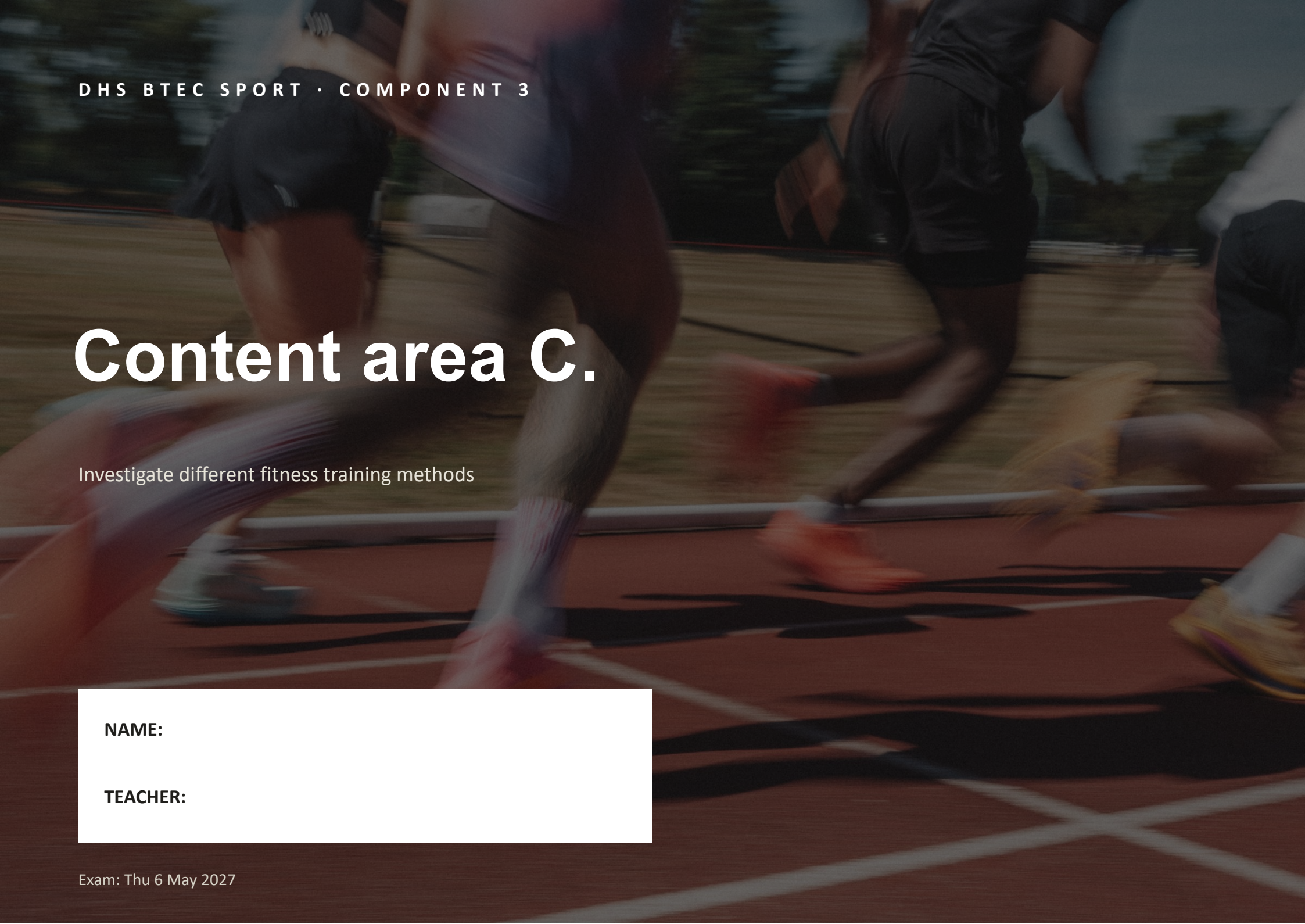

DHS BTEC SPORT · COMPONENT 3

# Content area C.

Investigate different fitness training methods

**NAME:**

**TEACHER:**

Exam: Thu 6 May 2027

# AROUND EVERY TRAINING SESSION

Complete both, then write why each part is done. You already know the warm-up from Component 1.

| | What it involves | Why it is done |
|---|---|---|
| Warm-up,<br>before training | | |
| Cool down,<br>after training | | |

**A real two-mark question.** "Explain the importance of one component of a cool down." The mark scheme wanted the component named and a linked reason: "stretching (1) to return the muscles to their pre-exercise length (1)". It refused "rest and recovery", and refused "remove lactic acid" when it was attached to stretching instead of to the pulse-lowering activity. The reason has to belong to the component you named.

# METHODS FOR AEROBIC ENDURANCE

Describe each method precisely. The details in bold in the specification are the ones that earn the mark.

| Method | Describe it | How it develops aerobic endurance |
|---|---|---|
| Continuous training | | |
| Fartlek training | | |
| Interval training | | |
| Circuit training | | |

How long must continuous training last, as a minimum? _____ What does Fartlek vary? _____

# METHODS FOR FLEXIBILITY, ENDURANCE AND STRENGTH

| Component and method | Describe it |
|---|---|
| Flexibility<br>Static active | |
| Flexibility<br>Static passive | |
| Flexibility<br>PNF (write out what it stands for) | |
| Muscular endurance<br>Free weights, machines, circuits | |
| Muscular strength<br>Free weights and machines | |

**Same equipment, opposite settings. Muscular endurance: _____ reps, _____ loads. Muscular strength: _____ reps, _____ loads.**

# METHODS FOR SPEED

| Method | Describe it |
|---|---|
| Acceleration sprints | |
| Interval training | |
| Resistance drills<br>(name at least three) | |

**Interval training appears twice in the specification. Complete the contrast:**

### For aerobic endurance

Rest periods: _____

Work intensity: _____

### For speed

Rest periods: _____

Work intensity: _____

# METHODS FOR SKILL-RELATED COMPONENTS

| Component | Method | Describe it, with examples |
|---|---|---|
| Agility | | |
| Power | | |
| Balance | | |
| Coordination | | |
| Reaction time | | |

**One method appeared in a photograph-matching question. Which one, and what does it look like?**

# CHOOSING A METHOD, AND WHERE TO TRAIN

**The eight things that make a method better or worse for a performer:**

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

**Provision: give two advantages and one disadvantage of each for someone who wants to train:**

| Sector | Advantages | Disadvantage |
|---|---|---|
| Public | | |
| Private | | |
| Voluntary | | |

# LONG-TERM EFFECTS ON THE BODY SYSTEMS

The most under-revised part of area C, and it appears in nearly every paper. Name the systems, then the adaptations.

| Training type | Which body systems adapt | The adaptations |
|---|---|---|
| Aerobic endurance training | | |
| Flexibility training | | |
| Muscular endurance training | | |
| Muscular strength and power training | | |
| Speed training | | |

Two technical words to spell: c_____ (more capillaries forming) and h_____ (the muscle or heart growing).

# MATCH THE METHOD TO THE PERFORMER

Use your own fitness test results from area B. For each weakness, choose a method and justify it using the eight considerations.

| Performer and sport | Component to improve | Method chosen | Why this method suits this performer |
|---|---|---|---|
| Me | | | |
| A 100m sprinter | | | |
| A marathon runner | | | |
| A gymnast | | | |

# THE SIX-MARK QUESTION

The biggest block of marks in the paper, and where most are lost. This is how it is marked:

| Level | Marks | What it looks like |
|---|---|---|
| Level 1 | 1 to 2 | isolated knowledge with major gaps · few points relevant to the question · generic assertions and unsupported judgements |
| Level 2 | 3 to 4 | some accurate knowledge with minor gaps · some points relevant but the link is not always clear · partially supported judgements |
| Level 3 | 5 to 6 | mostly accurate and detailed knowledge · most points relevant with clear links · well-developed, logical, supported judgements |

**The sub-max rule.** When a question names two components, each one has a maximum of three marks. A brilliant answer about only one of them cannot score more than 3 out of 6. Cover both, always.

**The plan that works. Three points for each named component:**

1. What the component is, in specification words
2. The test or training method that goes with it
3. What it lets this performer do in their sport, specifically

# SIX-MARK PRACTICE

Adam is a badminton player. **Assess the importance of flexibility and muscular endurance to his performance. (6 marks)**

**Plan first. Three points per component, then write:**

**Flexibility (3 marks max)**

**Muscular endurance (3 marks max)**

**Now write the answer:**

**My mark: / 6 Did I cover BOTH components? Yes / No**

# SELF-TEST

Cover your notes. Mark it against the knowledge organiser on the next page.

1. **Name the four training methods for aerobic endurance.**

2. **Name the three types of stretching.**

3. **What load and repetitions develop muscular endurance, and what develop strength?**

4. **Which method develops agility, and which develops power?**

5. **Name the four adaptations from long-term aerobic endurance training.**

6. **Why must a six-mark answer cover both named components?**

# AREA C KNOWLEDGE ORGANISER

## C1 to C3 The methods

Warm-up: pulse raiser, mobility, stretch. Reduces injury risk, prepares the body.
Cool down: lower pulse and breathing to resting levels, remove lactic acid, stretch to return muscles to pre-exercise length.

Aerobic endurance: continuous (steady, moderate, 30 min minimum) · Fartlek (varied speeds and terrain) · interval (work then rest; fewer, shorter rests and lower intensity) · circuit (stations in succession, minimal rest).

Flexibility: static active (internal force) · static passive (partner or object, external force) · PNF (isometric contractions to inhibit the stretch reflex).

Muscular endurance: high reps, low loads. Muscular strength: low reps, high loads. Free weights and fixed resistance machines for both.

Speed: acceleration sprints · interval (short, high intensity, more rest) · resistance drills (hills, parachutes, sleds, bungee, bands).

Skill-related: SAQ for agility · plyometrics for power · reduced base of support for balance · two or more body parts for coordination · quick responses for reaction time.

## C4 and C5 Choosing and providing

Eight things to weigh: number who can take part · cost of equipment · ease of set up · access to the venue · risk of injury if performed incorrectly · effectiveness for the performer · specificity to the component · replicating the demands of the sport.

Public: cheap or subsidised, council funded, accessible to everyone, local, wide range of activities. Busier at peak times, older equipment.

Private: newer equipment, specialist machines, quieter, extra services such as personal training. Most expensive, membership may be needed.

Voluntary: low cost, shared interest, social. Limited equipment and opening hours.

## C6 Long-term effects

Aerobic endurance, cardiovascular and respiratory: cardiac hypertrophy · decreased resting heart rate · increased strength of respiratory muscles · capillarisation around the alveoli.

Flexibility, muscular and skeletal: increased range of movement at a joint · increased flexibility of ligaments and tendons · increased muscle length.

Muscular endurance, muscular: capillarisation around the muscle tissues · increased muscle tone.

Strength and power, muscular and skeletal: muscle hypertrophy · increased tendon and ligament strength · increased bone density.

Speed, muscular: increased tolerance to lactic acid.

**Six-mark questions: each named component has a maximum of three marks, so cover both. Name the component, its method, and what it does for that performer in their sport.**