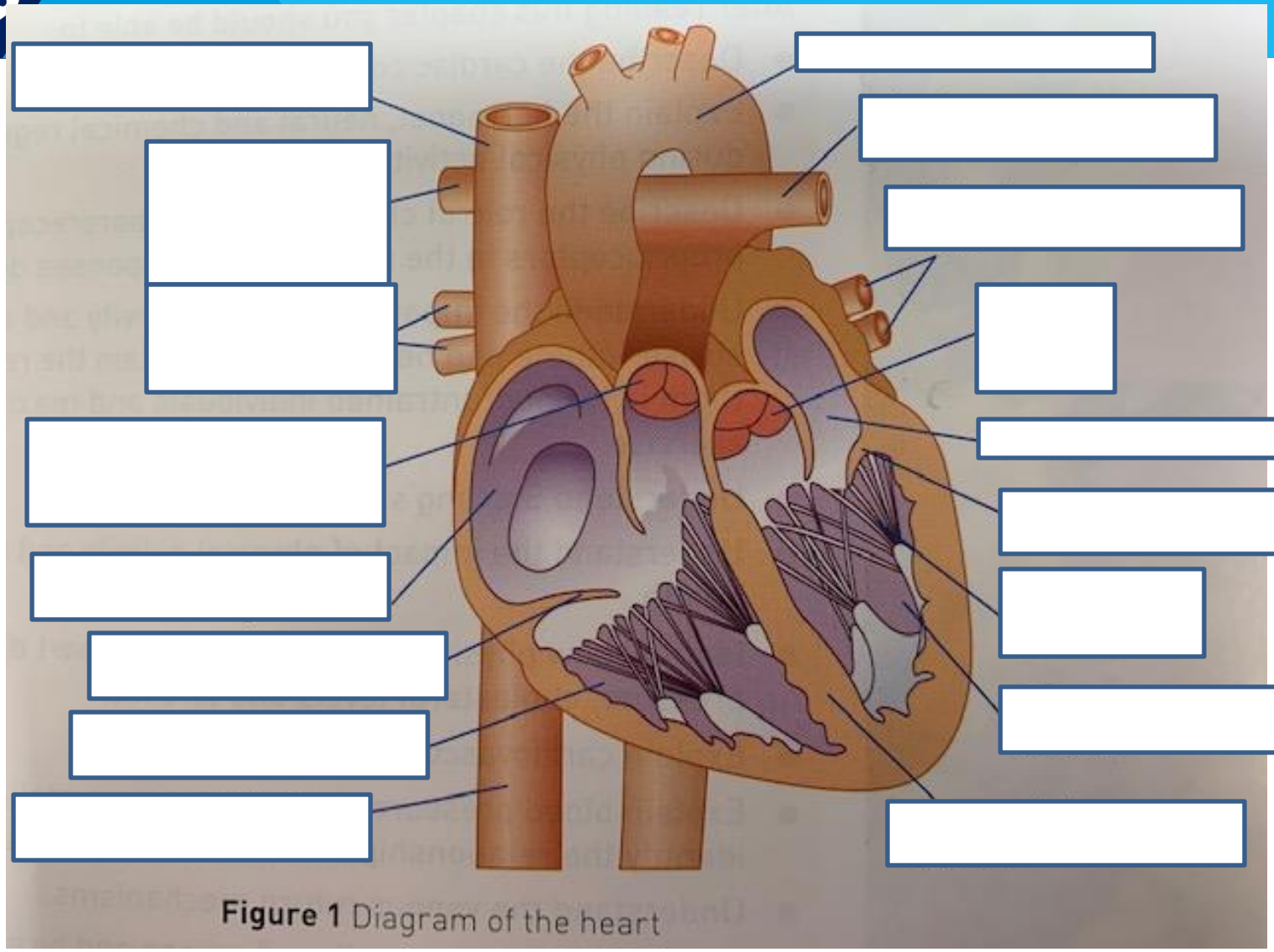


Figure 1 Diagram of the heart

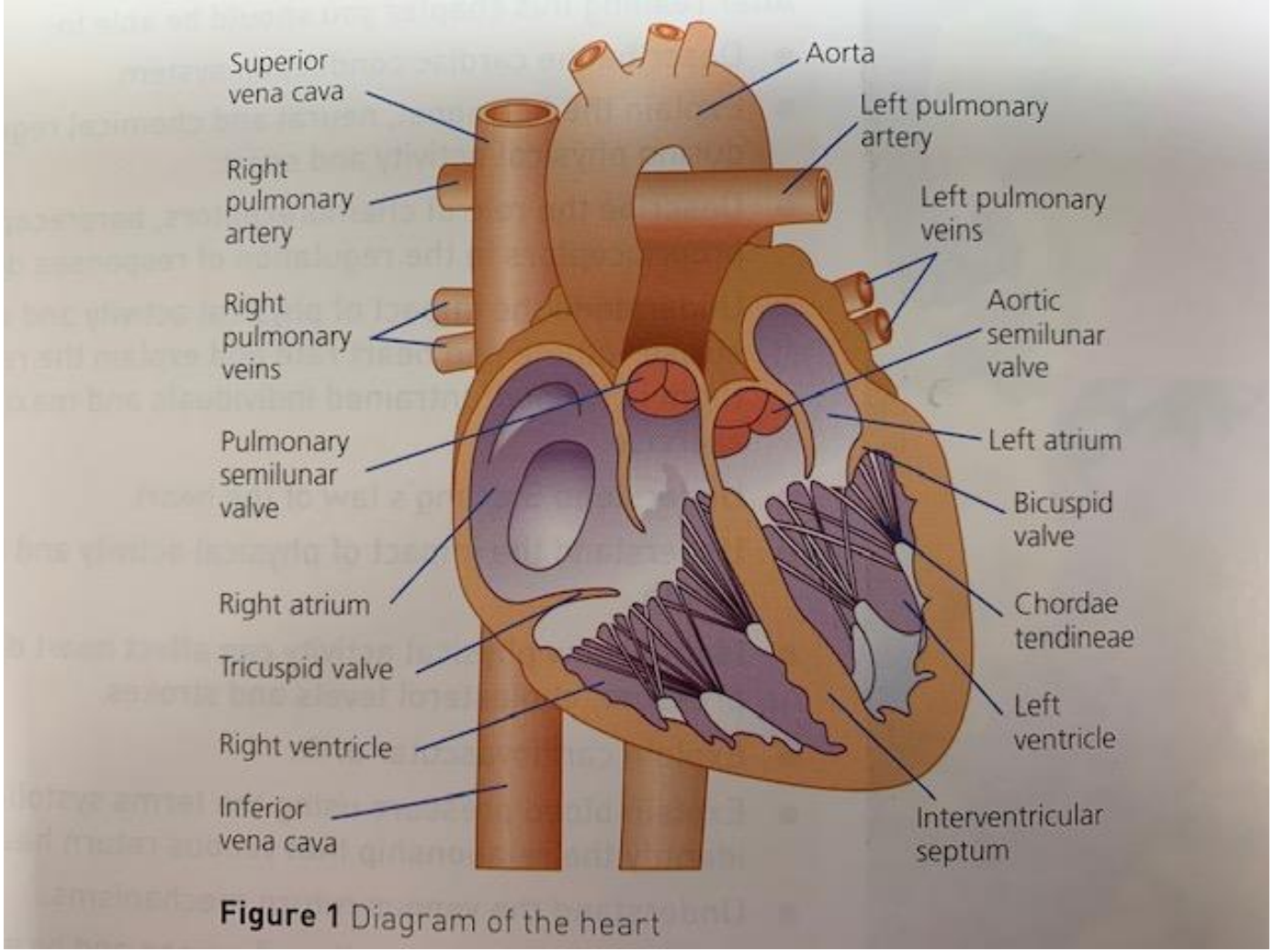


Figure 1 Diagram of the heart

Circulation

Story Board

- The cardiac cycle

Cardiac Cycle…

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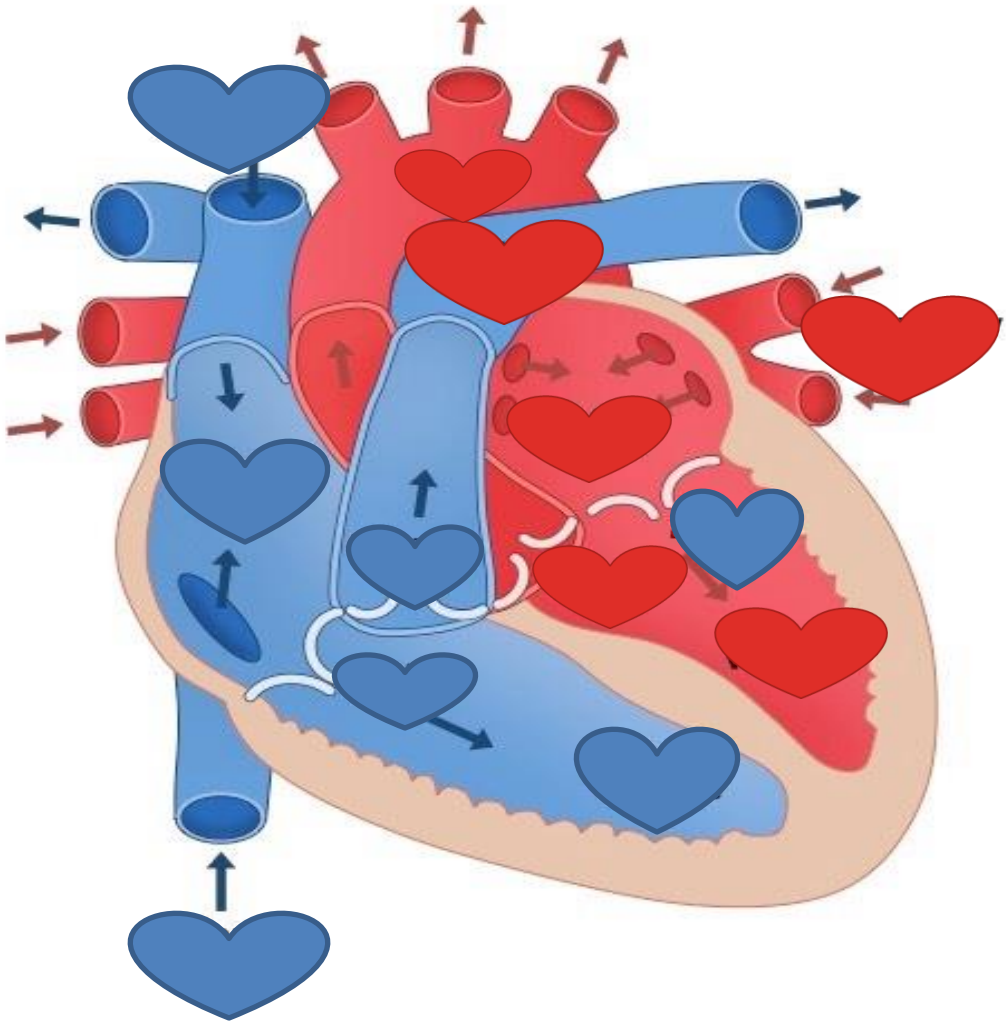

How?

- How does our heart know when to beat?

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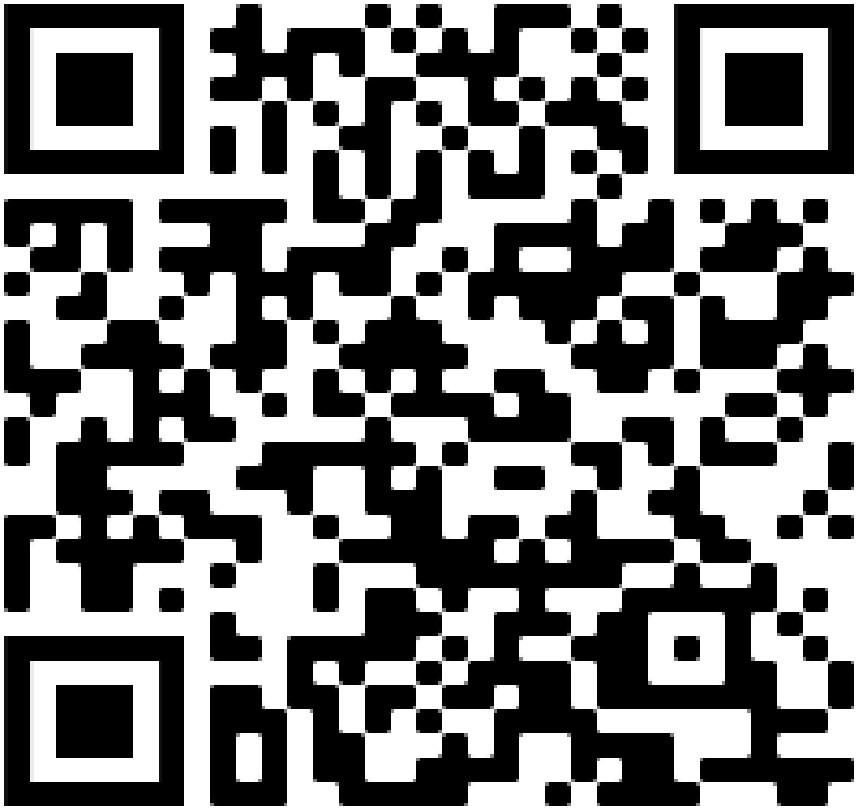
Scan and research/condense

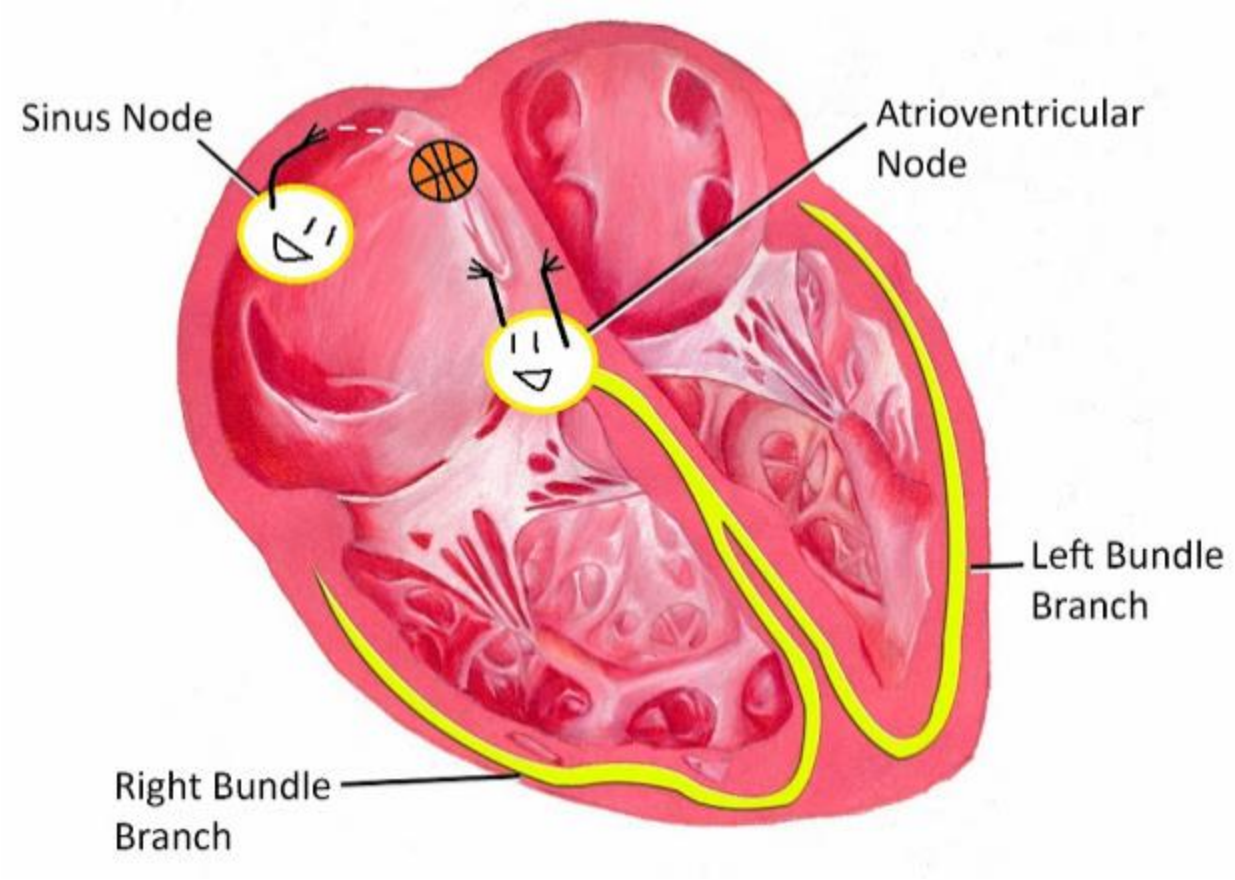


Conduction System

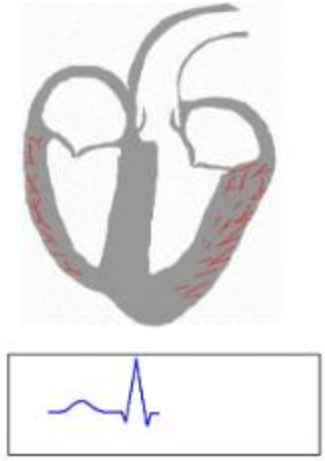
- The heart creates its own impulses rather than getting them through neural impulses.

Myogenic

- Electrical impulses…



- https://teachmeanatomy.info/thorax/organs/heart/conducting-system/



Key Terms…

- Purkinje Fibres
- Bundle of HIS
- Atrioventricular node
- Sinoatrial node
- Atrial systole
- Ventricular systole

Mnemonic

S
A
A
B
P
V

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Summer Work Printout

A Level PE Transition Summer Work 2026

Congratulations on completing your GCSE studies. We wish you all the best with your results and hope that you have done yourselves proud.

To ensure you are ready to begin studying A Level PE here at Furze Platt, we ask that you please complete the following work:

1) **Increase your sporting knowledge**
   Watch a full, **professional** match, of three of the following sports (you may choose the three but please choose the 3 that you have less knowledge of): basketball, hockey, tennis, badminton or cricket. Make notes on what makes these sports significant e.g. *tactics implemented, sport specific skills and where they would lie on the skill continuums, sport specific feedback used, skills that are transferable to other sports.*

2) **NEA preparation**
   a) **Gather footage.** Film yourself performing in your sport. You should film a continuous piece of footage e.g. *30 minutes of football, one race in athletics, one full gymnastics routine.* The camera should be focused on you.
   b) **Research**. What is meant by the following phases of skill performance: preparation, execution, recovery. You must be able to explain each phase, articulate the difference between them and begin to consider the importance of each stage to skill performance.
   c) **Technical Analysis.**
      - Review your footage and identify two skills to analyse.
      - Take screenshots of your performance of those skills.
      - Find elite examples of those skills being performed.
      - For each skill, compete analysis of your performance in the three researched phases.
      - Compare your performance in the three phases to the elite performance.
      - A short example of what is expected can be found here: \\fpss.sch\Staff\UserProfiles\bosed001\Desktop\Example Analysis.pdf

All of your work should be handed by Wednesday 10th September for checking. This work will also be marked by your teacher and a grade will be awarded. This will be the first grade reported home.