Unit 2 - Being Proactive

Content Area: **Science**
Course(s): **Sports Medicine**
Time Period: **October**
Length: **8 Blocks**
Status: **Published**

Transfer Skills

Being Proactive: Preventing Injuries Through Proper Fitness Training

Enduring Understandings

Proper physical conditioning for sports participation should prepare the athlete for a high-level performance while helping prevent injuries inherent to that sport.

Year-round conditioning is essential in most sports in preventing injuries.

A nutritious diet consists of eating a variety of foods in amounts recommended in MyPyramid. A diet that meets those recommended amounts does not require supplementation.

Essential Questions

What are the classes of nutrients that provide the energy required for muscular work during activity and play a role in the function and maintenance of body tissue?

How can percentage of body fat be assessed and why is it important?

What are the essentials of a proper warm-up and a proper cooldown?

What are the various ways used to develop strength?

Content

Interval training, strength, power, endurance, hypertrophy, atrophy, isometric, isotonic, ballistic, dynamic, static, obesity, anemia, body composition

Skills

Examine the roles of the athletic trainer and the strength and conditioning coach in getting an athlete fit.

Identify the principles of conditioning.

Apply the concept of periodization and identify the various training periods in each phase.

Distinguish the different classes of nutrients and describe their major functions.

Assess the advantages and disadvantages of dietary supplements.

Resources

Text: Essentials of Athletic Injury Management Copyright: 2010

PBS LearningMedia

National Federation of State High School Associations: Sports Medicine Resources

Top 10 Most Common Sports Injuries (And How to Prevent Them!)

Assessments

Assessments:

Class Discussions

Q&A

Vocabulary Quiz

Insurance Form Quiz

Nutrients Assessment

Unit Test

Standards

HPE.2.1.12.B.1	Determine the relationship of nutrition and physical activity to weight loss, weight gain, and weight maintenance.
HPE.2.1.12.B.2	Compare and contrast the dietary trends and eating habits of adolescents and young adults in the United States and other countries.
HPE.2.1.12.B.CS1	Applying basic nutritional and fitness concepts to lifestyle behaviors impacts wellness.
SCI.9-12.1.5	Empirical evidence is needed to identify patterns.
SCI.9-12.2.4	Changes in systems may have various causes that may not have equal effects.
SCI.9-12.5.3	Energy cannot be created or destroyed—only moves between one place and another place, between objects and/or fields, or between systems.
SCI.9-12.SEP.1.a	Ask questions
SCI.9-12.SEP.1.a.2	that arise from examining models or a theory, to clarify and/or seek additional information and relationships.
SCI.9-12.SEP.3.b	Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly.
9-12.HS-LS1-5.5.1	Changes of energy and matter in a system can be described in terms of energy and matter flows into, out of, and within that system.
9-12.HS-LS1-6.5.1	Changes of energy and matter in a system can be described in terms of energy and matter flows into, out of, and within that system.
9-12.HS-LS1-3.7.1	Feedback (negative or positive) can stabilize or destabilize a system.
9-12.HS-LS1-2.LS1.A.1	Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level.