



EduTrend Contents

W4C · FITNESS AND CONDITIONING · HIGH SCHOOL

Designing a Training Programme

Use FITT, heart rate zones and RPE to plan training

Ages 15–18

Level: Advanced

75 minutes

Individual and pairs

Activity 05

Inside: activity at a glance • step-by-step session plan • facilitator notes • 3 student worksheets • assessment checklist

ACTIVITY 05 · AT A GLANCE

Designing a Training Programme

Students learn principles of training and the FITT framework, estimate training heart rate zones and use the Borg rating of perceived exertion scale. They design a personal session, trial it while monitoring intensity, and evaluate it against their goals.

Learning outcomes

By the end of the session students can:

- apply principles of training and FITT;
- estimate and use heart rate training zones;
- monitor intensity with heart rate and RPE;
- design and evaluate a personal training session.

KEY WORDS

FITT · specificity · progression · overload · reversibility · heart rate zone · maximum heart rate · RPE · Borg scale

CURRICULUM LINKS

PE and sports science: training design. Biology: cardiovascular system. Maths: percentages and formulae.

1**WARM UP**

Raise and mobilise

2**LEARN**

Fitness idea

3**WORK**

Exercise or test

4**MEASURE**

Heart rate, score, effort

5**REFLECT**

What did we learn?

6**COOL DOWN**

Recover and stretch

Equipment

- Heart rate monitors or stopwatches for pulse counting
- Borg RPE scale cards
- Cones, skipping ropes, mats, resistance bands
- Planning templates
- Worksheets 1, 2 and 3

Before the session

- Check health questionnaires.
- Print RPE scales and planning templates.
- Set up an area with varied equipment.
- Prepare worked examples of heart rate zones.

SAFETY

Screen health first. Build intensity gradually. Stop if dizzy, in pain or unwell. Students with conditions follow medical advice.

ACTIVITY 05 · SESSION PLAN

Step by step

Remind students that 220 minus age is only a rough estimate: RPE helps check how hard a session really feels.

Time	What happens	Say or ask
0–10 min Hook	Compare two athletes' weekly training plans.	<i>"Why are they different?"</i>
10–25 min Theory	Principles of training, FITT, heart rate zones and RPE.	<i>"What is your estimated maximum heart rate?"</i>
25–40 min Design	Students plan a 20-minute personal session with target zone.	<i>"Does it match your goal?"</i>
40–60 min Trial	Students complete sessions, recording heart rate and RPE every five minutes.	<i>"Did you stay in your zone?"</i>
60–75 min Evaluate	Evaluate the session and plan progression.	<i>"How will you apply overload next time?"</i>

CHALLENGE CARD (print or copy onto the board)

Design a 20-minute personal training session using FITT and a target heart rate zone, trial it with heart rate and RPE monitoring, and evaluate how to progress it.

ACTIVITY 05 · FACILITATOR NOTES

The exercise science in brief

Principles of training include specificity, progression, overload and reversibility. The FITT framework sets frequency, intensity, time and type. Maximum heart rate is often roughly estimated as 220 minus age, and aerobic training is commonly described as roughly 60 to 85 per cent of that estimate.

Rating of perceived exertion, such as the Borg 6 to 20 scale, lets athletes judge how hard exercise feels, which helps when heart rate data is unavailable or estimates are inaccurate. The World Health Organization recommends that adolescents include vigorous activity and muscle- and bone-strengthening activities on at least three days a week.

Common ideas to listen for

- “220 minus age is exact.” It is only an estimate with large individual variation.
- “More training is always better.” Rest is when adaptation happens.
- “Training can be the same forever.” Without progression, improvement stops.

Adapting the activity

Support

Use a template session with target zone calculations completed.

Stretch

Use the Karvonen method with resting heart rate to calculate zones and compare.

WORKSHEET 1

My training zones

Name: _____

Class: _____ Date: _____

Calculate your zones.

Zones

Measure	Calculation	Result
Estimated max HR		
60% of max		
85% of max		
My target zone		

WORKSHEET 2

Session plan and data

Plan and record.

Session

Time (min)	Activity	Heart rate	RPE
0			
5			
10			
15			
20			

WORKSHEET 3

Evaluation

Evaluate and progress.

Did I stay in my zone? Why?

How I will progress (FITT)

FOR THE TEACHER

Assessment checklist

Use during the session. One sheet covers up to eight students; copy as needed.

Student	Applies principles and FITT	Monitors intensity	Evaluates and progresses

Suggested codes: W = working towards · E = expected · G = greater depth

ABOUT THIS ACTIVITY

Designing a Training Programme is a sample activity from the EduTrend Contents W4C Fitness and Conditioning programme (high school, level: advanced). Every activity in the programme follows the same format: a practical challenge, a clear session plan, facilitator notes and ready-to-print worksheets, so that teachers, club leaders and parents can run it without extra preparation.

Full 15-, 20- and 32-week programmes are available from EduStore at edutrend.org.

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