

# The **OPEN** Academic Language Project

Based on the Virginia Physical Education Standards of Learning

Academic Language Card Set

# GRADE TEN

Anatomical Basis of Movement



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# AEROBIC ACTIVITIES

(Noun)

Physical exercises of low to high intensity that increase the amount of oxygen used and delivered to the muscles for a sustained period of time.

*Suzie participated in aerobic activities to improve her cardiovascular health.*

(VA SOL 10.2)

# AEROBIC RESPIRATION

(Noun)

The energy pathway in which oxygen provides the chemical catalyst for the generation of energy. This system is associated with longer, more sustained forms of physical activity.

*When Chandler was jogging in the Halloween 5K, his body was using aerobic respiration to fuel his run.*

(VA SOL 10.2)

# AGONIST

(Noun)

A muscle whose contraction moves a part of the body directly; also known as a prime mover. Its contraction is regulated by a paired muscle known as an antagonist.

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*The agonist used in an arm curl is the biceps, while the triceps acts as the antagonist.*

(VA SOL 10.2)

# ANAEROBIC

(Adjective)

Concerning the energy pathway in which energy is generated without the use of oxygen. In humans, glycolysis is the main anaerobic metabolic pathway.

*When he was sprinting with the track team, Paul's body used the anaerobic energy system to supply quick energy to his muscles.*

(VA SOL 10.2)

# ANAEROBIC RESPIRATION

(Noun)

The energy pathway in which energy is generated without the use of oxygen. In humans, glycolysis is the main anaerobic metabolic pathway.

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*Glucose is a carbohydrate used as a fuel source during anaerobic respiration.*

(VA SOL 10.2)

# ANALYSIS

(Noun)

Detailed examination of the elements or structure of something, typically as a basis for discussion or interpretation.

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*Personal analysis of physical activity habits will help you create a comprehensive fitness plan.*

(VA SOL 10.2)

# ANTAGONIST

(Noun)

A muscle that opposes and regulates the actions of another muscle.

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*Linzy just learned that during an arm curl exercise, the triceps act as an antagonist to the biceps.*

(VA SOL 10.2)



# BLOOD PRESSURE

(Noun)

The pressure of the blood against the inner walls of the blood vessels, varying in different parts of the body during different phases of contraction of the heart and under different conditions of health, exertion, etc.

*The class learned that coronary artery disease can cause high blood pressure because blood flow is impeded by a buildup of plaque and a hardening of the arteries.*

*(VA SOL 10.2)*

# CONDITION

(Verb)

To train or exercise for  
a specific purpose.

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*Nolan worked to condition his core in  
order to improve his posture.*

*(VA SOL 10.2)*

# FAST- AND SLOW-TWITCH MUSCLE FIBERS

(Noun)

People have two general types of skeletal muscle fibers: slow-twitch (type I) and fast-twitch (type II). Slow-twitch muscles help enable feats of endurance such as distance running, while fast-twitch muscles fatigue faster but are used in powerful bursts of movements like sprinting.

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*Slow-twitch muscle fibers are most important during the majority of a 5k race, but at the end, your fast-twitch muscles help you sprint across the finish line.*  
(VA SOL 10.2)

# LACTIC ACID SYSTEM

(Verb)

An anaerobic energy system in which adenosine triphosphate (ATP) is manufactured from the breakdown of glucose to pyruvic acid in the muscle cells.

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*Dr. Curtis taught us that ATP-PC and the lactic acid system are part of anaerobic respiration.*

(VA SOL 10.2)

# PACING

(Verb)

To make a rate of movement constant in order to enable endurance, especially in stepping, walking, or running.

*Bill was pacing himself to run a 5K, so he did not begin his race by sprinting.*

(VA SOL 10.2)

# PROFICIENCY

(Noun)

A high degree of skill;  
mastery or expertise.

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*Tyler's proficiency in basketball made him a very tough opponent for even the best players in class.*

(VA SOL 10.2)

# **RATE OF PERCEIVED EXERTION (RPE)**

(Noun)

A way of measuring physical activity intensity level; a measurement of how hard you feel that your body is working during physical activity/exercise.

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*Evan was moderately tired after his bike ride, so he rated the workout as a 7 out of 10 on the RPE scale.*

(VA SOL 10.2)