

Getting Started with Social and Emotional Learning Using Heart Zones® for Health and Physical Education

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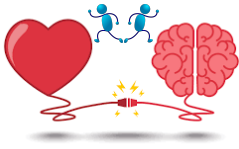


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Getting Started with Social and Emotional Learning Using Heart Zones®

by the Heart Zones Team



Meet your students where they are. Are they ready to learn? Are they able to self-regulate? Are you ready to teach these life skills?

Social and emotional learning (SEL) is as important as book learning. SEL has a broad reach and powerful outcomes. One of those is improving student behavior and enhancing learning by understanding a basic principle: *emotions drive behavior*.

This booklet is developed specifically for the Health and Physical Educator (HPE) to become a better teacher through the SEL lens. Using the power of wearable devices like heart rate sensors combined with the Heart Zones Method, HPE instructors can weave SEL into their programs effectively. In order

Social and Emotional Learning Using Heart Zones			
	5 CASEL Competencies	5 Elements	5 Activities
	1. Self-Awareness	<ul style="list-style-type: none"> Identify Emotions Expressing Emotions Self-Esteem Self-Confidence Mindfulness 	Ambient heart rate
	2. Self Management	<ul style="list-style-type: none"> Managing Stress Resilience Managing impulses Self-motivation Managing emotions 	Recovery heart rate
	3. Social Awareness	<ul style="list-style-type: none"> Respecting Differences Social Engagement Understanding Diversity Responsible Engagement Being Empathetic 	Cooperative Challenges and Cooperative Play
	4. Relationship Skills	<ul style="list-style-type: none"> Effectively Communicating Actively Listening Working through Conflicts Cooperative Teamwork Respecting Skill Differences 	Collaboration Physical Activities
	5. Responsible Decision Making	<ul style="list-style-type: none"> Leadership Skills Recognizing Problems Problem Solving Critical Thinking Setting Goals 	Physical Activities Using Goal Setting

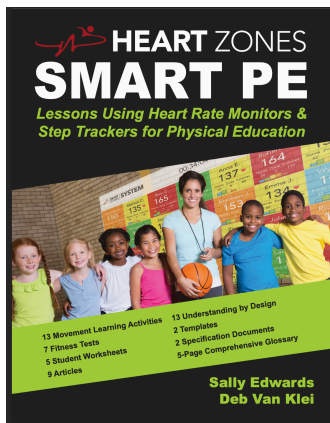
to accomplish this, you must start with the five competencies plus the five Elements followed by five activities that together enhance the HPE program at your campus as follows:

Given both the complexity and comprehensive nature of SEL, a definition¹, an in-depth understanding of SEL², and learning about CASEL, an evidence-based social and emotional learning non-profit, is important for the HPE teacher. For a brief overview, watch the Second Step explanation of SEL from their [video](#).³

ZONE NUMBER	EMOTIONAL ZONE	FEELING IN ZONE	HEALTH RESULTS
5	Red Zone	Out of control, frantic, total panic, disconnected, emergency	Zone 5 harms the health and safety of self and others. Body becomes "numb" to the stress response. Unhealthy weight gain or weight loss, susceptibility to mental disorders and addictions.
4	Distress Zone	Worried, anxious, angry, scattered, fearful, reactive	Elevated blood pressure, high cholesterol and increased risk of heart disease. Increased risk of infections, certain cancers, allergies and autoimmune diseases. Poor concentration, increased muscle stress. Hormonal changes that result in weight gain. Increased risk of degenerative diseases. Premature aging.
3	Performance Zone	Focused, in the flow, highly productive element, positive stress	Heightened awareness and creativity. Heightened physical performance and performance. Improved mental performance. Faster reaction time. Less potential for accidents. Inspire and energize those around you.
2	Productive Zone	High concentration, effective, prolific	Improved capacity for undertaking tasks involving mental or physical dexterity. Improved learning ability. Behavior has positive effects on those around you.
1	Safe Zone	Meditative, relaxed, affirming, regenerative, comfortable, compassionate, peaceful	Increased patience, caring, compassion, capacity for love. Lower risk of hypertension, Type 2 diabetes, immune disorders and mental disorders. Increased capacity for dealing with pain. Decrease in occurrence of stress-related disorders. Reduced dependence on prescribed medicine.

For physical educators, several of the outcomes when teaching HPE through the lens of SEL include:

- Avoiding negative classroom experiences with problem-solving positive solutions.
- Identifying and connecting student feelings with their current energy level.
- Using personalized heart rate zones to regulate emotional and physical performance status.
- Applying the heart's language, beats-per-minute, as one tool of regulation.
- Using the mind-body connection as a way to engage and motivate active learners.



For those schools with a school-wide social and emotional development implementation, SEL using Heart Zones is supportive because it is focused on a specific subject domain - health and physical education. Weaving this approach to SEL into your program does not conflict with a school-wide solution. Instead, it is complimentary. The five competencies of SEL are matched with activities specific to health and

¹ Social and Emotional Learning (SEL) is the process of developing students' and adults' knowledge, skills, attitudes and behaviors that they need to make successful choices. "How Social and Emotional Learning Became a Priority for Schools During the Pandemic." <https://www.the74million.org/article/how-social-and-emotional-learning-became-a-priority-for-schools-during-the-pandemic/>

² According to the CASEL, the Collaborative for Academic, Social and Emotional Learning, SEL is "the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions." JOPHERD article Volume 90 Number 2 Feb 2019.

³ <https://www.youtube.com/watch?v=ikehX9o1JbI>

physical education activities. Additional activities and lessons can be found in *Smart PE: Lessons Using Heart Rate Monitors and Step Trackers for Physical Education*.⁴ Additionally, matching the activity or lesson to the grade level, physical competency of your students, cultural relevance, interest areas, and providing levels of challenges ensures that the learner has the opportunity to adapt the activity to “where they are at”. The image below gives you an example of matching emotional and social energy to the mind-body connection.



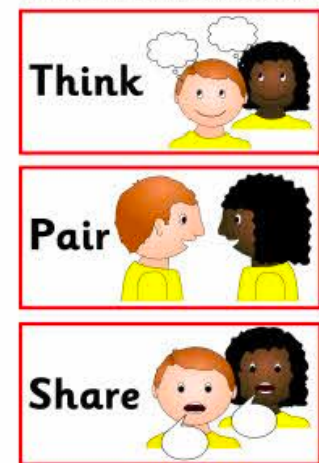
Darrell Salmi, teacher with student discussing SEL data on the Heart Zones Big Board display.

Strategies and tools to weave Heart Zones into your SEL for physical education include classroom visuals wall charts, student-created posters, pictures, and collages. You can fortify your approach with questionnaires, journaling, assessments, observations, check-ins and check-outs as well. Additionally, integration into academics further connects the learner in a cross-curriculum approach with:

- Math: heart rate data analysis, graphing, calculating values.
- Language Arts: writing, reading, journaling.
- Social Studies: use heart rate zones to empathize with sports and fitness figures, especially current health and fitness events.
- Science: how our mind-body connection works for calming and excitement, learning the stress response, physiological adaptation and heart health.

According to Darrell Salmi⁵, veteran Stillwater (Minnesota) high school, physical education is perfect for SEL as he explains, “Recess is for fun, training classes are for fitness, but physical education is different. Physical education is just that - education to learn about the physical and emotional connections with social self-regulation.” Salmi continues to explain that TPS, think-pair-share, is but one example for physical educators to use SEL as they allow students time to *think* about their social and emotional experiences, *pair* with a partner, and then *share* through discussion with the partner. The SEL lessons that follow include discussion prompts for TPS activities.

Think, pair and share prompt cards




Time to jump into the five activities that match the five competencies of SEL which are described previously with five Elements. Each of these activities is a way to use your Heart Zones technology - wearables, devices, applications, and zone methods to provide you with both the evidence and student engagement and motivation.

⁴ Co-authored by Sally Edwards and Deb Van Klein, *Smart PE: Lessons Using Heart Rate Monitors and Step Trackers for Physical Education* is [available here](https://www.heartzones.com/product/heart-zones-smart-pe-book/) <https://www.heartzones.com/product/heart-zones-smart-pe-book/>


⁵ 2018 Minnesota high school PE Teacher of the Year

#1 SEL Competency Activities: AMBIENT HEART RATE

Social and Emotional Learning Using Heart Zones			
	5 Competencies	5 Elements	5 Activities
	1. Self-Awareness	<ul style="list-style-type: none"> • Identify Emotions • Expressing Emotions • Self-Esteem • Self-Confidence • Mindfulness 	Ambient heart rate


Definition:	The number of beats per minute when you are awake but in a sedentary and stationary position. Norms for 18 and under are 60-100 bpm.		
Goals:	Calm the heart and get prepared to learn		
SEL Competency:	Mindfulness		
Student Knowledge:	What is the definition of ambient heart rate?	What contributes to lower and higher ambient heart rates?	What are the healthy norms for ambient heart rate?
Key Terms for Learner:	Internal stress	External stress	Ambient heart rate
Activity:	<ul style="list-style-type: none"> • Students turn on their Heart Zones heart rate sensor. • Students take a sitting position and remain quiet throughout. • Student use mindfulness techniques as a way to lower their heart rate via biofeedback. • Every 1 minute they note or write their heart rate number. • After 5 recordings they average or estimate their ambient heart rate number. • Students then reflect if the number is higher or lower and if so why. <p><i>Suggestion: Instructor plays quiet music and leads relaxation breathing activity.</i></p>		
Norms:	> 100 bpm High stress level- caution 90-100 bpm Elevated stress level for most 70-90 bpm Relatively normal value > 70 bpm Healthy value		
Think-Share-Pair Prompts:	<ul style="list-style-type: none"> • Why is a lower ambient heart rate better than a higher number? • How do you use self-regulation to manage your ambient heart rate? 		

#2 SEL Competency: Self-Management Activity – RECOVERY HEART RATE⁶

	2. Self Management	<ul style="list-style-type: none"> • Managing Stress • Resilience • Managing impulses • Self-motivation • Managing emotions 	Recovery heart rate
Definition:	The number of beats per minute that your heart rate drops in one or two minutes. There are two types of recovery heart rate: (1) Total recovery with a complete cessation of movement and (2) Active recovery when participant continues to move but a a very low and slow effort.		
Goals:	Students learn to identify individual recovery heart rate and determine the trend during a workout activity or between one. If recovery heart rate improves, it is one demonstration that the body is more resilient to fatigue and has enhanced endurance.		
SEL Competency:	Resilience		
Student Knowledge:	Learn how to self-regulate heart rate when asked to recover from an activity	Know the differences between the two types of recovery	Perform a recovery heart rate assessment within and at the end of a physical activity.
Key Terms for Learner:	Total recovery	Active recovery	Recovery heart rate
Activity:	<ul style="list-style-type: none"> • Instructor launches the Heart Zones Move app. Student turn on their sensor. • Students do a cardio activity that increases heart rate circuits into the Yellow or higher heart rate zones. • Instructor flips tiles to the “Recovery Heart Rate” display to start the measurement. • Student stops activity. Start a 1-minute <u>active recovery</u> by slowly walking. • Instructor explains the Recovery heart rate formula: $\frac{\text{exercise heart rate} - \text{one-minute heart rate}}{\text{exercise heart rate}} \text{ minus } \text{one-minute heart rate} = \text{recovery heart rate bpm}$ • The higher the value the higher the recovery • The percentage recovery heart rate is as valuable as the absolute number. • Do a recovery heart rate assessment frequently observing the trend. 		
Norms:	<ul style="list-style-type: none"> > Extreme caution 11-20 Low but acceptable 21-40 Good > 41 Excellent Know the differences between the two types of recovery		
Think-Share-Pair Prompts:	<ul style="list-style-type: none"> • What can you do to improve your recovery heart rate number? • What affects your ability to recover in a healthy way? 		


⁶ For more details refer to title *Smart PE: Lessons Using Heart Rate Monitors and Step Trackers*, Part 4. Assessments BD Lesson: Ambient Heart Rate Assessment

#3 SEL Competency: Self-Management Activity – Cooperative Challenges ⁷

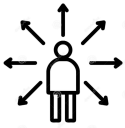

	3. Social Awareness		<ul style="list-style-type: none"> • Respecting Differences • Social Engagement • Understanding Diversity • Responsible Engagement • Being Empathetic 	Cooperative Challenges and Cooperative Play
Definition:	<p>Each student’s heart rate response to an emotional or physical activity is different. Cooperative play is a play-based learning approach that helps students develop cognitive, social, emotional and physical skills in an active learning environment. It is often seen as the opposite of solitary play.</p>			
Goals:	<p>Students perform different activities (games) that demonstrate the absolute heart rate number varies while doing the same activity</p>			
SEL Competency:	<p>Respecting Differences</p>			
Student Knowledge:	<p>Different activities raise and lower heart rate differently between the partners</p>	<p>Learn strategies of how to increase and lower the effort eliciting higher and lower heart rate results.</p>	<p>Learn to self-regulate by managing their heart rates.</p>	
Key Terms for Learner:	<p>Easy-Moderate-Hard effort</p>	<p>Heart rate zones</p>		
Activity:	<ul style="list-style-type: none"> • Students turn on their Heart Zones heart rate sensor. • Students are organized in partners of two. • Students do an Ambient heart rate (see Comment #1) and share and contrast their differences. • Either a game of your choice as (Grades K-6) or circuits (Grades 7-12) are selected such as Mirror Mirror on the Wall (Smart PE Lesson #11), which is then explained. • The two partners interact as they participate in the game or circuit comparing their heart rate numbers as they do the activity at the same effort and elapsed time. • At the end of the activity, students explain to the class and share with each other why some students have a higher heart rate for the same effort as other students. 			
Think-Share-Pair Prompts:	<ul style="list-style-type: none"> • Why is every student’s heart rate different regardless of fitness level? • Is a higher heart rate better than a lower one or does it matter? 			

⁷ Mirror Mirror on the Wall. Lesson #11 in title *Smart PE: Lessons Using Heart Rate Monitors and Step Trackers*, Part 4. Assessments BD Lesson: Ambient Heart Rate Assessment

#4 SEL Competency: Relationship Skills – Cooperative Teamwork

	4. Relationship Skills	<ul style="list-style-type: none"> • Effectively Communicating • Actively Listening • Working through Conflicts • Cooperative Teamwork • Respecting Skill Differences 	Collaboration Physical Activities
Definition:	Cooperative teamwork is the ability to work cooperatively within diverse teams, to achieve the desired goals. It includes the desire and ability to understand, play and respond effectively to other people from diverse backgrounds with diverse views.		
Goals:	Students learn to collaborate without the need for winning or losing but for the spirit of teamwork as they are aware of their effort as measured by percent of MVPA, moderate to vigorous physical activity.		
SEL Competency:	Cooperative teamwork		
Student Knowledge:	Self-regulate physical effort	Learn different energy and effort zones by colors	Spirit of working together in diverse situations to achieve pre-determined goals
Key Terms for Learner:	Easy-Moderate-Vigorous effort	Blue zone = Easy Yellow zone = Moderate Red zone = Vigorous	MVPA = Moderate to Vigorous Physical Education
<div> </div> <p>Activity: Grades K - 6: Builders and Bulldozers Grades 7-12: Bowling</p> <div> </div> <div> </div>	<p>Grades K - 6: Builders and Bulldozers</p> <ul style="list-style-type: none"> • Students are assigned to one of two teams. • One team knocks over cones while the other team sets them upright. • Students are to start with 3 minutes in Blue zone, 3 minutes in the Yellow zone and 3 minutes in the Red Zone. • If age-appropriate, 1-minute recovery between each 3-minute effort level. <p>Grades 7-12: Bowling</p> <ul style="list-style-type: none"> • Students are assigned to a three person team with different rotating positions: (1) the bowler (2) the pinsetter (3) the scorekeeper. • Students start their heart rate sensor. • Students use three different levels of play: easy bowling in the Blue Zone, moderate bowling in the Yellow Zone, and vigorous bowling in the Red Zone. • Students determine which of the three positions consistently results in the highest heart rate number. • <i>Modify: Have the students skip, jump, hop, walk, and run as they move between the three different positions.</i> 		
Think-Share-Pair Prompts:	<ul style="list-style-type: none"> • Why is working out together as a team important? • Which the colored heart zones do you perform best and why? 		

#5 SEL Competency: Responsible Decision Making - PHYSICAL FITNESS GOAL SETTING

	5. Responsible Decision Making	<ul style="list-style-type: none"> • Leadership Skills • Recognizing Problems • Problem Solving • Critical Thinking • Setting Goals 	Physical Fitness Goal Setting
Definition:	The process of what you or the team want to achieve over a particular period that is planned, clear, and trackable.		
Goals:	Students learn to set S.M.A.R.T. goals that are s pecific, m easurable, a chievable, r elevant, and t imely.		
SEL Competency:	Goal Setting		
Student Knowledge:	Learn to use different wearable devices	Apply S.M.A.R.T goals to their health and fitness	
Key Terms for Learner:	Step tracking	Fitness Planner	S.M.A.R.T. goals
Activity: Grades K - 6: Step Tracking  Grades 7-12: Portfolio Fitness Planner	<p>Grades K - 6: Step Tracking</p> <ul style="list-style-type: none"> • Teacher chooses a measured route like a track. • Students put on a smart step tracker. • Students estimate and track how far they can travel or how many steps it takes to: <ul style="list-style-type: none"> • Run the distance • Walk the distance • Skip the distance • Students set an improvement goal to improve how they individually can get fitter by following the 5 parts of S.M.A.R.T. goals <p>Grades 7-12: Student Portfolio Fitness Planner</p> <ul style="list-style-type: none"> • Teacher chooses contemporary and relevant cardio fitness activities. • Students develop a written plan that is one part of a student portfolio which they want to achieve within a certain period that meets the 5 parts of S.M.A.R.T. goals. <ul style="list-style-type: none"> • Two examples: (A) <i>"The Heart Zones 7 Healthy Heart Assessments"</i> available in Smart PE curriculum binder. (B) <i>The Kirkpatrick "Sub-Max Cardio Test"</i> a giant improvement over the Pacer Test. 		
Think-Share-Pair Prompts:	<ul style="list-style-type: none"> • What are 2 of your fitness goals and why are they important to you? • Why is measuring the number of steps you take important to your health? 		

Toolbox Suggestions:

Several veteran physical education teachers have provided suggestions to weave SEL into your Health and PE programs. By putting together your own HPE SEL Toolbox, you can further add strategies for SEL. Here are three examples:

- **Check-IN: Glenn Young⁸, Educational Change and Healthy Living Consultant**

As students first come to class, Glenn asks them individually, "How are YOU feeling today?" The answer leads them to gather near the light bulb color that matches these feelings as the warm-up activity. Glenn's quick SEL strategy is called the "4 Station SEL Check-In". This 5-minute strategy is based on the relationship that emotions drive behavior and readiness to learn.



- **Check-OUT: Darrell Salmi, Minnesota PE Teacher of the Year, Stillwater High School PE and coach in Stillwater, MN**

Creating a way for the participant to share their SEL experience after the class has concluded, Darrell Salmi developed the adjacent "Check Out" form. Darrell welcomes contact⁹ with him for additional information as he continues to develop SEL strategies for his students and faculty.

SEL Card	Last Name:					First Name:					Class Period:									
Date																				
Activity																				
How was your mood BEFORE your workout/activity?	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
How was your mood AFTER your workout/activity?	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
How was your energy level BEFORE your workout/activity?	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
How was your energy level AFTER your workout/activity?	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Did you enjoy the activity?	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Did you reach your goal for the day?	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Would you like me to connect with you to talk about anything?	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Cardio Card	Last Name:					First Name:					Class Period:									
Total Exercise Time																				
MVPA % Achieved																				
TOTAL FIT POINTS																				
Did you reach the goal?																				
Warmup & Low Intensity (Blue & Green Zones)																				
Aerobic Exercise Time (Yellow & Orange Zones)																				
Anaerobic Exercise Time (Red Zone)																				
RECOVERY HEART RATE <small>*not used every class</small>																				

Moderate to Vigorous Activity (MVPA): It is recommended you reach this level of intensity for a minimum of 50% or more of your class time. Increased MVPA time provides you with a better opportunity to achieve the health benefits associated with an active lifestyle.



- **Green Exercise: Ted Temertzoglou¹⁰, veteran Canadian PE Teacher**

Green Exercise: The Gateway to SEL, by Health & Physical Education Practitioner Ted Temertzoglou, is a whole-school approach to SEL. It is a self-paced 3-hour professional development course with over 20 downloadable resources that align with CASEL's framework and Dr. Halas and Zaretta Hammond's work on Culturally Responsive Classrooms. Ted provides school-wide physical activities as a simple strategic solution for teachers that integrate movement, numeracy, literacy and science standards to help grades 4-8 generalist teachers. Teachers will earn a certificate upon completion of the course.

Technology equipment is a lifesaver for your SEL solution. Technology provides proof, and evidence that your PE and health program is meeting the SHAPE National Standards and achieving your lesson plan goals. There is a plethora of ed-tech now available for you. And, federal grant money is

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⁹ salmid@stillwater.k12.mn.us

¹⁰ ted@lifeisathletic.com or visit or visit <https://bit.ly/3uULvDv>

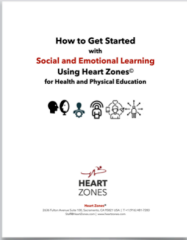
provided for technology purchases which are covered under the CARES Act ¹¹. If you ask for it persuasively with persistence, you should receive it. Yes, simply “asking” is the first and possibly only step that your admin may require.

Heart Zones

Heart Zones Starter Pack


1

Booklet




2

5 Heart Rate Sensors




3

Bridge Transceiver



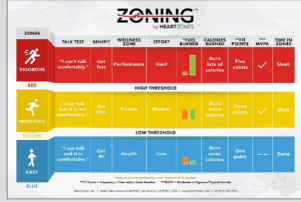
4

Software License



5


ZONING Wall Charts



SEL Starter Pack only \$1,948

Includes:

- Five Blink 3.0 Plus Armbands
- ZONING wall chart
- 4 sets of additional straps
- Heart Zones Bridge
- Plastic storage case
- Heart Zones Move Software
- Installation Training



*Pricing on additional sensors such as a 10 Pack or 20 Pack available upon request,
visit www.Heartzones.com

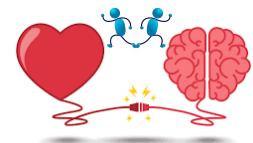
The most crucial ed-tech that you can request is mobile and wearable devices (inside and outside applications), easy and fast to deploy, individualize and personalize for all students, and that engages and motivates students. Heart Zones has specially developed a one-time purchase with a lifetime license fee for Heart Zones Move, for all levels of instruction. You can use step trackers for lower grades that measure and track “movement” or steps and you can then progress your students in the higher grades to heart rate sensors that measure intensity or effort. Here’s what Heart Zones recommends:

For More Information Contact:

Joe Gooden, Heart Zones Vice President and Director of School HPE

Heart Zones®

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¹¹ <https://www.heartzones.com/?s=Cares+Act>