

**Appendix B: Lesson plan alignment with SHAPE America Instructional Framework for Fitness Education for Grades 9-12**

The following tables articulate how the *Fitness for Life* textbook and *Teacher's Guide* lesson plans address the SHAPE Instructional Framework for Fitness Education for grades 9 through 12. Each fitness education high school outcome is listed. In the Textbook column, chapters and lessons that meet each outcome are listed. In the Teacher's Guide Lesson Plan column, the numbers of the specific lesson plans that meet the outcome are listed.

|   | <b>Textbook Chapters/<br/>Lessons</b> | <b>Teacher's Guide Lesson Plan #</b>   |
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| <b>1 Technique: Demonstrates competency in techniques needed to perform a variety of moderate to vigorous physical activities.</b>      |                                       |  |
| 1.1 Technique in developing cardiovascular fitness.   |                                       |  |
| 1.1a Apply rates of perceived exertion (RPE) & pacing.  |                                       | 1.2, 1.5, 2.2, 2.5, 3.2, 3.4, 6.2, 6.5, 7.2, 7.4, 8.5, 9.2, 9.4, 10.5, 14.4, 14.5, 21.5    |
| 1.1b Adjust pacing to keep HR in the target zone for extended periods of time.  |                                       | 3.2, 3.4, 6.4, 7.4, 16.5   |
| 1.2 Technique when developing muscle strength and endurance activities.   |                                       |  |
| 1.2a Apply basic musculoskeletal techniques necessary to participate in strength and endurance activities.                              | 11.1, 20.1                            | 1.2, 1.4, 1.5, 3.4, 5.5, 9.2, 10.2, 10.4, 10.5, 11.1, 11.4, 11.5, 14.4, 14.5, 15.2, 20.1   |
| 1.2b Demonstrate proper machine adjustment and techniques on resistance training machines, and compare machines to free-weight lifting. |                                       | 10.4, 10.5, 11.5   |
| 1.3 Technique in developing flexibility.  |                                       |  |
| 1.3a Demonstrate proper alignment while stretching.   |                                       | 1.5, 8.5, 11.4, 12.2, 12.4, 12.5,  |
| 1.3b Demonstrate variety of appropriate stretching techniques (static, PNF, active isolated and passive).                               |                                       | 8.5, 12.2, 12.4, 15.2  |
| 1.4 Safety techniques.  |                                       |  |
| 1.4a Hold oneself and others responsible for following safety practices.  |                                       | 3.4, 4.1, 5.2, 9.4, 10.4, 10.5, 11.4, 11.5, 12.2, 12.5, 20.2, 20.4, 20.5, 21.2, 21.4, 21.5 |

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| 1.4b Anticipate potentially dangerous consequences of participating in activities and contribute to the development and maintenance of rules and equipment use that provide for safe participation in physical activities.  | 9.1, 10.2, 12.2 | 2.2, 4.1, 9.1, 10.3, 12.3, |
| 1.4c Differentiate among the three types of heat illnesses associated with fluid loss (heat cramps, heat exhaustion and heat stroke) and their symptoms. Also, identify the appropriate prevention and first aid responses. | 4.1             | 4.1, 8.2,                  |
| 1.4d Identify issues when exercising in the cold (e.g., frostbite, hypothermia) and the appropriate prevention and first aid responses.   | 4.1             | 4.1, 4.4, 8.2, 8.4,        |
| 1.4e Obtain certifications for first aid, CPR and automated external defibrillator (AED).   | 18.1            | 18.1                       |
| 1.4f Understand how to access community resources during an emergency.  | 9.1             | 9.1                        |

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| <b>2 Knowledge: Demonstrates understanding of fitness concepts, principles, strategies and individual differences needed to participate and maintain a health-enhancing level of physical fitness.</b> |  |  |
| 2.1 Benefits of physical activity/dangers of physical inactivity.  |  |  |
| 2.1a Compare & contrast the health-related benefits of various physical activities (e.g., improved cognition, increased strength & flexibility, cardiovascular endurance, social interaction).         | 2.1, 7.1, 7.2, 8.1, 10.1, 10.2, 11.1, 12.1 | 1.2, 1.5, 2.1, 7.1, 7.3, 8.1, 10.1, 10.2, 10.3, 11.1, 12.1, 21.3 |
| 2.1b Explain the interrelationship of physical activity to physiological responses and physical, mental/ intellectual, emotional and social benefits.  | 6.2  | 6.3,   |
| 2.1c Analyze the benefits of a healthy lifestyle and the consequences of poor nutrition and inactivity.  | 2.1, 11.1                                  | 2.1, 11.1  |
| 2.2 Basic anatomy & physiology.  |  |  |
| 2.2a Predict the impact of physical activity on the functioning of body systems.   | 8.1, 10.2, 13.2, 18.1                      | 1.4, 5.5, 8.1, 10.3, 13.3, 18.1                                  |
| 2.2b Discuss the importance of balancing the development of strength in opposing muscle groups.  | 11.1, 12.1                                 | 11.1, 12.1, 19.4   |
| 2.2c Apply the concepts of concentric, eccentric and isometric contraction to the use of major muscles in basic fitness activities.  | 10.1                                       | 10.1, 10.2, 10.5, 11.5   |
| 2.2d Analyze one's personal posture and identify needs for improvement.  | 11.1                                       | 11.1, 11.2, 19.4   |
| 2.3 Physiological responses to physical activity.  |  |  |
| 2.3a Analyze the long-term effects of regular participation in moderate to vigorous physical   | 2.1, 5.2, 7.2, 8.1,                        | 2.1, 5.3, 5.5, 6.4, 7.3, 8.1,                                    |

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| activity on the body systems (e.g., respiratory, cardiovascular, muscular, skeletal).  |   |   |
| 2.3b Identify personal physiological responses to physical activity.   | 10.1  | 1.2, 3.2, 7.2, 7.4, 7.5, 10.1,  |
| 2.3c Understand how and why adult patterns of physical activity participation change throughout life (i.e., identify the effects of age on the physiological response to physical activity). | 4.1   | 4.1,  |
| 2.3d Understand the energy forms used in aerobic and anaerobic activities.   |   | 9.1   |
| <b>2.4 Components of health-related fitness.</b>   |   |   |
| 2.4a Explain how each of the health-related fitness components is improved through the application of training principles.   | 7.1, 10.1, 10.2, 12.2   | 6.4, 7.1, 10.1, 10.3, 12.3,   |
| 2.4b Compare and contrast skill-related fitness with health-related fitness.   | 1.1, 13.2   | 13.3, 21.5  |
| <b>2.5 Training principles (frequency, intensity, time, type, overload, specificity, progression) &amp; workout elements.</b>  |   |   |
| 2.5a Apply frequency, intensity, time and type to your workout.  | 6.1, 7.1, 7.2, 8.1, 8.2, 10.2, 11.1, 11.2, 12.1                               | 6.1, 7.1, 7.3, 7.5, 8.1, 8.3, 9.5, 10.2, 10.3, 10.5, 11.1, 11.3, 11.5, 12.1, 12.2, 12.5, 19.5   |
| 2.5b Employ an accurate working vocabulary related to fitness and wellness.  | 1.1, 1.2, 6.1, 6.2, 7.1, 10.1, 10.2, 12.1, 12.2, 13.1, 14.1, 14.2, 20.1, 20.2 | 1.1, 1.3, 6.1, 6.3, 7.1, 9.1, 10.1, 10.3, 10.4, 10.5, 11.4, 12.1, 12.2, 12.3, 13.1, 13.5, 14.1, 14.3, 18.4, 18.5, 20.1, 20.3, 20.4, 20.5, 21.1, 21.3, 21.5, |
| 2.5c Use available technology to analyze heart rate and recovery time; distinguish among the three parts of a workout (warm-up, workout, cool-down) on a heart rate graph.                   | 8.1, 8.2  | 6.4, 8.1, 8.3,  |
| <b>2.6 Factors that influence physical activity choices.</b>   |   |   |
| 2.6a Compare & contrast personal characteristics and activity preferences, including changes over the lifespan.  | 7.2, 13.1   | 7.3, 9.1, 13.1, 21.2  |
| 2.6b Explain immediate & long-term impacts of fitness decisions to the individual, family and community.   | 2.1, 5.2  | 2.1, 2.5, 5.3   |
| 2.6c Evaluate the influence of environment, public   | 4.1, 7.2  | 4.1, 7.3  |

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| health policies, government regulations, research and medical advances on personal & community health promotion and disease prevention. |      |      |
| 2.6d Describe ways in which social networking and/or other technology can influence personal fitness behaviors positively.              | 11.2 | 11.3 |

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| <b>3 Physical Activity: Participates regularly in fitness enhancing physical activity</b>  |                       |   |
| 3.1 Physical activity participation (e.g., aerobic, muscle strength & endurance, bone strength, flexibility, enjoyment/social/personal meaning).   |                       |   |
| 3.1a Meet CDC guidelines of 60 or more minutes a day of moderate- or vigorous-intensity aerobic physical activity, muscle- and bone-strengthening activity at least three days a week, respectively. |                       | 6.5, 7.2, 7.4, 10.2, 11.4, 13.2,          |
| 3.1b Participate regularly in flexibility exercises to target specific muscles after they are warmed up.   | 6.2                   | 2.2, 4.1, 6.2, 6.3, 8.5, 12.2, 12.5, 15.2 |
| 3.1c Explore & participate in and out of school in daily health-enhancing & personally rewarding physical activities.  |                       | 7.2, 7.5, 17.2, 19.2, 20.2, 21.1          |
| 3.1d Choose to engage in lifestyle activities (e.g., use stairs, bike to school, gardening) that increase physical activity.   | 7.2                   | 7.3, 7.5                                  |
| 3.2 Create an individualized physical activity plan.   |                       |   |
|  | 7.2, 12.2, 15.1, 18.2 | 7.3, 12.3, 15.1, 18.3                     |
| 3.3 Self-monitor physical activity and adhere to a physical activity plan.   |                       |   |
| 3.3a Use available technology (e.g., heart rate monitor, pedo- meter) to self- monitor. Develop a personalized physical activity plan to address deficiencies in physical activity level.            | 11.2                  | 9.2, 9.4, 9.5, 11.3                       |

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| <b>4 Health-Related Fitness: Achieve and maintain a health-enhancing level of health-related fitness</b>   |                  |   |
| 4.1 Physical fitness assessment (including self-assessment) & analysis.  |                  |   |
| 4.1a Self-assess health-related fitness using FitnessGram® (e.g., muscle strength, muscle endurance, cardiovascular endurance, flexibility, body composition) and identify which scores fall in the healthy zone and which need improvement. |                  | 2.4, 3.4, 4.3, 6.4, 8.4, 10.4, 12.4, 13.4, 15.4 |
| 4.1b Use technology (e.g., heart rate monitor, electrical impedance) to assess physical fitness.   | 8.1              | 8.1, 15.4                                       |
| 4.1c Identify areas in need of improvement to meet personal goals (e.g., run in a 10K race).   | 11.2, 12.2, 15.1 | 3.1, 3.4, 4.3, 7.4, 11.2, 11.3,                 |

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|   |                 | 12.3, 12.4,<br>13.4, 15.1,<br>15.4, 21.5  |
| 4.1d Relate personal performance on specific fitness measures to criterion- referenced standards.   | 11.2            | 7.4, 3.4, 11.3,<br>12.4, 15.4   |
| <b>4.2 Setting goals &amp; create a fitness improvement plan.</b>   |                 |   |
| 4.2a Use available technology to evaluate personal physical fitness assessment results and develop intermediate and long-term fitness plans.  | 6.2             | 6.3, 8.4,   |
| 4.2b Design & implement a personal fitness plan, addressing personal goals that incorporates target heart rate zone [THRZ], FITT and basic training principles (e.g., overload, specificity, progression) that affect physical fitness. | 3.1, 11.2, 15.1 | 2.4, 3.1, 7.2,<br>11.3, 11.4,<br>12.2, 15.1,<br>15.2  |
| 4.2c Create a plan, train for and participate in a community event (e.g., 5K, triathlon, swimming event, cycling event) that shows improvement in cardiovascular endurance.   | 21.1            | 21.1, 21.2  |
| <b>4.3 Work to improve fitness components.</b>  |                 |   |
| 4.3a Participate in targeted activities based on age, gender and personal fitness to improve specific fitness component.  | 3.1, 3.2        | 3.1, 3.3, 3.4,<br>4.3, 8.4, 8.5,<br>11.5, 12.5,<br>14.2, 14.4,<br>14.5, 15.5,<br>16.2, 16.4,<br>16.5, 18.4,<br>18.5, 19.2 |
| <b>4.4 Self-monitor &amp; adjust plan.</b>  |                 |   |
| 4.4a Monitor improvement on the components of fitness using available technology, and make adjustments as needed.   |                 | 6.4, 6.5, 8.2,<br>8.4, 13.2, 15.4,<br>15.5, 19.2  |
| <b>4.5 Achieve goals.</b>   |                 |   |
| 4.5a Achieve the healthy zone in each of the FitnessGram <sup>®</sup> assessment items.   |                 | 2.4, 15.4   |

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| <b>5 Responsible Personal and Social Behaviors: Exhibit responsible personal and social behaviors in physical activity settings.</b>      |          |   |
| <b>5.1 Social interaction/respecting differences.</b>   |          |   |
| 5.1a Invite & participate with others in physical activity regardless of varying skills, abilities, limitations and cultural backgrounds. | 5.1      | 3.5, 5.1, 5.2,<br>5.4, 9.5, 12.4,<br>13.5, 20.2,<br>20.4, 20.5,<br>21.2, 21.4 |
| 5.1b Analyze the influences of sport participation on developing appreciation of cultural, ethnic, gender and physical diversity.         | 3.2, 5.1 | 3.3, 5.1  |
| <b>5.2 Self-management.</b>   |          |   |

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| 5.2a Employ effective self-management skills to analyze barriers and appropriately modify physical activity pattern, as needed.   | 2.2, 5.2, 7.2, 15.2, 17.2, 13.2, 20.2 | 2.3, 4.1, 5.3, 7.3, 9.4, 13.3, 15.3, 17.3, 19.2, 20.3, 21.3, 21.4 |
| 5.2b Analyze how personal choices can affect short- and long-term fitness.  | 11.2, 14.2, 15.2                      | 4.1, 11.3, 14.3, 15.3   |
| 5.2c Accept responsibility for improving one's own levels of physical activity and fitness.   | 7.2, 12.2                             | 7.3, 10.5, 11.5, 12.2, 12.3, 12.5, 15.5, 19.2                     |
| <b>5.3 Personal strategies to manage body weight.</b>   |                                       |   |
| 5.3a Identify & apply personalized strategies to ensure adequate sleep, apply food choices or physical activity enhancements, based on a personal log, that would create energy balance, resulting in healthy weight. | 14.1, 16.1                            | 2.2, 6.2, 14.1, 16.1  |
| 5.3b Identify the role of physical activity in increasing basal metabolic rate in improving energy balance.   | 3.2, 6.2, 14.2                        | 3.3, 6.3, 8.5, 14.2, 14.3,  |
| 5.3c Use available technology & social networking to apply strategies as needed for seeking weight-management help.   | 16.1                                  | 16.1  |
| <b>5.4 Stress management.</b>   |                                       |   |
| 5.4a Journal situations & behaviors that influence stress and the effectiveness of physical strategies used to relieve it.  | 17.1                                  | 17.1, 17.2, 17.4  |
| 5.4b Research physical activity & fitness effectiveness in coping with & overcoming feelings of stress.   | 17.2                                  | 17.2, 17.3, 17.4  |
| 5.4c Practice strategies for dealing with stress, such as deep breathing, guided visualization and aerobic exercise.  | 17.2                                  | 17.2, 17.3, 17.5  |

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| <b>6 Values &amp; Advocates: Value fitness-enhancing physical activity for disease prevention, enjoyment, challenge, self-expression, self-efficacy and/or social interaction, and allocate energies toward the production of health environments.</b> |                                       |   |
| <b>6.1 Value physical activity.</b>  |                                       |   |
| 6.1a Analyze the roles of attitude, motivation, self-expression, challenge, social interaction and determination in achieving personal satisfaction from challenging physical activities.  | 2.1, 5.1, 8.2, 12.2, 13.2, 15.2, 20.2 | 2.1, 2.5, 3.5, 6.5, 8.3, 12.3, 13.3, 15.3, 20.3, 21.1 |
| 6.1b Value the way in which becoming physically fit empowers one.  | 2.2, 6.2, 8.2,                        | 2.3, 2.5, 6.3, 8.3, 18.2, 21.4                        |
| <b>6.2 Advocacy: promoting healthy behaviors</b>   |                                       |   |
| 6.2a Independently and/or cooperatively devise & implement a strategic plan that promotes & communicates appropriate health or fitness issues or concerns to a target audience.  | 18.1, 18.2                            | 5.1, 18.1, 18.3                                       |

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| 6.2b Apply techniques for funding school, community and workplace physical activity programs.   | 18.2 | 18.3, 21.4 |
| 6.2c Use available technology & social networking to coordinate with others to advocate for improving personal, family & community fitness. | 18.2 | 18.3       |
| 6.2d Act as a positive role model for fitness in community.   |      | 19.5       |
| <b>6.3 Fitness careers.</b>   |      |            |
| 6.3a Analyze health- and fitness-related careers, and evaluate one's own compatibility.   | 1.2  | 1.3, 21.2  |
| 6.3b Journal professional responsibilities & opportunities for employment in professions associated with physical activity.                 |      | 21.2       |
| <b>6.4 Occupational fitness needs.</b>  |      |            |
| 6.4a Create a fitness/wellness plan for sedentary careers that one could use to maintain health-related fitness.                            |      | 19.5       |
| 6.4b Analyze components of health- and skill-related fitness necessary for successful and safe performance in various occupations.          | 11.1 | 11.1       |
| 6.4c Identify questions to ask potential employers about their support of healthy lifestyles.   | 21.2 | 21.3       |

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| <b>7 Nutrition: Strive to maintain healthy diet through knowledge, planning and regular monitoring.</b>  |            |                        |
| <b>7.1 Basic nutrition and benefits of a healthy diet.</b>   |            |                        |
| 7.1a Analyze the importance of nutrition in health and well-being.   | 16.1       | 2.2, 16.1              |
| 7.1b Assess the benefits of consuming adequate amounts of vitamins, minerals, fiber, folic acid and water, and identify foods that contain high amounts of each. | 16.1       | 16.1                   |
| 7.1c Describe how nutrients are released, absorbed, used & excreted by the body.   | 16.1       | 16.1, 16.4             |
| 7.1d Discuss the effects of supplements on the body.   | 11.2       | 11.3                   |
| <b>7.2 Healthy diet recommendations.</b>   |            |                        |
| 7.2a Describe federal dietary guidelines, food groups, nutrients and serving sizes for healthy eating habits.  | 16.1, 16.2 | 16.1, 16.2, 16.3, 16.4 |
| 7.2b Summarize the effects of hydration & dehydration on physical & mental performance, the risks of dehydration, and how to maintain hydration.                 | 16.1       | 16.1, 16.4             |
| 7.2c Know how to use body weight and urine color to monitor hydration status.  | 16.2       | 16.3                   |
| 7.2d Draw conclusions from food labels for calories, nutrient density, types of fats & empty calories, and makes recommendations on healthy choices.             | 16.2       | 16.3                   |
| 7.2e Differentiate among different eating disorders and the resulting symptoms & effects on healthy  | 14.1       | 14.1                   |

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| growth & development.   |      |            |
| 7.2f Discuss psychological implications associated with eating disorders.   | 14.1 | 14.1       |
| 7.2g Identify resources for people with eating disorders.   |      | 14.1       |
| <b>7.3 Diet assessment.</b>   |      |            |
| 7.3a Use available technology to assess & analyze personal nutrition needs, preferences & practices.  | 16.1 | 16.1, 16.4 |
| 7.3b Design a personal nutrition log that documents food intake, calories consumed, energy expended through physical activity and nutrition needs, and analyze the results. | 16.1 | 16.1       |
| <b>7.4 Plan and maintain a healthy diet.</b>  |      |            |
| 7.4a Set a personal goal based on a dietary analysis to enhance health, and track progress toward the goal.   | 16.1 | 16.1, 16.4 |
| 7.4b Describe how to adjust one's diet to accommodate changing levels of activity or to meet one's nutrition needs.   | 16.1 | 16.1       |

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| <b>8 Consumerism: Access and evaluate fitness information, facilities, products, and services.</b>                          |                  |                  |
| 8.1 Differentiate between fact and fiction regarding fitness products.  |                  |                  |
| 8.1a Use technology to distinguish between facts & myths regarding nutrition practices & products and physical performance. | 11.2, 19.1, 19.2 | 11.3, 19.1, 19.3 |
| 8.1b Analyze advertised diet plans for feasibility, caloric intake and promotion of physical activity.                      | 19.1             | 19.1             |
| 8.1c Distinguish between fact and fiction about weight control.   | 16.1, 19.1       | 16.1, 19.1       |
| <b>8.2 Make good decisions about consumer products.</b>   |                  |                  |
| 8.2a Make informed decisions about physical fitness products and programs.  | 19.1, 19.2       | 19.1, 19.3, 19.5 |