**High Plains Technology Center**

**Health Careers**

**Learning Activity Packet (LAP) for Physical Therapy Aide**

**Related unit of instruction:**

Exercise Physiology

**Approximate Completion time:**

15 hours

**Rationale for the Lap:**

This LAP is designed to help the student learn the physiology behind fitness and exercise through kinesiology and biomechanics. Students will obtain client information, test and evaluate current fitness using body fat testing, fitness assessments, as well as strength and conditioning tests. Students will also learn the concepts of nutrition and weight control.

**Criteria for successful completion:**

By the end of this LAP the student will

1. Read and turn in work sheet for Chapters 5 in *Sports Medicine Essentials, Core Concepts in Athletic Training & Fitness Instruction. 2nd Edition,* Jim Clover, Delmar Cengage Learning, 2007.
2. Pass the test for the chapter.

**Learning Objective:**

Physical Fitness Assessment Chapter 5

1. Define and correctly spell each of the key terms.
2. Assess the capacity for extension and flexibility of the lower back and hamstrings.
3. Assess cardiovascular endurance.
4. Assess upper body, abdominal and lower body strength.
5. Analyze the above assessments with respect to established fitness standards.
6. Measure body fat and make professional recommendations, based on those measurements, regarding weight ranges according to individual needs and goals.

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**Criteria for successful completion:**

By the end of this LAP the student will

1. Read and turn in work sheets for Chapters 7 and 8 in *Sports Medicine Essentials, Core Concepts in Athletic Training & Fitness Instruction. 2nd Edition,* Jim Clover, Delmar Cengage Learning, 2007.
2. Pass the tests for the chapters.

**Learning Objective:**

Physical Conditioning Chapter 7

1. Define and correctly spell each of the key terms.
2. Describe a flexibility program for a client.
3. Discuss the three major factors in weight training.
4. List the eight safety guidelines integral to any weight training program.
5. Explain the difference between isometric, isotonic and isokinetic exercises.
6. Describe how repetitions, sets and resistance work together to increase strength.
7. Explain how certain exercises work specific muscles or muscle groups.
8. Understand the concerns and benefits of cardiovascular conditioning.

Designing a Conditioning Program Chapter 8

1. Define and correctly spell each of the key terms.
2. Explain why it is important to keep each client’s physical condition and medical history in mind at all times during the training program.
3. List the foundational elements of fitness program design.
4. List the structural elements of a fitness program.
5. Explain how duration, intensity and frequency work together in the fitness program.
6. Discuss how to intensify a conditioning program using gradual steps.
7. Explain why it is important for clients to take responsibility for their own health.

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**Criteria for successful completion:**

By the end of this LAP the student will

1. Read and turn in work sheets for Chapters 19 and 20 in *Sports Medicine Essentials, Core Concepts in Athletic Training & Fitness Instruction. 2nd Edition,* Jim Clover, Delmar Cengage Learning, 2007.
2. Pass the tests for the chapters.

**Learning Objective:**

Environmental Conditions Chapter 19

1. Define and correctly spell each of the key terms.
2. Identify the signs and symptoms of conditions caused by exposure to extreme environments.
3. Describe methods to prevent or minimize the effects of environmental conditions.
4. Describe methods of handling emergencies associated with extreme environmental conditions.
5. Describe what to do during a thunderstorm.

Medical Conditions Chapter 20

1. Define and correctly spell each of the key terms.
2. Describe methods to prevent medical conditions from becoming emergencies.
3. Identify the signs and symptoms of medical conditions that require immediate treatment.
4. Describe methods of handling emergencies associated with preexisting medical conditions.