

# Physical Education: Using AI to Enhance Fitness Routines

Why?	
<p>The purpose of this lesson is to empower high school students with the skills to leverage technology, specifically AI, to enhance their physical fitness routines. By engaging in creating a tailored warm-up routine with AI assistance, participating in a mile run focused on building endurance, and subsequently reflecting on the experience, students will not only improve their fitness abilities but also develop the capacity to effectively collaborate with AI tools while recognizing the importance of personal knowledge and critical thinking in optimizing their overall health and fitness journey.</p>	
Materials Needed	Time needed
<ul style="list-style-type: none"> <li>• Computers or devices with internet access</li> <li>• Writing materials (notebooks, pens)</li> <li>• Optional: fitness trackers or apps</li> <li>• Safety equipment and first aid supplies</li> <li>• Printed warm-up instructions and lesson overview</li> <li>• Timers or stopwatches</li> </ul>	<p>Approximately 1 hour, 15 minutes</p>
Objectives	
<ul style="list-style-type: none"> <li>• Collaborate with ChatGPT to design a personalized 10-minute warm-up focused on enhancing endurance for a mile run.</li> <li>• Communicate physical attributes to create a custom warm-up routine through AI interaction.</li> <li>• Execute the tailored warm-up and mile run, reflecting on AI's fitness assistance and the interplay between AI guidance and personal knowledge.</li> </ul>	
Key Concepts & Vocabulary	
<ul style="list-style-type: none"> <li>• <b>Key Words</b> <ul style="list-style-type: none"> <li>○ AI Integration               <ul style="list-style-type: none"> <li>■ The process of incorporating artificial intelligence (AI) tools and technologies into a specific context or activity, in this case, fitness routines. AI integration involves using AI algorithms to enhance,</li> </ul> </li> </ul> </li> </ul>	

- automate, or assist tasks related to fitness planning, training, and tracking.
- Endurance Training
    - A form of physical training focused on improving the body's ability to sustain prolonged periods of exercise. Endurance training aims to enhance cardiovascular fitness, muscular endurance, and overall stamina through activities that promote aerobic capacity and resistance to fatigue.
  - Collaboration
    - Collaborative efforts involving multiple individuals working together to achieve a common goal. In the context of the lesson plan, collaboration refers to students working jointly with technology (AI) to design a warm-up routine and engaging in group discussions to share experiences and insights.
  - **Key Concepts**
    - Personalized Fitness Routines
      - Tailored exercise plans and activities designed to match an individual's specific physical strengths, weaknesses, preferences, and goals. The concept emphasizes the importance of creating fitness routines that address each person's unique needs and requirements.
    - Balancing AI and Personal Knowledge
      - Striking the right equilibrium between utilizing artificial intelligence (AI) tools for guidance and relying on one's own knowledge, experience, and critical thinking to make informed decisions. This concept underscores the idea that AI can provide valuable assistance, but human judgment and understanding remain essential.
    - Collaborative Learning and Engagement
      - A learning approach that involves active participation, sharing of ideas, and joint exploration of concepts among a group of learners. The key concept emphasizes the value of collective interactions, discussions, and shared experiences in enhancing learning outcomes and fostering a sense of community.

## Lesson

### **Introduction (5 minutes):**

1. Greet the students and provide a brief overview of the lesson's objectives.
2. Explain how technology, specifically AI, can be integrated into fitness routines to enhance endurance training.

### **Warm-Up Routine Design (20-30 minutes):**

1. Have students access their computers or devices and connect to the internet.
2. Instruct them to navigate to ChatGPT or a designated AI platform.

3. Explain that they will collaborate with ChatGPT to design a personalized 10-minute warm-up routine focusing on enhancing endurance for a mile run.
4. Students should communicate their physical strengths, weaknesses, mobility limitations, and health concerns to generate a tailored warm-up routine through AI interaction.
5. Emphasize the importance of accurate and detailed information to ensure an effective warm-up routine.

**Warm-Up Routine Execution (10 minutes):**

1. Distribute printed warm-up instructions to each student.
2. Lead the class in performing the designed warm-up routine, incorporating elements that address endurance improvement.
3. Ensure students follow proper form and technique during the warm-up exercises.

**Mile Run (10-15 minutes):**

1. Lead students to the designated running area (track or field).
2. Explain that the goal is to focus on enhancing endurance during the mile run rather than speed.
3. Provide instructions for marking the start and finish lines using measuring tools.
4. Use timers or stopwatches to time the mile run for each student.
5. Encourage students to pace themselves and complete the run to the best of their abilities.

**Reflection and Discussion (15-20 minutes):**

1. Return to the classroom or designated discussion area.
2. Have students record their reflections on the experience, including their feelings during the warm-up routine, mile run, and any improvements they noticed in endurance.
3. Initiate a group discussion about the use of AI in fitness routines:
  - Were students able to create effective warm-up routines with AI assistance?
  - How did the designed warm-up routine impact their performance during the mile run?
  - What are the benefits and limitations of utilizing AI for fitness guidance?
  - How does personal knowledge and critical thinking complement AI assistance in fitness training?

**Conclusion (5 minutes):**

1. Summarize the key takeaways from the discussion.
2. Reinforce the importance of both technological tools like AI and personal knowledge in achieving fitness goals.
3. Introduce the exit ticket: Distribute a small piece of paper to each student and ask them to briefly answer the following question: "In what specific ways did the AI-assisted warm-up routine enhance your mile run experience today?"
4. Collect the exit tickets before the end of the class.

## Supplemental Materials

- **Fitness Tracker Comparison:** Have students research and compare different fitness trackers or apps that can assist in monitoring endurance improvements and overall fitness progress. They can present their findings to the class, discussing features, benefits, and potential limitations.
- **AI in Everyday Life:** Ask students to identify other areas of life where AI integration is becoming prevalent (e.g., healthcare, transportation, entertainment). Have them create short presentations or reports on how AI is being utilized in these areas and its impact.
- **Fitness Workshop:** Organize a fitness workshop where students can learn about various types of workouts that focus on endurance training. Invite a fitness instructor to guide students through exercises and techniques to improve cardiovascular fitness.

## Sources to Learn More

- **Online Fitness Platforms:** Websites and apps like MyFitnessPal, Strava, and Fitbit offer resources for tracking fitness progress, sharing workout routines, and accessing community discussions related to endurance training.
- **AI and Health Articles:** Articles from reputable sources like Harvard Health Publishing, MIT Technology Review, and Forbes often discuss the integration of AI in health and fitness, providing insights into the potential benefits and considerations.
- **Fitness Journals:** Academic journals such as the "Journal of Sports Science & Medicine" and "Medicine & Science in Sports & Exercise" publish research articles on endurance training methods, physiological adaptations, and the role of technology.
- **TED Talks:** Search for TED Talks related to AI, fitness, and collaborative learning. These talks can provide inspiring insights and perspectives on the intersections between technology and physical well-being.
- **Fitness Apps and Blogs:** Explore fitness apps and blogs that focus on endurance training, running tips, and personalized workout routines. Websites like Runner's World and Verywell Fit often offer in-depth guides and advice.