

Heart Rate Unit: What You Have & How To Use It

Designed for High School PE – Cardiovascular Fitness & Monitoring

Introduction

This unit helps students understand heart rate concepts, monitor cardiovascular health, and apply knowledge to maintain MVPA and energy balance. Students learn to measure, interpret, and use heart rate data to make informed fitness decisions.

Lessons in This Unit

- Introduction to Heart Rate
- Cardiovascular Health
- Resting Heart Rate
- Heart Rate Estimation Challenge
- Recovery Heart Rate
- Maximum Heart Rate
- Target Heart Rate
- Heart Rate Zones
- Energy Balance
- Create a Heart Rate Activity

What You Have

Teacher resources to organize instruction, assessment, and application of heart rate concepts.

- Unit overview and daily lesson plans with learning targets and fitness objectives.
- ASAP warm-ups for engagement and readiness.
- Inclusion strategies for students without monitors or with limited access.
- Skill progressions for measuring, interpreting, and applying heart rate data.
- Assessment toolkit: observation checklists, calculation tasks, self-reflection prompts.
- Peer coaching cards for feedback and encouragement.
- Reflection questions aligned to SEL and fitness goals.
- Vocabulary and formula summaries (e.g., HRmax, target zones).
- Teacher reflection prompts for continuous improvement.

Instructional Media

- Sample 15-day unit map (adaptable to 10–20 lessons).
- Printable charts for heart rate zones and energy balance.
- Skill/task cards for measurement and interpretation.
- Leveled assessments with cognitive and physical components.
- Limited equipment & large class adaptations.

Core Equipment by Lesson

Lesson	Standard Equipment	Low-Cost/DIY Substitutions
Introduction to Heart Rate	Heart rate monitors, charts	Manual pulse check, printed charts
Cardiovascular Health	Posters, monitors	Digital slides, paper visuals
Resting Heart Rate	Monitors, stopwatch	Manual pulse + phone timer
Heart Rate Estimation Challenge	Monitors, cones	Manual pulse, chalk zones
Recovery Heart Rate	Monitors, timer	Manual pulse, phone timer
Maximum Heart Rate	Charts, calculators	Printed formula sheets
Target Heart Rate	Monitors, charts	Manual pulse, laminated zone cards
Heart Rate Zones	Zone posters	Paper charts
Energy Balance	Nutrition visuals	Handouts
Create a Heart Rate Activity	Monitors, cones	Manual pulse, classroom props

How to Use It

Sequence lessons to build understanding from basic concepts to applied fitness activities.

- Days 1–3: Intro concepts (Introduction to Heart Rate, Cardiovascular Health).
- Days 4–6: Measurement skills (Resting HR, Estimation Challenge).
- Days 7–9: Application (Recovery HR, Maximum HR, Target HR).
- Days 10–12: Heart Rate Zones and Energy Balance activities.
- Days 13–15: Create a Heart Rate Activity and culminating fitness challenge.

Daily Flow (Prep → Set → Teach)

- Prep: Check equipment; post charts and learning targets.
- Set: Quick warm-up; review formulas and cues.
- Teach: Practice measurement; apply data to activity; close with reflection.

Assessment & Evidence of Learning

- Observation checklists for accurate measurement.
- Student self-reflection on fitness goals.
- Calculation tasks for HRmax and target zones.
- Performance rubrics during culminating activity.

Safety

- Ensure proper use of monitors and straps.
- Teach manual pulse technique to avoid injury.
- Monitor hydration and rest breaks.
- Avoid overexertion during HRmax activities.

Limited Equipment / Large Class Ideas

- Use manual pulse checks instead of monitors.
- Pair students to share monitors and record data.
- Create stations for different HR tasks to keep all students active.

Reflection Questions

- What did you learn about your heart rate today?
- How can monitoring HR help you reach fitness goals?
- What adjustments will you make in future workouts?

Appendix A: Heart Rate Activity Rotation Template

Use this template for organizing stations and recording HR data.

Station	Round	Student	HR Reading	Notes
	1			
	2			
	3			
	4			
	5			
	6			
	7			

Appendix B: Equipment Checklist

- Heart rate monitors or manual pulse charts
- Stopwatches or phone timers
- Zone posters and formula sheets
- Station signs, score sheets, pencils