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Module 1 - Applied Functional Science®

Tour Guide #1

Applied Functional Science® (5:03)
- Encourage Transformation
  - Empower Bodies
  - Enhance Minds
  - Enrich Spirits
- Common Denominator of Human Movement
- Pursuit of Truth
- Evidence-Based System for Analysis & Performance
- Context-Dependent
- Convergence of Sciences
  - Physical
  - Biological
  - Behavioral

Principles & Truths (10:51)
- Principles / Truths, Strategies, & Techniques
- Physical Sciences – Our World
  - Environment
  - Gravity & Ground Reaction Force
  - Mass & Momentum
- Biological Sciences – Our Body
  - Motion
  - Chain Reaction®
  - Proprioceptors
  - Muscles
  - Joints
  - Task
  - Specificity
  - Mobility / Stability
- Behavioral Sciences – Our Mind & Spirit
  - Success
  - Locus of Control
  - Encouragement
  - Empowerment
  - Relevant
  - Significant
- Confluence of Sciences for Principles / Truths, Strategies, & Techniques
The Functional Spectrum (6:28)

- Analyze Me, Help Me
  - Prepare for Anything, Enhance for Anything - Everything Movements
- Provide Context, Common Characteristics / Movements
- Common Denominator Movements / Fundamental Movements
  - Reach
  - Swing
  - Squat
  - Lunge
  - Step
  - Walk
  - Run
  - Jump
- Science Provides Truth for Context of Fundamental Movements
- Counterfeit Analogy - Study Truth
- Functional Movement Spectrum (PDF)

Physical Principles (8:08)

- How to Determine Non-Functional vs. Functional?
  - Non-Functional - Unnatural, Artificial, Counterfeit, Fake
  - Functional - Natural, Authentic, Genuine, Real
- Environment
  - Unnatural vs. Natural
  - Three-Dimensionality
- Gravity & Ground Reaction Force
  - Confused vs. Used
  - Importance of Being Upright
- Mass & Momentum
  - Neglected vs. Leveraged
  - Replicate Ability to Decelerate for Productivity

Biological Principles (28:29)

- Motion
  - 1-Dimensional vs. 3-Dimensional
  - Sagittal Plane, Frontal Plane, Transverse Plane
- Reaction
  - Link vs. Chain
  - Body Operates / Moves as Chain Reaction®; Hands, Feet, Eyes Drive Chain Reaction®
- Proprioceptors
• Inhibited vs. Facilitated
  • Motion Turns On Proprioceptors, Proprioceptors Turn On Muscles
• Muscles
  • Actor vs. Reactor
  • Eccentric, Econcentric, & Concentric; React to Movement Caused by Drivers
• Joints
  • Isolated vs. Integrated
  • Move / Function within System, Not Alone
• Task
  • Conscious Reaction vs. Subconscious Reaction
  • Conscious Tasks Facilitate Subconscious Reactions
• Specificity
  • Stagnation vs. Transformation
  • Transformational Zones – Specific to Activity & Imposed Demands; Get In to & Get Out of
• Mobility / Stability
  • Segregation vs. Combination
  • Mostability - Mobility & Stability Combined; Flexibility Concurrent with Strength

**Behavioral Principles** (12:11)

• Behavioral Drivers
  • Do Things, Not Do Things
  • Facilitate Movement, Inhibit Movement
  • Framework of Human Movement & Heart of Human Movement
• Success & Encouragement
  • Build Upon Success (Not Failures)
  • Power of Encouragement (Not Discouragement)
• Locus of Control & Empowerment
  • Internal Locus of Control (Not External)
  • Empowerment of Inclusion (Not Judging)
• Relevant & Significant
  • Two-Way Relevance (You to Me & Me to You)
  • Mutual Significance (You to Me & Me to You)
• Behavioral Drivers (PDF)
Module 3 - PST Process

PST Process (14:41)
• Power of Applied Functional Science® = Power of PST Process
  o Principles – Truths
  o Strategies – Transformed
  o Techniques – Analysis, Performance, Rehabilitation, Training
• PST Process (PDF)
• Functional Spectrum – Undeniable Truths to Human Function
  o Gravity & Motions for Free; Position for Authenticity
  o 3D Motion & Matrices
  o Success & Prioritization
• Functional Spectrum
  o Gaposis – Between Non-Functional & Functional
  o Use Spectrum to Challenge
• Confidence & Competence

Examples of Gaposis (32:18)
• Analyzing Knee
  o Isokinetic Knee Machine
  o Functional Spectrum – Litmus Test
• Analyzing Trunk / Core
  o Push-Up, Rotary Stability, Plank
  o Functional Spectrum – Litmus Test
• Analyzing Flexibility
  o Sit & Reach, Straight Leg Raise
  o Functional Spectrum – Litmus Test
• Analyzing Joint Movements
  o Isolated Mobility
  o Functional Spectrum – Litmus Test
• Analyzing Abdominals
  o Sit-Ups, Isometric Leg-Lowering
  o Functional Spectrum – Litmus Test
• Analyzing Balance
  o Single Leg Balance
  o Functional Spectrum – Litmus Test

Summary (11:51)
• Humans – Desire Success, Encouragement, Control, Empowerment, Relevance, & Significance
• Start from Scratch; Start with Truth
• 3DMAPS
- Environment - Natural
- Gravity & Ground Reaction Force - Used
- Mass & Momentum - Leveraged
- Motion - 3-Dimensional
- Reaction - Chain
- Proprioceptors - Facilitated
- Muscles - Reactors
- Joints - Integrated
- Task - Subconscious Reactions
- Specificity - Transformation
- Mobility / Stability - Combined

- 66 Vital Motions

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- Analysis Movements (PDF)
- Determine Relative Success
- Desire to be Significant to Others
- Design Environments, Facilitate Chain Reactions®

**Exam #1**
Module 4 - AFS Nomenclature

Tour Guide #2

Intro to Applied Functional Science® Nomenclature (4:32)
- What?
  - System to Describe Any & All Movement
- Why?
  - “Grasp the subject, the words will follow.” – Cato the Elder (Roman Statesman)
  - “Language is the dress of thought.” – Samuel Johnson (English Poet)
- Follows PST Process
- Purpose-Driven Movement
- Variables
  - Environment
  - Position
  - Driver
  - Triangulation
  - Action
- Applied Functional Science® Nomenclature Highlights (PDF)

Environment (3:29)
- Variable of AFS Nomenclature
- Setting / Context
  - Natural
- In, On, Used
- Default – Open Room
- Examples - Box, Air BAPS, TRUE Stretch, Dumbbell(s), Bench, Doorway (Support), etc.
- What is Purpose?
  - “There is a difference between the imprisonment of the tool using you versus the empowerment of you using the tool!” – Gray Institute®

Position (7:21)
- Variable of AFS Nomenclature
- Gravity & Ground Reaction Ramifications
- Global Positions - Upright, Kneeling, Sitting, Prone, Supine, & Side-Lying
- Upright - Analysis & Performance Movements
- Bilateral / Both Feet - Mobility Focus in 3DMaps
- Default - Side by Side (Sagittal Plane), Shoulder-Width (Frontal Plane), Pointing Forward (Transverse Plane)
- SFT Syntax
  - Right (In Front of Left) & Left (In Front of Right) - R / L
  - Narrow / Wide - N / W
o Internally Rotated / Externally Rotated - I / E
- Unilateral / Single Leg Balance - Stability Focus in 3DMAPS
  o Right Single Leg Balance
  o Left Single Leg Balance
- Beginning & Position the Same Unless Otherwise Identified
- What is Purpose?

**Driver (4:33)**
- Variable of AFS Nomenclature
- No Default - Must be Identified
- Primary Anatomical Drivers - Feet, Hands, Eyes, & Pelvis
- Driver - Elicits a Chain Reaction®
  o Conscious Tasks, Subconscious Reaction
- What is Purpose?

**Triangulation (9:42)**
- Variable of AFS Nomenclature
- 3-Dimensional
  o Environment
  o Body
- 3 Parts to Triangulation (Referenced to Driver)
  o Direction
  o Height
  o Distance
- Direction
  o Sagittal Plane - Anterior & Posterior
  o Frontal Plane - Right Lateral & Left Lateral; Same Side Lateral & Opposite Side Lateral
  o Transverse Plane - Right Rotational & Left Rotational; Same Side Rotational & Opposite Side Rotational
- Height
  o Ground, Ankle, Knee, Hip, Shoulder, & Overhead
- Distance
  o Initial Range of Motion, Mid Range of Motion, & End Range of Motion
- What is Purpose?

**Action (6:37)**
- Variable of AFS Nomenclature
- “Subtle tweaks are the most powerful tweaks!” - Gray Institute®
- Term & Associated Definition
  o Fundamental Movements - Reach, Squat, Lunge, Step, Push, Pull, Lift, Walk, Run, Jump, Hop, Swing, etc.
- Analysis - Lunge, Reach, Swing, & Squat
- Lunge - Step & Return
- Reach - Unloaded Drive in 3-Dimensional Space
- Swing - Arcing Drive in 3-Dimensional Space (i.e. - Elbows Extended)
- Squat - Vertical Displacement of Pelvis

- Default Beginning Position for Swing
  - Sagittal Plane - Anterior @ Shoulder
  - Frontal Plane - @ Overhead
  - Transverse Plane - Anterior @ Shoulder

- What is Purpose?

**3DMAPS’s Analysis Movements (22:47)**

- Break for Action; Reflect & Move
- PST Process of 3DMAPS
- Prioritize for Overall Global Human Function
- Validity of 3DMAPS - Applied Functional Science®
  - PST Process
  - Nomenclature
- Importance of Functional Spectrum - Environment, Gravity & Ground Reaction Force, Mass & Momentum, Motion, Reaction, Proprioceptors, Muscles, Joints, Task, Specificity, Mobility / Stability
- Logic of 3DMAPS - Mobility / Stability
  - Mostability
- Primary Focus on One or Other
  - Mobility - Does Body Have it?
  - Stability - Can Body Control it?
- Mobility & Stability - Motion
- Vital Transformational Zones
  - Chain Reactions® Take Place Throughout Body
  - 6 Vital Transformational Zones
- 3DMAPS’s Analysis Movements
  - Mobility Analysis Movements
  - Stability Analysis Movements

- **Mobility / Stability Analysis Movements (PDF)**
- Mobility Analysis Movements = Lunge with Bilateral Hand Swing Matrix
  - Lunge Matrix + Bilateral Hand Swing Matrix
- Stability Analysis Movements = Single Leg Balance Foot Reach with Bilateral Hand Swing Matrix
  - Single Leg Balance Foot Reach Matrix + Single Leg Balance Bilateral Hand Swing Matrix
- 6 Vital Transformational Zones
  - Tell All About Body
- Strategies in Teaching Patient / Client
  - Face to Face (Mirror)
• Face to Face (No Mirror)
• Back to Face
• Alongside
  • Combination - 45 Degrees Side by Side
• Success, Encouragement, Internal Locus of Control, Empowerment, Relevant, & Significant

**Lunge Matrix (6:13)**
• First Component of Mobility Analysis Movements
• 6 Vital Transformational Zones / 6 Chain Reactions®
  • Right Foot, Anterior, Lunge
    Left Foot, Anterior, Lunge
  • Right Foot, Posterior, Lunge
    Left Foot, Posterior, Lunge
  • Right Foot, Right Lateral, Lunge
    Left Foot, Left Lateral, Lunge
  • Right Foot, Left Lateral, Lunge
    Left Foot, Right Lateral, Lunge
  • Right Foot, Right Rotational, Lunge
    Left Foot, Left Rotational, Lunge
  • Right Foot, Left Rotational, Lunge
    Left Foot, Right Rotational, Lunge

**Bilateral Hand Swing Matrix (4:42)**
• Second Component of Mobility Analysis Movements
• 6 Vital Transformational Zones / 6 Chain Reactions®
  • Bilateral Hand, Posterior @ Overhead, Swing
  • Bilateral Hand, Posterior @ Ankle, Swing
  • Bilateral Hand, Right Lateral @ Overhead, Swing
  • Bilateral Hand, Left Lateral @ Overhead, Swing
  • Bilateral Hand, Right Rotational @ Shoulder, Swing
  • Bilateral Hand, Left Rotational @ Shoulder, Swing

**Lunge with Bilateral Hand Swing Matrix (8:34)**
• Mobility Analysis Movements
• 6 Vital Transformational Zones / 6 Chain Reactions®
  • Right Foot, Anterior, Lunge with Bilateral Hand, Posterior @ Overhead, Swing
    Left Foot, Anterior, Lunge with Bilateral Hand, Posterior @ Overhead, Swing
  • Right Foot, Posterior, Lunge with Bilateral Hand, Posterior @ Ankle, Swing
    Left Foot, Posterior, Lunge with Bilateral Hand, Posterior @ Ankle, Swing
  • Right Foot, Right Lateral, Lunge with Bilateral Hand, Left Lateral @ Overhead, Swing
    Left Foot, Left Lateral, Lunge with Bilateral Hand, Right Lateral @ Overhead, Swing
Swing
o Right Foot, Left Lateral, Lunge with Bilateral Hand, Right Lateral @ Overhead, Swing
Left Foot, Right Lateral, Lunge with Bilateral Hand, Left Lateral @ Overhead, Swing
o Right Foot, Right Rotational, Lunge with Bilateral Hand, Right Rotational @ Shoulder, Swing
Left Foot, Left Rotational, Lunge with Bilateral Hand, Left Rotational @ Shoulder, Swing
o Right Foot, Left Rotational, Lunge with Bilateral Hand, Left Rotational @ Shoulder, Swing
Left Foot, Right Rotational, Lunge with Bilateral Hand, Right Rotational @ Shoulder, Swing

Single Leg Balance Foot Reach Matrix (7:59)
• First Component of Stability Analysis Movements
• 6 Vital Transformational Zones / 6 Chain Reactions®
o Left Single Leg Balance, Right Foot, Anterior @ Ankle, Reach
Right Single Leg Balance, Left Foot, Anterior @ Ankle, Reach
o Left Single Leg Balance, Right Foot, Posterior @ Ankle, Reach
Right Single Leg Balance, Left Foot, Posterior @ Ankle, Reach
o Left Single Leg Balance, Right Foot, Right Lateral @ Ankle, Reach
Right Single Leg Balance, Left Foot, Left Lateral @ Ankle, Reach
o Left Single Leg Balance, Right Foot, Left Lateral @ Ankle, Reach
Right Single Leg Balance, Left Foot, Right Lateral @ Ankle, Reach
o Left Single Leg Balance, Right Foot, Right Rotational @ Ankle, Reach
Right Single Leg Balance, Left Foot, Left Rotational @ Ankle, Reach
o Left Single Leg Balance, Right Foot, Left Rotational @ Ankle, Reach
Right Single Leg Balance, Left Foot, Right Rotational @ Ankle, Reach

Single Leg Balance Bilateral Hand Swing Matrix (7:30)
• Second Component of Stability Analysis Movements
• 6 Vital Transformational Zones / 6 Chain Reactions®
o Left Single Leg Balance, Bilateral Hand, Posterior @ Overhead, Swing
Right Single Leg Balance, Bilateral Hand, Posterior @ Overhead, Swing
o Left Single Leg Balance, Bilateral Hand, Posterior @ Ankle, Swing
Right Single Leg Balance, Bilateral Hand, Posterior @ Ankle, Swing
o Left Single Leg Balance, Bilateral Hand, Right Lateral @ Overhead, Swing
Right Single Leg Balance, Bilateral Hand, Left Lateral @ Overhead, Swing
o Left Single Leg Balance, Bilateral Hand, Left Lateral @ Overhead, Swing
Right Single Leg Balance, Bilateral Hand, Right Lateral @ Overhead, Swing
o Left Single Leg Balance, Bilateral Hand, Right Rotational @ Shoulder, Swing
Right Single Leg Balance, Bilateral Hand, Left Rotational @ Shoulder, Swing
Single Leg Balance Foot Reach with Bilateral Hand Swing Matrix (10:08)

- Stability Analysis Movements
- 6 Vital Transformational Zones / 6 Chain Reactions®
  - Left Single Leg Balance, Right Foot, Anterior @ Ankle, Reach with Bilateral Hand, Posterior @ Overhead, Swing
  - Right Single Leg Balance, Left Foot, Anterior @ Ankle, Reach with Bilateral Hand, Posterior @ Overhead, Swing
  - Left Single Leg Balance, Right Foot, Posterior @ Ankle, Reach with Bilateral Hand, Posterior @ Ankle, Swing
  - Right Single Leg Balance, Left Foot, Posterior @ Ankle, Reach with Bilateral Hand, Posterior @ Ankle, Swing
  - Left Single Leg Balance, Right Foot, Right Lateral @ Ankle, Reach with Bilateral Hand, Left Lateral @ Overhead, Swing
  - Right Single Leg Balance, Left Foot, Right Lateral @ Ankle, Reach with Bilateral Hand, Right Lateral @ Overhead, Swing
  - Left Single Leg Balance, Right Foot, Left Lateral @ Ankle, Reach with Bilateral Hand, Right Lateral @ Overhead, Swing
  - Right Single Leg Balance, Left Foot, Left Lateral @ Ankle, Reach with Bilateral Hand, Left Lateral @ Overhead, Swing
  - Left Single Leg Balance, Right Foot, Right Rotational @ Ankle, Reach with Bilateral Hand, Right Rotational @ Shoulder, Swing
  - Right Single Leg Balance, Left Foot, Left Rotational @ Ankle, Reach with Bilateral Hand, Left Rotational @ Shoulder, Swing
**Module 5 - Chain Reaction®**

**Tour Guide #3**

**Vital Transformational Zones** (15:48)
- 3DMAPS - Valid & Pure
  - Upright in 3-Dimensional Space / Environment
  - Foot & Hand Drivers - Subconscious Chain Reaction®
  - Mobility & Stability in Transformational Zones
- Transformational Zones
  - Change Direction (Get In to, Get Out of), Load & Explode
  - Proprioceptors, Muscles, Joints
  - Examples
    - Jumping
    - Walking
    - Swinging
    - Lifting
- Vital Transformational Zones
  - Transform Into Mobility Analysis Movements
  - Transform Into Stability Analysis Movements
  - Transform Into Performance Movements
- 6 Vital Transformational Zones
  - Anterior Chain Reaction®
  - Posterior Chain Reaction®
  - Same Side Lateral Chain Reaction®
  - Opposite Side Lateral Chain Reaction®
  - Same Side Rotational Chain Reaction®
  - Opposite Side Rotational Chain Reaction®
- Mobility & Stability Application in Each Transformational Zone / Chain Reaction®
- Critical to Look at Biomechanics in Each Transformational Zone / Chain Reaction®

**Sagittal Plane** (10:54)
- Anterior Chain Reaction®
  - Foot Being Driven Anterior & Hands Complementing
    - Lunge - Mobility
    - Single Leg Balance Foot Reach - Stability
- Right Anterior Chain Reaction® & Left Anterior Chain Reaction®
  - Biomechanics
    - Stance Subtalar / Ankle - Dorsiflexion
    - Stance Hip - Extension
    - Thoracic Spine - Extension
    - Shoulders - Flexion
• Posterior Chain Reaction®
  o Foot Being Driven Posterior & Hands Complementing
    ▪ Lunge - Mobility
    ▪ Single Leg Balance Foot Reach - Stability
• Right Posterior Chain Reaction® & Left Posterior Chain Reaction®
  o Biomechanics
    ▪ Stance Subtalar / Ankle - Plantar Flexion
    ▪ Stance Hip - Flexion
    ▪ Thoracic Spine - Flexion
    ▪ Shoulders - Extension

Frontal Plane (8:02)
• Same Side Lateral Chain Reaction®
  o Foot Being Driven Same Side Lateral & Hands Complementing
    ▪ Lunge - Mobility
    ▪ Single Leg Balance Foot Reach - Stability
• Right Same Side Lateral Chain Reaction® & Left Same Side Lateral Chain Reaction®
  o Biomechanics
    ▪ Stance Subtalar / Ankle - Eversion
    ▪ Stance Hip - Abduction
    ▪ Thoracic Spine - Opposite Side Lateral Flexion
    ▪ Shoulders - Abduction / Adduction
• Opposite Side Lateral Chain Reaction®
  o Foot Being Driven Opposite Side Lateral & Hands Complementing
    ▪ Lunge - Mobility
    ▪ Single Leg Balance Foot Reach - Stability
• Right Opposite Side Lateral Chain Reaction® & Left Opposite Side Lateral Chain Reaction®
  o Biomechanics
    ▪ Stance Subtalar / Ankle - Inversion
    ▪ Stance Hip - Adduction
    ▪ Thoracic Spine - Same Side Lateral Flexion
    ▪ Shoulders - Adduction / Abduction

Transverse Plane (9:06)
• Same Side Rotational Chain Reaction®
  o Foot Being Driven Same Side Rotational & Hands Complementing
    ▪ Lunge - Mobility
    ▪ Single Leg Balance Foot Reach - Stability
• Right Same Side Rotational Chain Reaction® & Left Same Side Rotational Chain Reaction®
  o Biomechanics
    ▪ Stance Subtalar / Ankle - Abduction
- Stance Hip - External Rotation
- Thoracic Spine - Same Side Rotation
- Shoulders - Horizontal Abduction / Horizontal Adduction

- **Opposite Side Rotational Chain Reaction®**
  - Foot Being Driven Opposite Side Rotational & Hands Complementing
    - Lunge - Mobility
    - Single Leg Balance Foot Reach - Stability
- **Right Opposite Side Rotational Chain Reaction® & Left Opposite Side Rotational Chain Reaction®**
  - Biomechanics
    - Stance Subtalar / Ankle - Adduction
    - Stance Hip - Internal Rotation
    - Thoracic Spine - Opposite Side Rotation
    - Shoulders - Horizontal Adduction / Horizontal Abduction
Module 6 - Chain Reaction® Biomechanics

Chain Reaction® Biomechanics (3:28)
- Appreciation of Human Biomechanics
  - Whole - Parts - Whole
  - Chain Reaction®
- Mobility Analysis
  - Mobility, Range of Motion, Shape of Movement
- Stability Analysis
  - Stability, Control of Motion, Quality of Movement
- Look at Parts / Complexes
- Primary Joint Complexes (PDF)

Subtalar / Ankle Complex (5:39)
- Sagittal Plane
  - Dorsiflexion & Plantar Flexion
- Frontal Plane
  - Eversion & Inversion
- Transverse Plane
  - Abduction & Adduction
- Analyze Shape & Quality

Hip Complex (4:58)
- Sagittal Plane
  - Flexion & Extension
- Frontal Plane
  - Abduction & Adduction
- Transverse Plane
  - External Rotation & Internal Rotation
- Analyze Shape & Quality

Knee Complex (5:29)
- Sagittal Plane
  - Flexion & Extension
- Frontal Plane
  - Abduction & Adduction
- Transverse Plane
  - External Rotation & Internal Rotation
- Analyze Shape & Quality

Thoracic Complex (5:32)
- Sagittal Plane
o Flexion & Extension
• Frontal Plane
  o Right Lateral Flexion & Left Lateral Flexion
• Transverse Plane
  o Right Rotation & Left Rotation
• Analyze Shape & Quality

Lumbar Complex (2:50)
• Sagittal Plane
  o Flexion & Extension
• Frontal Plane
  o Right Lateral Flexion & Left Lateral Flexion
• Transverse Plane
  o Right Rotation & Left Rotation
• Analyze Shape & Quality

Cervical Complex (2:47)
• Sagittal Plane
  o Flexion & Extension
• Frontal Plane
  o Right Lateral Flexion & Left Lateral Flexion
• Transverse Plane
  o Right Rotation & Left Rotation
• Analyze Shape & Quality

Shoulder Complex (3:47)
• Sagittal Plane
  o Flexion & Extension
• Frontal Plane
  o Abduction & Adduction
• Transverse Plane
  o Horizontal Abduction & Horizontal Adduction
• Analyze Shape & Quality

Intransformalize (3:59)
• Complexes (Parts) Contribute to Body (Whole)
  o Shape
  o Quality
• 6 Vital Transformational Zones - All 66 Motions Covered
  o Shape
  o Quality
• 66 Vital Motions (PDF)
• Nucleus of Movement
Module 7 - Mobility & Stability Analysis Movements

Tour Guide #4

Why, How, & What (24:33)
- Applied Functional Science®
  - Physical
  - Biological
  - Behavioral
- Functional Spectrum
  - Non-Functional - Unnatural, Artificial, Counterfeit, Fake
  - Functional - Natural, Authentic, Genuine, Real
- Behavioral Drivers
  - Success & Encouragement
  - Internal Locus of Control & Empowerment
  - Relevant & Significant
- PST Process
  - Principles / Truths
  - Strategies / Transformed
  - Techniques / Analysis, Performance, Rehabilitation, Training
- Power of AFS Nomenclature
  - Understand Movement
  - Describe Movement
  - Unlimited Abilities
- 6 Vital Transformational Zones
  - Feet, Hands, & Eyes as Drivers
  - Mobility / Stability Success
- 6 Chain Reactions®
  - Anterior Chain Reaction®
  - Posterior Chain Reaction®
  - Same Side Lateral Chain Reaction®
  - Opposite Side Lateral Chain Reaction®
  - Same Side Rotational Chain Reaction®
  - Opposite Side Rotational Chain Reaction®
- Chain Reaction® Biomechanics of Primary Joint Complexes
  - Contribute to Shape of Movement - Mobility
  - Contribute to Quality of Movement - Stability
- Gary’s Voiceover to Doug Analyzing Val for Relative Success Code
  - Brief Synopsis of Movements - Mobility Analysis Movements
  - Request for Movements at Threshold
  - Appreciating Big Rocks of Body, Analyzing Shape of Movements
  - Brief Synopsis of Movements - Stability Analysis Movements
Request for Movements at Threshold
Appreciating Big Rocks of Body, Analyzing Quality of Movements
Constant Encouragement, Constant Feedback
Aggregate of Mobility & Stability Analysis Movements

Strategies (11:28)
- How Did Doug Get to Mobility Analysis Movements & Stability Analysis Movements?
- Strategies - Comfortable & Confident
  - Creating Environment (Natural)
  - Communication & Demonstration
  - Sequencing of Movements
  - Safety
  - Natural & Relevant Movements
  - Appreciate 3 Planes of Motion
  - Warm-Up - Joints, Muscles, Nerves
  - Power of Encouragement
  - Building Upon Success
  - Non-Judgmental - Relative Success Code
  - Trust, Empowerment, and Significance (Two-Way Communication)
  - Fellowship of Fun

Anterior Chain Reaction® - Movement Progressions (4:47)
- Right Foot, Anterior Lunge
- Left Foot, Anterior Lunge
- Bilateral Hands, Posterior @ Overhead Swing
- Combination of Above Movements (Mobility Analysis)
- Left Single Leg Balance, Right Foot, Anterior @ Ankle Reach
- Right Single Leg Balance, Left Foot, Anterior @ Ankle Reach
- Left Single Leg Balance, Bilateral Hand, Posterior @ Overhead Swing
- Right Single Leg Balance, Bilateral Hand, Posterior @ Overhead Swing
- Combination of Above Movements (Stability Analysis)

Posterior Chain Reaction® - Movement Progressions (4:39)
- Right Foot, Posterior, Lunge
- Left Foot, Posterior, Lunge
- Bilateral Hands, Posterior @ Ankle, Swing
- Combination of Above Movements (Mobility Analysis)
- Left Single Leg Balance, Right Foot, Posterior @ Ankle, Reach
- Right Single Leg Balance, Left Foot, Posterior @ Ankle, Reach
- Left Single Leg Balance, Bilateral Hand, Posterior @ Ankle, Swing
- Right Single Leg Balance, Bilateral Hand, Posterior @ Ankle, Swing
- Combination of Above Movements (Stability Analysis)
Same Side Lateral Chain Reaction® - Movement Progressions (4:27)
- Right Foot, Right Lateral, Lunge
- Left Foot, Left Lateral, Lunge
- Bilateral Hands, Left Lateral @ Overhead, Swing
- Bilateral Hands, Right Lateral @ Overhead, Swing
- Combination of Above Movements (Mobility Analysis)
- Left Single Leg Balance, Right Foot, Right Lateral @ Ankle, Reach
- Right Single Leg Balance, Left Foot, Left Lateral @ Ankle, Reach
- Left Single Leg Balance, Bilateral Hand, Left Lateral @ Overhead, Swing
- Right Single Leg Balance, Bilateral Hand, Right Lateral @ Overhead, Swing
- Combination of Above Movements (Stability Analysis)

Opposite Side Lateral Chain Reaction® - Movement Progressions (4:36)
- Right Foot, Left Lateral, Lunge
- Left Foot, Right Lateral, Lunge
- Bilateral Hands, Right Lateral @ Overhead, Swing
- Bilateral Hands, Left Lateral @ Overhead, Swing
- Combination of Above Movements (Mobility Analysis)
- Left Single Leg Balance, Right Foot, Left Lateral @ Ankle, Reach
- Right Single Leg Balance, Left Foot, Right Lateral @ Ankle, Reach
- Left Single Leg Balance, Bilateral Hand, Right Lateral @ Overhead, Swing
- Right Single Leg Balance, Bilateral Hand, Left Lateral @ Overhead, Swing
- Combination of Above Movements (Stability Analysis)

Same Side Rotational Chain Reaction® - Movement Progressions (5:07)
- Right Foot, Right Rotational, Lunge
- Left Foot, Left Rotational, Lunge
- Bilateral Hands, Right Rotational @ Shoulder, Swing
- Bilateral Hands, Left Rotational @ Shoulder, Swing
- Combination of Above Movements (Mobility Analysis)
- Left Single Leg Balance, Right Foot, Right Rotational @ Ankle, Reach
- Right Single Leg Balance, Left Foot, Left Rotational @ Ankle, Reach
- Left Single Leg Balance, Bilateral Hand, Right Rotational @ Shoulder, Swing
- Right Single Leg Balance, Bilateral Hand, Left Rotational @ Shoulder, Swing
- Combination of Above Movements (Stability Analysis)

Opposite Side Rotational Chain Reaction® - Movement Progressions (5:26)
- Right Foot, Left Rotational, Lunge
- Left Foot, Right Rotational, Lunge
- Bilateral Hands, Left Rotational @ Shoulder, Swing
- Bilateral Hands, Right Rotational @ Shoulder, Swing
- Combination of Above Movements (Mobility Analysis)
• Left Single Leg Balance, Right Foot, Left Rotational @ Ankle, Reach
• Right Single Leg Balance, Left Foot, Right Rotational @ Ankle, Reach
• Left Single Leg Balance, Bilateral Hand, Left Rotational @ Shoulder, Swing
• Right Single Leg Balance, Bilateral Hand, Right Rotational @ Shoulder, Swing
• Combination of Above Movements (Stability Analysis)

**Intro to Analysis Considerations (23:22)**
- What & Why Are You Looking At?
  - Movement As a Whole - Shape & Quality
- Relative Success
- Shape (Range of Motion) & Quality (Control of Motion)
- Whole is Compilation of Parts
  - 4 Big Rocks - Subtalar / Ankle, Hip, Thoracic Spine, & Shoulder
- Right vs. Left - Comparison
- Removing Pressure of Pinpointing Which Complex is Culprit of Asymmetry
- Threshold of Success
- Importance of Chain Reaction®
- Relative Success Code - Based on Individual
- Importance of Communication & Feedback
  - Relationship / Interaction of Practitioner & Patient / Client
- Mobility Analysis Movements
  - Freedom, Fluidity, Feel, Flexible
- Stability Analysis Movements
  - Confidence, Coordination, Control, Strength
- Pain
  - Discomfort
  - Disabling
- Aggregate of Mobility & Stability
- Allowing Patients / Clients to be Successful

**Anterior Chain Reaction® - Analysis Considerations (8:57)**
- Shape & Quality
- 4 Big Rocks - Chain Reaction® Biomechanics
  - Stance Ankle Dorsiflexion
  - Stance Hip Extension
  - Thoracic Spine Extension
  - Shoulder Flexion
- Angle of Assessment
  - Perpendicular to Stance Leg
- Symmetry or Asymmetry
Posterior Chain Reaction® - Analysis Considerations (5:14)
- Shape & Quality
- 4 Big Rocks - Chain Reaction® Biomechanics
  o Stance Ankle Plantar Flexion
  o Stance Hip Flexion
  o Thoracic Spine Flexion
  o Shoulder Extension
- Angle of Assessment
  o Perpendicular to Stance Leg
- Symmetry or Asymmetry

Same Side Lateral Chain Reaction® - Analysis Considerations (5:23)
- Shape & Quality
- 4 Big Rocks - Chain Reaction® Biomechanics
  o Stance Subtalar Eversion
  o Stance Hip Abduction
  o Thoracic Spine Opposite Side Lateral Flexion
  o Shoulder Abduction / Adduction
- Angle of Assessment
  o Perpendicular to Movement (Front or Back) / Parallel to Individual
- Symmetry or Asymmetry

Opposite Side Lateral Chain Reaction® - Analysis Considerations (4:44)
- Shape & Quality
- 4 Big Rocks - Chain Reaction® Biomechanics
  o Stance Subtalar Inversion
  o Stance Hip Adduction
  o Thoracic Spine Same Side Side Lateral Flexion
  o Shoulder Adduction / Abduction
- Angle of Assessment
  o Perpendicular to Movement (Front or Back) / Parallel to Individual
- Symmetry or Asymmetry

Same Side Rotational Chain Reaction® - Analysis Considerations (7:21)
- Shape & Quality
- 4 Big Rocks - Chain Reaction® Biomechanics
  o Stance Subtalar Abduction
  o Stance Hip External Rotation
  o Thoracic Spine Same Side Rotation
  o Shoulder Horizontal Abduction / Horizontal Adduction
- Angle of Assessment
  o 45 Degrees to Stance Leg
- Symmetry or Asymmetry
Opposite Side Rotational Chain Reaction® - Analysis Considerations (7:26)
• Shape & Quality
• 4 Big Rocks - Chain Reaction® Biomechanics
  o Stance Subtalar Adduction
  o Stance Hip Internal Rotation
  o Thoracic Spine Opposite Side Rotation
  o Shoulder Horizontal Adduction / Horizontal Abduction
• Angle of Assessment
  o 45 Degrees to Stance Leg
• Symmetry or Asymmetry

Summary of Analysis Process (15:43)
• Considerations for Consistency & Considerations for Success
  o Safety
  o Clothing for Comfort
  o Shoes
• Bilateral Hand Swing - Position of Hands
  o Sagittal Plane - Middle of Plane / Arc (Palms In)
  o Frontal Plane - Middle of Plane / Arc (Palms Forward)
  o Transverse Plane - Middle of Plane / Arc (Palms Down)
• Bilateral Hand Swing - Arms Straight
• Lunge with Bilateral Hand Swing - Together
• Single Leg Balance with Bilateral Hand Swing - Together
• Eyes Follow Hands
• Reps & Sequencing
  o What Am I After Today?
  o Success
• Aggregate of Mobility & Stability
  o 6 Chain Reactions® - Right vs. Left Comparison
• Strategy of Staying Within Threshold of Success (i.e. Only Mobility Analysis Movements)
• Ongoing Analysis
• Communication Considerations
  o Feedback Essential
  o Encouragement, Non-Judgmental
  o Relevant & Significant

Compensation Considerations (23:52)
• Relevant & Significant
• Objective & Consistent
• Path of Least Resistance; Compensation Surface Within Movements
• Common Compensations
o Mobility / Shape
  o Stability / Quality

• Compensations are Positive

• Global Compensations - Mobility Analysis Movements
  o Lunge with Swing Together & Proportionately
  o Bilateral Hand Swing - Arms Straight / Extended
  o Eyes - Follow Hands

• Global Compensations - Stability Analysis Movements
  o Foot Reach with Swing Together & Proportionately
  o Foot Reach @ Ankle
  o Bilateral Hand Swing - Arms Straight / Extended
  o Eyes - Follow Hands
  o Foot Reach @ Ground vs. Ankle

• Anterior Chain Reaction®
  o Mobility - Preconceived Notion of Knee Over Foot
  o Stability - Stance Leg Not Bending as Much

• Posterior Chain Reaction®
  o Mobility - Not Shifting Weight on Lunging Leg
  o Stability - Reaching Foot Not Staying at Ankle Height

• Same Side Lateral Chain Reaction®
  o Mobility - Hands Deviating Forward When Swinging
  o Stability - Reaching Foot Not Staying at Ankle Height

• Opposite Side Lateral Chain Reaction®
  o Mobility - Lunging Foot Not Staying in Frontal Plane
  o Stability - Reaching Foot Not Staying in Frontal Plane

• Same Side Rotational Chain Reaction®
  o Mobility - Stance Foot Spinning
  o Stability - Foot Reach and Bilateral Hand Swing Not Proportionate

• Opposite Side Rotational Chain Reaction®
  o Mobility - Stance Foot Spinning
  o Stability - Foot Reach and Bilateral Hand Swing Not Proportionate

Exam #2
Module 8 - Relative Success Code & Performance System

Tour Guide #5

Relative Success Code (6:01)
- Fun in Function
- Perfect Position - Create Environments to Encourage Individuals
  - Empower Bodies
  - Enhance Minds
  - Enrich Spirits
- Applied Functional Science® & Chain Reaction® Biomechanics
  - Mobility - Shape
  - Stability - Quality
- Aggregate of Mobility (Shape) & Stability (Quality) Analysis Movement for Relative Success Code
- Document - Comparative Relationship between Right Chain Reaction® & Left Chain Reaction®
- Algorithm - Determine Relative Success Code
  - Reveal Success
  - Provides Guidance & Direction
  - Enhance Lives of Others

Relative Success Code Symbols (6:28)
- Relative Success Code - Fun & Simple
- Analysis of Each Chain Reaction®
  - Right vs. Left
  - Aggregate of Mobility (Shape) & Stability (Quality)
- Relative Success Code Symbols (PDF)
- 5 Symbols / Options
Relative Success Code Form (18:19)

- Relative Success Code Form (PDF)
  - Chain Reactions® - ANT, PST, SSL, OSL, SSR, OSR
  - 3 Boxes
  - Mobility Images & Stability Images
  - Right Chain Reactions® on Left of Form; Left Chain Reactions® on Right of Form
- Process of Movements to Demonstrate Success
  - Comfortable & Confident
  - Warm-Up
  - Threshold Movements for Analysis
    - Shape
    - Quality
- Communication & Feedback - Important & Essential
  - Visual
  - Verbal
- Relative Success Code Form (Plain) (PDF)
- Anterior Chain Reaction® Examples / Scenarios
  - Both Chain Reactions® Successful
  - Right Chain Reaction® Less Successful; Left Chain Reaction® Less Successful
  - Both Chain Reactions® Less Successful
  - Right Chain Reaction® Less Successful Due to Pain; Left Chain Reaction® Less Successful Due to Pain
  - Both Chain Reactions® Successful Due to Pain
- Pain
  - Discomforting - Does Not Affect / Inhibit Threshold of Success of Mobility & / or Stability Movements
  - Disabling - Does Affect / Inhibit Threshold of Success of Mobility & / or Stability Movements
- Location of Pain
- Description of Pain
  - No Pain Prior to Movement, Yet Pain with Movement
  - Pain Prior to Movement, Pain Increases with Movement
  - Pain Prior to Movement, Pain Remains Same with Movement

Relative Success Code Algorithm (22:21)

- Analysis = Relative Success Code
- Algorithm (Formula)
- Review of 5 Options / Symbols
- Relative Success Code Algorithm (PDF)
- Overview / Steps
  - Progress through Each of Chain Reactions® Top to Bottom (ANT, PST, SSL, OSL, SSR, OSR) 5 Times
Each Time, Identify Relative Success Code Symbol in Order

- Both Chain Reactions® Successful
- 1 Chain Reaction® Less Successful
- Both Chain Reactions® Less Successful
- 1 Chain Reaction® Less Successful Due to Pain
- Both Chain Reactions® Successful Due to Pain

List Each Chain Reaction® Respectively (Right to Left) in Relative Success Code (Bottom of Form)

- Relative Success Code Example 1 (PDF)
- Relative Success Code Example 2 (PDF)
- Relative Success Code Example 3 (PDF)
- Relative Success Code - Now What?
- Unique to Individual
- Strategies
  - Mobility & Stability Analysis Movements
  - Components to Mobility & Stability Analysis Movements
  - Performance System Movements
- Enhance for Lifetime

Tests & Tweaks (10:10)

- “If our tests do not reflect the desired result, then we all have flunked.” - Gary Gray
- 3DMAPS - Best Analysis for Global Human Function
- Demonstrate Success & All Motions
- Fundamental to Life
- Significance
  - Relative Success Code of Individual
  - Utilize Relative Success Code for Ongoing Success of Individual
- Human Movement / Function
  - Begin with Analysis
  - Progress with Movements
- “The test is the exercise and the exercise is the test.” - Gary Gray
  - Analysis Movements
- “The test is the exercise and the exercise properly tweaked becomes the enhanced test.” - Gary Gray
  - Analysis & Performance Movements
- Overall Goal - Enhance Individual’s Performance, Decrease Pain, Enhance Function
- Tweak
  - Adjust Something Slightly; Alter Movement to Enhance Movement
  - Power of Tweakology
  - Proportionate to Understanding of Human Movement
  - Proportionate to Understanding Nomenclature
- CAFS (PDF)
- CAFS (Certification of Applied Functional Science®)

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o 20+ Hour Certification - Further Understanding of Applied Functional Science® & Programming of Human Function
o Local to Global Spectrum
o 10 Observational Essentials - Action, Environment, Position, Driver, Direction, Height, Distance, Load, Rate, & Duration

• 3DMAPS’s Performance System
  o Identify Primary Tweaks / Progressions
  o Verticals / Matrices - Mobility & Stability
  o Order May Be Based on Relative Success Code

• Goals
  o Enhance Range of Motion, Flexibility, Shape of Movements
  o Enhance Control of Motion, Stability, Quality of Movements
  o Enhance Individual’s Performance, Decrease Pain, Enhance Function

Performance System Movements (36:22)
• Analysis & Performance Movements (PDF)
• Support - Mobility & Support - Stability
  o Environment & Driver
  o Examples - Anterior Chain Reaction®
• Elevated (Lunge Leg) - Mobility & Elevated (Lunge Leg) - Stability
  o Environment & Position & Driver
  o Examples - Posterior Chain Reaction®
• Fixed Trunk - Mobility & Fixed Trunk - Stability
  o Position
  o Examples - Same Side Lateral Chain Reaction®
• Unilateral Hand Swing - Mobility & Unilateral Hand Swing - Stability
  o Driver
  o Examples - Opposite Side Lateral Chain Reaction®
• Plane (Hands) - Mobility & Plane (Hands) - Stability
  o Direction
  o Examples - Same Side Rotational Chain Reaction®
• Plane (Foot) - Mobility & Plane (Foot) - Stability
  o Direction
  o Examples - Opposite Side Rotational Chain Reaction®
• Hybrid (Hands) - Mobility & Hybrid (Hands) - Stability
  o Direction & Height
  o Examples - Anterior Chain Reaction®
• Hybrid (Foot) - Mobility & Hybrid (Foot) - Stability
  o Direction & Distance
  o Examples - Posterior Chain Reaction®
• Pivot (In-Chain) - Mobility & Pivot (In-Chain) - Stability
  o Action
  o Examples - Same Side Lateral Chain Reaction®
• Pivot (Out-of-Chain) - Mobility & Pivot (Out-of-Chain) - Stability
  o Action
  o Examples - Opposite Side Lateral Chain Reaction®
• Load - Mobility & Load (In-Chain) - Stability
  o Load
  o Examples - Same Side Rotational Chain Reaction®
• Elevated (Stance Leg) - Mobility & Elevated (Stance Leg) - Stability
  o Environment
  o Examples - Opposite Side Rotational Chain Reaction®
• Locomotor - Mobility & Locomotor - Stability
  o Action & Rate
  o Examples - Anterior Chain Reaction®
• Spherical - Mobility & Spherical - Stability
  o Position / Action & Rate
  o Examples - Posterior Chain Reaction®

Tour Guide #6

Exam #3