**Answer Key: Learning Activity 1.1: Functions of the Brain**

**Instructions:** First, match the brain function with the corresponding structure. Then, label the images of the brain with the structures. Refer to the lecture, *Behavior Change 1: All systems ultimately controlled by brain* for assistance.

<table>
<thead>
<tr>
<th>Brain Functions</th>
<th>Brain Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Name the structure that is able to strategize, perform complex thinking, decisions and controls emotions. It is responsible for impulse control.</td>
<td>A. Parietal</td>
</tr>
<tr>
<td>2. Name the structure that processes hearing and emotion.</td>
<td>B. Frontal</td>
</tr>
<tr>
<td>3. Name the structure that provides a sense of self and position in space and time.</td>
<td>C. Occipital</td>
</tr>
<tr>
<td>4. Name the structure that processes vision.</td>
<td>D. Temporal</td>
</tr>
<tr>
<td>5. Name the structure responsible for integration and movement control.</td>
<td>E. Cerebellum</td>
</tr>
</tbody>
</table>
Brain Functions

6. Name the structure responsible for the learning and storing of memories.

7. Name the structure that controls hormones, appetite and sleep behavior.

8. Name the structure that is responsible for the processing of emotionally relevant stimuli due to a threat. This part of the brain can shut down the front lobes when active.

Brain Structures

A. Amygdala

B. Hippocampus

C. Hypothalamus
Answer Key: Learning Activity 1.2: Positive Self-Talk:

Instructions: Using what you've learned from the lecture on Functional Neuroscience in Behavior Change 1, mark the examples below that could elicit positive self-talk for your client.

☐ Trainer expresses to client: “You will never reach your goal if you are always late.”

- This example will likely elicit negative self-talk. If your client hears this repeatedly, he may start to believe that he will never reach his goal.

☒ Trainer expresses to client: “Wow, Mike, look at those guns! Your arms are really looking more defined.”

- This will likely make Mike proud of the progress he has made on his arms. This could be a real self-esteem booster, especially if Mike really wants to have defined arms. This will enforce positive self-talk because you are helping Mike to see that he is getting results.

☒ Trainer expresses to client: “You just ran up the stairs, and you’re not even winded. Remember when just walking up the stairs was exhausting. You are making great progress!”

- This will absolutely help your client to realize that the training program is having an effect on his/her endurance and will elicit positive self-talk since you are helping your client realize results.

☐ Trainer questions client: “Why hasn’t your weight changed? Are you not following the eating plan?”

- This will likely elicit negative self-talk such as “I have failed. I cannot eat right.”

☒ Trainer expresses to client: “It looks like you did a great job with water intake last week looking at your log sheet. I understand that making lots of nutritional changes at once can be daunting. This week I would like you to focus on drinking water throughout the day and having vegetables with every meal. Do you feel like this is doable?”

- Since the trainer is making nutritional changes in an incremental manner, the client will likely adopt a “I can do this” attitude towards making these changes.
Trainer questions client: “Jennifer, what aspect of your training session with me have you enjoyed the most? What results have you noticed?”

- This will elicit positive self-talk because the client is given a chance to give her opinion on what she really liked and to reflect on any results she has noticed.

Trainer expresses to client: “No pain, no gain,” in response to the client mentioning the extent of his/her soreness.

- This will likely elicit negative self-talk because feeling sore or uncomfortable will become associated with exercise. Since exercise is a habit that we want to enforce, the client should enjoy the experience during the session and in-between sessions.

Trainer’s response to client’s dislike of activity: “Cindy, I understand that you don’t like to do burpees. You don’t have to do them. Let’s try this other exercise instead. This other exercise will still help us get the results we are looking for.”

- This response will likely elicit positive self-talk because the client will appreciate that her trainer is listening to her and has empathy for her. The client will also like that the other exercise is still keeping her on track to achieve her goal.

Your client expresses to you that she is not coordinated and would feel really awkward doing complex exercises. You explain to your client that her being comfortable is the most important thing, and you won’t make her do anything that she isn’t comfortable with. You proceed to give her a traditional exercise and she expresses that she really likes it.

- This will elicit positive self-talk because the client knows she can trust her trainer not to embarrass her and her trainer will give her exercises she likes. This, in turn, will make exercising a positive experience and something she wants to continue.
**Answer Key: Learning Activity 1.3: Righting Reflex:**

**Instructions:** The *Righting Reflex* is an innate reflex to want to help people. There are 4 common tactics discussed in *Behavior Change 2* that fitness and health professionals typically use to try to evoke change. These are the wrong ways to go about creating change because they often cause the person to associate the change with a past negative experience or a threat. In this exercise identify the following examples as *Insight Induction, Knowledge Induction, Skill Induction or Distress Induction*. Once you understand these tactics, why they don’t work and the correct way to go about achieving change, it will be easier to help your clients achieve their goals.

<table>
<thead>
<tr>
<th>Fill in the blank:</th>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skill Induction</strong></td>
<td>Jennifer, have you tried reducing your carbohydrate intake and adding a cardiovascular workout?</td>
</tr>
<tr>
<td><strong>Distress Induction</strong></td>
<td>Nathan, if you don’t change your eating and sedentary habits, you are going to die!</td>
</tr>
<tr>
<td><strong>Insight Induction</strong></td>
<td>Don’t you see that eating fast food every day for lunch is causing you to make unhealthy calorie-dense food choices?</td>
</tr>
<tr>
<td><strong>Knowledge Induction</strong></td>
<td>Let me explain. If you can achieve a caloric deficit on a daily basis based on how much you exercise and how much you eat, you will lose weight.</td>
</tr>
</tbody>
</table>
**Answer Key: Learning Activity 1.4: Understanding the Change and Motivation Models:**

**Instructions:** Identify the stages of change in the Transtheoretical Model as identified in *Behavior Change 3*. Then, indicate which stage the following statements belong in.

- **Maintenance**
  - It takes 6 months of adherence to get to this stage of change.

- **Contemplation**
  - The majority of people a personal trainer will meet will be in this stage.

- **Determination**
  - This is the stage of change a person is in when they sign up for personal training.

- **Relapse**
  - This stage is inevitable. Going through this stage of change will increase your client’s chances of future success.
Instructions: Identify the stages along the motivation continuum in the Self-Determination Theory as presented in Behavior Change 3. Then, identify the characteristics that are represented by each stage.

1. **Self-Determined Extrinsic Motivation**
   - Health and Fitness Benefits; Social Aspects; Relaxation

2. **Amotivation**
   - No motivation; Disorganized

3. **Intrinsic Motivation**
   - Enjoyment; Challenge; Mastery

4. **Other-Determined Extrinsic Motivation**
   - Rewards; Guilt; Coercion
**Answer Key: Learning Activity 1.7: Setting S.M.A.R.T.E.R. Goals**

**Instructions:** Fill in the chart below according to the given scenarios. The first scenario has been done for you as an example. Refer to the lecture *Behavior Change 4* for more information on S.M.A.R.T.E.R. goal setting.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Weight Loss Client: Paul’s 20-year high school class reunion is coming up in 3 months. Paul would like to look good since he will be seeing friends he hasn’t seen in a while. Paul would like to lose 15 lbs.</th>
<th>Lean Body Mass Client: Chris is going to be hosting a backyard party in 6 months. He figures it will take him two months of yard work to prepare his home for the event. Chris would like to get stronger in preparation for the work he must do to his home. Chris, a beginner, estimates he’d like to gain 6 lbs. of lean body mass prior to beginning construction.</th>
<th>Sport Specific Client: Lisa is a Volleyball player. Her goal is to increase the height of her vertical jump by 2 inches by the pre-season. She is currently in the off-season after her first season as a Volleyball player.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S - Specific</strong></td>
<td>Lose weight</td>
<td>Lean body mass</td>
<td>Volleyball Vertical Jump</td>
</tr>
<tr>
<td><strong>M - Measurable</strong></td>
<td>Lose 15 lbs.</td>
<td>Gain 6 lbs. lean body mass</td>
<td>Increase vertical jump by 2 inches</td>
</tr>
<tr>
<td><strong>A - Attractive</strong></td>
<td>Yes, because Paul wants to look good for his friends.</td>
<td>Yes, because achieving this goal will help him get the construction done, plus he will have more muscular definition by his party.</td>
<td>Yes, increasing her vertical jump height will increase the likely-hood that she can play better defense.</td>
</tr>
<tr>
<td><strong>R - Realistic</strong></td>
<td>Yes, Paul’s goal is realistic. In order to achieve his goal, he should lose 1.25 lbs. each week or 5 lbs. per month.</td>
<td>Yes, it is realistic for him to gain 6 lbs. of lean body mass over four months since he is a beginner.</td>
<td>Yes, with proper programming she should be able to attain this goal.</td>
</tr>
<tr>
<td><strong>T - Time Based</strong></td>
<td>3-month time frame</td>
<td>4-month time frame</td>
<td>3-month time frame, off-season</td>
</tr>
<tr>
<td><strong>E - Evaluate</strong></td>
<td>Evaluate at the end of each month to see if Paul is making proper progress towards his goal.</td>
<td>Evaluate weight and body fat percentage monthly to see if changes are on-track.</td>
<td>Evaluate vertical jump on a bi-weekly or monthly basis.</td>
</tr>
<tr>
<td><strong>R – Reward Progress</strong></td>
<td>1st month goal reward: A coupon to the gym’s smoothie bar. 2nd month goal reward: A free massage at the gym spa. 3rd month goal reward: A gift card towards the purchase of attire for the reunion.</td>
<td>1st month reward: Free protein shake at the café. 2nd month reward: Free water bottle from the gift shop. 3rd month reward: Free protein shake at the café. 4th month reward: A gift card to a home improvement store.</td>
<td>1st month reward: A coupon to the gift shop towards the purchase of a myofascial release tool. 2nd month reward: Free smoothie from the smoothie bar. 3rd month reward: Trainer attends practice session to cheer on client.</td>
</tr>
</tbody>
</table>
**Answer Key: Learning Activity 1.8: Cognitive Restructuring**

**Instructions:** Match the steps of the Cognitive Restructuring Process with the letter that matches that step. For help, please refer to the presentation, *Behavior Change 4: Cognitive Restructuring*.

- **Step 1: Become the watcher**
  - A. Stop the negative stuff – a conscious effort involving the front cortex wrestling control from the basal areas of the brain.

- **Step 2: Accept Responsibility**
  - B. Create social responsibility by telling as many people as you can about your intended change.

- **Step 3: Make a Declaration to Change**
  - C. Physical demonstration helps rewire the brain.

- **Step 4: Intervene**
  - D. What is going on inside your head that is holding your back? If you can’t name it, you can’t change it.

- **Step 5: Affirmations**
  - E. Mental imagery works the same way as doing something in the brain.

- **Step 6: Rituals**
  - F. Reward activation triggers the release of Dopamine and drives us to do the behavior over and over again.

- **Step 7: Feedback**
  - G. Only you, can change you!
**Answer Key: Learning Activity 2.1: Developing Rapport**

**Instructions:** Rapport is essential to connect with a potential client and maintain the relationship. Understanding your client is the key to developing a lasting relationship.

**Part 1:** After listening to **Client Orientation 2, Mirroring Communication** try this exercise...

When having conversation with someone, practice mirroring communication by matching their rate of speech, body language, and choice of words.

**Part 2:** Identifying Visual, Auditory and Kinesthetic Dominant People: Circle the correct answers from the choices below. Refer to **Client Orientation 2, Sensory Representational Systems** for assistance.

1. A visual person speaks  
   - a. rapidly.  
   - b. slowly.
2. An auditory person looks where to assess information  
   - a. straight ahead.  
   - b. side to side.
3. A kinesthetic person is influenced most by what they  
   - a. see.  
   - b. feel.
4. An auditory person uses body gestures  
   - a. infrequently.  
   - b. moderately.

**Part 3:** After reviewing the **4 Basic Temperaments** in **Client Orientation 2**, match the examples with the temperaments.

- Director  
  - Very organized
- Analytical  
  - Has high expectations of you
- Amiable  
  - Greatly fears change
- Expressive  
  - Fears rejection

**Part 4:** When looking at the attributes of each of the 4 Basic Temperaments, think of someone you know that matches up with each one.

- Director: ____________________________  
  - Amiable: ____________________________
- Analytical: ___________________________  
  - Expressive: ___________________________
**Answer Key: Learning Activity 2.2: Interviewing Skills**

**Instructions:** These skills will help you lead your client to their own conclusions and ultimately help them get to their goals. Give 2 examples for each to help develop your understanding of these skills. The answers given here could vary from what you suggested and that is okay as long as it still matches the skill.

1. **Verbal Extraction** - Asking open-ended questions to help a client arrive at their own conclusions: Give two examples of open-ended questions that will help your client take ownership of their responsibilities.
   
   a. If you could change one small aspect of your eating habits, what would that be?
   
   b. What are some ways you could work towards better success this time around?

2. **Reflective Listening** - paraphrase what the client says and indicate words with emphasis.
   
   a. “I can never make it early enough to get on the Elliptical.”

   You can **never** make it **early** enough?
   
   b. “I just can’t eat right because I eat out all the time.”

   You **can’t** eat right because you eat out **all** the time?

3. **Affirmation** – Affirm positive characteristics of the client.
   
   a. “I’ve been eating small portions, and it’s not making a difference.”

   It really shows determination that you have been able to stick to eating small portions.
   
   b. “I’ve been working out for so long, but I’m still not losing the weight I want to lose.”

   Even after not losing the weight you want to lose, you still have the commitment to workout.

4. **Reframing** – Take something they see as a negative and make it a positive.
   
   a. “I’ve been trying for years to eat right.”

   What’s good about that?
   
   b. “Sorry, I’m late. My wife needed my help with the kids for a few minutes.”

   I’m glad you were able to help your wife with the kids. I know how important they are to you, and you still managed to make it here.
5. **Gap Analysis** – The utilization of questions to help someone see the gap between where they are and where they desire to be.

   a. “I know I eat horribly. I eat out all the time.”

      **What consequences will result if you don’t change your eating habits?**

   b. “I really need to make some changes, so I don’t continue along the same unhealthy path.”

      **How do you want your life to be different 5 years from now?**

6. **Inverse Reflection** – Skillfully uses a question to help a client see the situation from a different perspective.

   a. “I’ll never be able to commit to this exercise program.”

      **What would happen if you did?**

   b. “I’ve never been able to keep weight off in the past.”

      **What if you could keep it off?**

7. **Root Cause Analysis** – Elaborate on goals to determine a source of motivation.

   a. “I want to lose a bit of weight.”

      **Why is weight loss important to you?**

   b. “I just want to feel better.”

      **How?**

8. **Conversational Alignment** – uses member’s beliefs as a rational basis for recommendations made in the program.

   a. “I already know how to eat healthy.”

      **That’s great! How do you think I can help you to enforce your healthy eating habits?**

   b. “Running is the only way I can lose weight.”

      **I am glad you have found something that works well for you. We can implement running into your program to really help you lose weight.**
Answer Key: Learning Activity 2.4: 6 Steps to Client Retention

Instructions: Review the examples below and name the step of the 6 Steps of Client Retention that each refers to. Refer to the presentation Personal Training Operations 3 for assistance.

- Playing music to put a client in a positive state is an example of Step 3: Details.
- Using continuing education to provide your client with more value is an example of Step 6: Self-Reinvention.
- Using body language, facial expressions and vocal tonality to provide a more memorable client experience is an example of Step 1: Emotional Engagement.
- Making mention of important events in your client’s life such as their child’s graduation is an example of Step 4: Become Your Client’s Raving Fan.
- Sending articles to your client via email about nutrition is an example of Step 5: Partnership.
- Purchasing a massage for your client to accent the movement recovery aspect of their program is an example of Step 2: Uncompromising Experiences.
Answer Key: Learning Activity 3.1: Identifying Functional Lines

Instructions: Fill in the blank with the name of the functional line represented in the image. Refer to the presentations Functional Anatomy 1-4 for assistance.

1. Functional Line: Superficial Front Line

2. Functional Line: Back Functional Line
3. Functional Line: Lateral Line

4. Functional Line: Front Functional Line

5. Functional Line: Superficial Back Line
Answer Key: Learning Activity 3.2: Tracking the Superficial Back Line (SBL)

Instructions: Identify the observed muscle/fascial bundles indicated along the Superficial Back Line. Refer to the presentation Functional Anatomy 1 for assistance. Use the terms listed on the summary slide.

1. Flexor Digitorium Brevis
2. Gastrocnemius
3. Hamstrings
4. Sacrotuberous Ligament
5. Erector Spinae
6. Scalp Fascia
Answer Key: Learning Activity 3.3: Tracking the Superficial Front Line (SFL)

Instructions: Identify the observed muscle/fascial bundles indicated along the Superficial Front Line. Refer to the presentation Functional Anatomy 2 for assistance. Use the terms listed on the summary slide.

1. Extensor Digitorum Longus and Brevis
2. Quadriceps
3. Tibialis Anterior
4. Rectus Abdominus
5. Sternalis
6. Patellar Tendon
7. Sternocleidomastoid

[Diagram of human body with labeled muscles]
Answer Key: Learning Activity 3.4: Tracking the Lateral Line (LL)

Instructions: Identify the observed muscle/fascial bundles indicated along the Lateral Line. Refer to the presentation Functional Anatomy 3 for assistance. Use the terms listed on the summary slide.

1. IT Band, TFL, Gluteus Maximus
2. Peroneus Longus and Brevis
3. Anterior Ligament of the Fibular Head
4. Lateral Abdominal
5. Splenius Capitis and Sternocleidomastoid
6. External and Internal Intercostals
**Answer Key: Learning Activity 3.5: Exercising Functional Lines**

**Instructions:** Identify which functional line is targeted in each exercise. For assistance refer to the functional lines exercise videos. Fill in the blank with Superficial Front Line, Superficial Back Line, or Lateral Line.

1. Functional Line: **Lateral Line**

2. Functional Line: **Superficial Front Line**
3. Functional Line: **Superficial Back Line**

4. Functional Line: **Superficial Back Line**
5. Functional Line: Lateral Line

6. Functional Line: Superficial Front Line
7. Functional Line: **Lateral Line**

8. Functional Line: **Superficial Front Line**
Answer Key: Learning Activity 3.6: Applying the 3DC

Instructions: Using the 3D Motion Checkpoints as presented in the Movement System SST along with the concepts from the Human Design and Function and Biomechanics sections, answer the questions for each scenario.

Scenario 1: Your traditional client is doing a Dumbbell Squat.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Beginning Position</th>
<th>Driver</th>
<th>Triangulation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dumbbell</td>
<td>Standing XXX</td>
<td>DBs held at hips</td>
<td>DBs lower to ankle height</td>
<td>Squat</td>
</tr>
</tbody>
</table>

1. Based on the recommendations provided in the Movement SST handout for the Traditional person, what Checkpoint would you manipulate first to progress this exercise?
   a. Beginning Position
   b. Driver
   c. Triangulation

2. Note an example of a manipulation you could implement for the question above. Change stance to RXX (Any change in SFT syntax is correct)

3. Using your knowledge of Biomechanics, how could you change the environment to achieve greater force production in this squat?
   a. Stand on a lifting platform
   b. Stand on a vibrating platform
   c. Stand on top of a bench

4. Using your knowledge of biomechanics, how could you change the tempo of this exercise to achieve greater power production?
   a. Move slower on the return
   b. Move faster on the return

5. You watch your client doing this exercise for the first time, and you observe instability in their knees. According to the first coaching tip in the notes for the Movement SST, what modification should you make? Ask your client to perform this exercise without weight.
Scenario 2: Your hybrid client is doing a Kinesis Chest Press.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Beginning Position</th>
<th>Driver</th>
<th>Triangulation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinesis</td>
<td>Standing XWX</td>
<td>Hands</td>
<td>Chest Height</td>
<td>Press</td>
</tr>
</tbody>
</table>

1. After the workout, you perform a *Kaizen-6 Trainer Self Appraisal* and learn that your client wants more intensity from the workout. Which modification to this exercise listed below will meet the needs of your client and involve changing the action checkpoint? (Refer to the Action Coaching Tip in the Movement SST notes for assistance.)
   a. Lunge with Press
   b. Stand in LWX
   c. Press with just the Right Arm

2. If you add a lunge with press to this exercise, according to Biomechanics of moment arms, what would be the effect on resistance from the initial exercise to the new exercise?
   a. Decreased resistance on the moment arm
   b. Increased resistance on the moment arm

3. What could you change to about triangulation to make this exercise more progressive?
   a. Sit on a Stability Ball
   b. Increase the weight
   c. Press low, medium, then high

4. Your client has been practicing this exercise for several sessions. A few sessions ago, you added a mid-range lunge with press that your client performed successfully. Today, you progress this exercise even further by having your client do targeted lunge with press. Every time your client lunges, you provide a new target for him/her to press to. You notice that when you give your client a target that is further away, your client has difficulty maintaining good posture and stability. Which of the following statements is true?
   a. You should push your client to work through the end range-of-motion.
   b. You should decrease the sphere of function and work within a lunge distance that your client can perform well.
   c. You should increase the weight.
**Answer Key: Learning Activity 4.1: Hormones and Exercise**

**Instructions:** Match the descriptions on the left with the correct hormone(s) on the right. Refer to the presentations on *Exercise Endocrinology, Program Design for Weight Loss and Program Design for Lean Body Mass* for assistance.

1. These two hormones are secreted by the anterior pituitary gland. - Adrenaline and Noradrenaline
2. A classical response to resistance training is the release of these two hormones. - Paracrine and Autocrine
3. These two hormones are indirectly released inside a cell during resistance training. - Growth Hormone and Catecholamines
4. These two hormones are secreted by the Adrenal Medulla. - Antidiuretic Hormone and Growth Hormone
5. These two hormones work together to increase both duration of stimulus and force of contraction. - Insulin and Glucagon
6. In the process of fat metabolism, these hormones are released once cortisol levels return to a more normal state. - Growth Hormone and Testosterone
7. These two hormones are secreted by the Pancreas. - Growth Hormone and Testosterone
1. These four hormones increase glucose metabolism. They promote glycogenesis and glucogenesis. They make it so that we can exercise at higher levels for longer.

2. These four hormones increase fat metabolism.

3. The release of this hormone stimulates the release of growth hormone during moderate to high volume strength training focused on large muscles at high intensity with short rest periods.

4. These two hormones play a vital role in the repair of muscle tissue that can ultimately lead to increases in lean body mass.

5. This hormone has been shown to lead to visceral fat storage as a result of prolonged and chronic stress.

6. This hormone releases as a response to sweat and is the reason we must rehydrate after prolonged exercise and with electrolytes.

7. In the initial stages of exercise, this hormone acts to accelerate lipolysis (the conversion of fat to energy) releasing free-fatty acids into the blood so they can be taken up by the cells for energy production.
Answer Key: Learning Activity 4.2: Key Points in Programming for Weight Loss

Instructions: Identify the following statements as true or false. For assistance refer to the presentation Program Design for Weight Loss and the section notes.

1. An individual that is 70 inches tall and weighs 250 lbs. would fall into the overweight range on the Body Mass Index scale.

2. We anticipate our clients will achieve weight loss if more calories are being burned than consumed and the exercise plan is being executed properly with a moderate to high intensity level achieved with exercise after the initial phase of training.

3. An intensity of 60-75% of maximal heart rate is required to achieve weight loss after the initial phase of training.

1. **False: BMI=35.9=Obese**

2. **True**

3. **False: 75-85% MHR/ 65-75% Vo2 Max**
Answer Key: Learning Activity 4.3: Key Points in Programming for Lean Body Mass

Instructions: Identify the following statements as true or false. For assistance refer to the presentation Program Design for Lean Body Mass and the section notes.

1. The following are examples of changes that occur due to stress imposed on the myofascial system because of resistance training:
   a. Breakdown/micro-damage to tissues
   b. Increase in protein synthesis
   c. Increase in hormones associated with tissue repair and rebuilding

2. Stress to large muscle mass and short rest intervals are 2 of the 4 integral components needed to elicit a hormonal response that will lead to an increase in lean body mass after the initial phase of training and following proper progressions.

3. It’s safe to begin my lean body mass goal client with a high volume of training in the initial phase of the exercise plan.

4. It is optimal to intake carbohydrates and protein within the first 30 minutes following a workout geared at increasing lean body mass to stimulate recovery and protein synthesis.

1. _______ True _________
2. _______ True _________
3. False – Only after progression
4. _______ True _________
**Answer Key: Learning Activity 4.4: Key Points in Programming for Wellness**

**Instructions:** Identify the following statements as true or false. For assistance refer to the presentation *Program Design for Wellness*.

1. Wellness could be described as the desire to move and feel better.  
   1. ______ true

2. We cannot change/influence a client’s sleep and lifestyle habits.  
   2. ______ false

3. Through wellness programming we can fix our client’s issues.  
   3. ______ false

4. Through wellness programming we can decrease our client’s pain/discomfort.  
   4. ______ true

5. A goal of wellness training is to achieve efficient motion.  
   5. ______ true
Answer Key: Learning Activity 4.5: Key Points in Programming for Sports Conditioning

Instructions: Identify the following statements as true or false. For assistance refer to the presentation Program Design for Sports Conditioning.

1. The balance between work and rest is an important consideration in sports conditioning programming. 1. ______ true

2. Fitness serves as the base of what we do in sports conditioning in terms of movement and the acquisition of skill and technique. 2. ___false: function, not fitness____

3. A needs analysis, testing data and our knowledge base all filter into the choices that we make on exercises for our program design. 3. ______ true

4. The tests that we use in sports conditioning are based on a needs analysis. 4. ______ true

5. Our client’s off-season is an example of a mesocycle within the structure periodization. 5. ______ false: macrocycle____
Answer Key: Learning Activity 5.3: Teaching RAQS

Instructions: For each section determine if the statements on teaching progression are true or false and fill in the blank. Refer to the presentation RAQS/GAMES for assistance.

Teaching Reactive Training:

1. Landing mechanics should be emphasized before jumping mechanics.  
   1. ____ TRUE ____
2. Begin, by having your client jump up onto a box before down.  
   2. ____ FALSE ____
3. Next, have your client jump down in different planes of motion.  
   3. ____ TRUE ____
4. Your client should practice landing on two feet before landing on one foot.  
   4. ____ TRUE ____
5. With respect to amplitude, your client should practice jumping on a shorter box and progress to taller boxes.  
   5. ____ TRUE ____
6. You should solely focus on fast speeds with reactive training.  
   6. ____ FALSE ____
7. Work on simple movements before complex.  
   7. ____ TRUE ____
8. Work on basic singular movements prior to multitasking.  
   8. ____ TRUE ____

Teaching Agility Training:

1. Start by emphasizing eccentric acceleration.  
   1. ____ FALSE ____
2. Once your client can decelerate well in one plane of motion, progress to all planes of motion.  
   2. ____ TRUE ____
3. Progress speed of motion from slow → fast.  
   3. ____ TRUE ____

Teaching Quickness:

1. Progress slow → fast; Pause, to fluid motion, then transition to explosive.  
   1. ____ TRUE ____
2. In terms of complexity progress from known → unknown.  
   2. ____ TRUE ____
3. Start with a low load before progressing to a high load.  
   3. ____ TRUE ____

Teaching Speed:

1. Focus first on proper running technique: arm motion, stride and posture  
   1. ____ TRUE ____
2. In terms of length of drills, start with longer drills to maximize technique such as posture.  
   2. ____ TRUE ____
3. Begin with maximal speeds before progressing to submaximal speeds.  
   3. ____ FALSE ____
4. Start with bodyweight → progress to low load → progress to high load → progress to assisted speed.  
   4. ____ TRUE ____
Answer Key: Learning Activity 5.4: ESD

Instructions: Answer the open-ended questions on energy system development. For better understanding refer to the presentations Cardio 1 and Cardio 2.

1. Would a continuous type of cardiovascular training for energy system development such as running for 20 minutes at 70-85% of maximal heart rate be practical for a client interested in increasing lean body mass? Why or why not?

   No, the energy system demands are different.

   ________________________________________________________________

2. What are some benefits of interval training?

   Intervals develop all energy systems, burn more calories, increase metabolism, are cardio-

   strength and increase motivation.

   ________________________________________________________________

3. What is a “true interval”/ “true recovery?”

   In a “true interval” heart rate reaches near maximal levels and recovers completely. 95% of

   heart rate max with a 65% of heart rate max recovery.

   ________________________________________________________________

4. Why might the strength component of the workout be placed before the cardiovascular training?

   The strength component may be placed before cardiovascular because of the neurological

   demands of strength training.

   ________________________________________________________________

5. What type of client would you typically use Fartlek training for?

   Fartlek training is typically used for sports specific clients that need to develop this energy

   system demand such as a soccer player.

   ________________________________________________________________
**Answer Key: Learning Activity 6.2: Gears and Goals**

**Instructions:** For each example, fill in the blank with the appropriate gear(s). For a better understanding of gears and goals, refer to the presentation *Programming System SST.*

<table>
<thead>
<tr>
<th>Goals/ Details</th>
<th>Gears:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recovery and Regeneration/ Continuous work for 12 minutes</td>
<td>1. 1 &amp; 2</td>
</tr>
<tr>
<td>2. Cardiac Strength/ Continuous Tempo for 8 minutes</td>
<td>2. 4 &amp; 5</td>
</tr>
<tr>
<td>3. Heart Rate Recovery/ Intervals for 30-60 seconds, 3-4 sets. Give gears for work and recovery.</td>
<td>3. W: 3-5, R: 1 &amp; 2</td>
</tr>
<tr>
<td>4. Cardiac Strength/ Intervals for 12 minutes. Give gears for work and recovery.</td>
<td>4. W: 3 &amp; 4, R: 1 &amp; 2</td>
</tr>
<tr>
<td>5. Specific Power/ Continuous Speed Play for 12 minutes</td>
<td>5. 3 &amp; 4</td>
</tr>
<tr>
<td>6. Endurance/ Continuous for 40 minutes</td>
<td>6. 2 &amp; 3</td>
</tr>
</tbody>
</table>
**Answer Key:** Learning Activity 6.3: The Process of Program Design

**Instructions:** Match the descriptions below with the part of the program design process it relates to. For a better understanding of the process, refer to the presentation *Program Design.*

**Description:**

1. This part of the process contains a color-coded periodization.
2. The main function of this part of the process is to create behavioral change.
3. In this part of the process, we can organize and tweak movements based on client ability and preferences.
4. All movement is metabolic so we must apply the right stress at the right time using this part of the process.
5. Be accountable to your client’s wants/needs by asking questions in this part of the process.
6. Meet a client where they need to be met according to their daily stressors using this part of the process.
7. This part of the process is the “big picture” of how the body mitigates force.
8. This part of the process is simply the equipment that we are using.
9. This part of the process is broken down into 3 sections: movement preparation, goal-based training and movement recovery.
10. A client’s style is determined in this part of the process.
**Answer Key: Learning Activity 7.1: Personalizing Group Training**

**Instructions:** Group training often fails because of the “one size fits all approach,” a lack of connection between the clients in the group, and a lack of seamless personalization. In this activity use the 3DC to give each exercise a style-based personalization. For inspiration review the presentation *Personal Training Practical*. In red, you will see the suggested exercise modifications. These are not the only possible answers.

<table>
<thead>
<tr>
<th>#1 Traditional</th>
<th>#2 Hybrid</th>
<th>#3 Progressive</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kinesis Row</strong></td>
<td><strong>Kinesis Row (use 1 handle)</strong></td>
<td><strong>Kinesis Row (use 1 handle)</strong></td>
</tr>
<tr>
<td>• Standing in RXX or LXX</td>
<td>• alternate legs lunging back</td>
<td>• Alternate legs lunging back</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Alternate pulling with the same side that lunges back</td>
</tr>
<tr>
<td><strong>TRX High Biceps Curl</strong></td>
<td>Alternate between TRX High Biceps Curl and Clutch Curl</td>
<td>Alternate between High Biceps curl and Clutch curl with one leg suspended</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power Plate Chest Press</strong></td>
<td>Power Plate Chest Press</td>
<td>Power Plate Chest Press</td>
</tr>
<tr>
<td>• Stand in RXX or LXX</td>
<td>• Alternate legs lunging forward</td>
<td>• pressing low, medium, high</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• alternate legs lunging forward</td>
</tr>
<tr>
<td><strong>Skater Drill (this may be done slower than the hybrid and progressive styles)</strong></td>
<td>Skater Drill with cones</td>
<td>Skater Drill with cones</td>
</tr>
<tr>
<td></td>
<td>• touch the top of the cone with the hand crossing the body</td>
<td>• Hop from right to left</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medicine ball wood chop</td>
</tr>
<tr>
<td><strong>Push Up</strong></td>
<td>Push Up</td>
<td>Push</td>
</tr>
<tr>
<td></td>
<td>• Alternating hands in LXX and RXX</td>
<td>• Alternating hands and feet in LXX and RXX</td>
</tr>
<tr>
<td><strong>TRX Plank</strong></td>
<td><strong>TRX Suspended Crunch</strong></td>
<td><strong>TRX Suspended Oblique Crunch</strong></td>
</tr>
</tbody>
</table>
Answer Key: Learning Activity 7.2: Programming for Group Training

Instructions: Match the description on the left with the programming type on the right. Refer to the presentation Group Training Solutions for better understanding. One programming type is used twice.

1. When using this program type, everyone in the group is trying to complete a task together.
   - A. Warding
2. When using this program type, one person is the leader and the other person(s) mimic their movements.
   - B. Games
3. The fitness professional is the coach and dictates the tempo when using this program type.
   - C. The Timer
4. These drills are performed with a partner while one partner is giving the other person resistance, and the other person is performing a task or movement.
   - D. “Give and Go”
5. When using this program type, there are a series of exercises performed to time. These can be internal or external.
   - E. Mirroring
6. This program type could also be called a “circuit.”
   - F. Relay Races
7. When using this program type, the person at the “go” exercise performs an exercise for a certain number of reps. When the “go” person is done, the group rotates.
   - G. Group Challenges
8. Play, where no one wins or competition, where there is a winner is descriptive of this program type.
   - H. Whistle Blower
9. When using this program type, you could have partner work up an ascending ladder. (Person 1 does 1 rep/ person 2 does 1 rep, person 1 does 2 reps/ person 2 does 2 reps, person 1 does 3 reps/ person 2 does 3 reps...)

Instructions:

- Match the description on the left with the programming type on the right. Refer to the presentation Group Training Solutions for better understanding. One programming type is used twice.

1. When using this program type, everyone in the group is trying to complete a task together.

2. When using this program type, one person is the leader and the other person(s) mimic their movements.

3. The fitness professional is the coach and dictates the tempo when using this program type.

4. These drills are performed with a partner while one partner is giving the other person resistance, and the other person is performing a task or movement.

5. When using this program type, there are a series of exercises performed to time. These can be internal or external.

6. This program type could also be called a “circuit.”

7. When using this program type, the person at the “go” exercise performs an exercise for a certain number of reps. When the “go” person is done, the group rotates.

8. Play, where no one wins or competition, where there is a winner is descriptive of this program type.

9. When using this program type, you could have partner work up an ascending ladder. (Person 1 does 1 rep/ person 2 does 1 rep, person 1 does 2 reps/ person 2 does 2 reps, person 1 does 3 reps/ person 2 does 3 reps...)
**Answer Key: Learning Activity 7.3: Individualizing Intensity in Group Training**

**Instructions:** Fill in the blank with the appropriate word that relates to exercise intensity in group training from the word bank. Refer to *Group Training Solutions* for assistance.

<table>
<thead>
<tr>
<th>Word Bank:</th>
</tr>
</thead>
<tbody>
<tr>
<td>level</td>
</tr>
<tr>
<td>Gears</td>
</tr>
<tr>
<td>intensity</td>
</tr>
<tr>
<td>rate of perceived exertion</td>
</tr>
<tr>
<td>tempo</td>
</tr>
<tr>
<td>energy system</td>
</tr>
</tbody>
</table>

1. If heart rate measurement is not a possibility, or there are other factors in their genetics or lifestyle that alter their heart rate, introduce them to the rate of perceived exertion scale and how that relates to exercise intensity and correlates to heart rate Gears.

2. Given a client’s goal and level of fitness as gathered by utilizing the PDQ, you will be able to gather what intensities he/she should target individually while participating in the group program.

3. During the initial consultation, introduce your client to heart rate and the Gears. This is easiest to perform on a cardiovascular machine of their choice. Show them the heart rate Gears chart and what each percentage is, discussing the energy system used and how it will relate to their individual goal.

4. The acute variable of tempo and range of motion can increase/decrease heart rate/intensity to match the desired response needed.

5. The Gears and the intensities accumulated at the end of the workout will give each client a training load. That training load will give them immediate feedback of calories burned and what was accomplished during the workout.

6. Prior to performing each movement, assign a specific intensity the client should be looking to experience/feel during the exercise.
**Answer Key: Learning Activity 7.4: The Group Training Process**

**Instructions:** Understanding the process of group training is essential to achieve seamless integration. Fill in the information needed in the third column to reinforce the group training process. Refer to all group training presentations, but especially, *Group Training Solutions*, for better understanding.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>The 9 “Wants” of Group Training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. answers</td>
</tr>
<tr>
<td></td>
<td>2. plans/directions</td>
</tr>
<tr>
<td></td>
<td>3. guidance</td>
</tr>
<tr>
<td></td>
<td>4. supervision</td>
</tr>
<tr>
<td></td>
<td>5. results</td>
</tr>
<tr>
<td></td>
<td>6. adherence</td>
</tr>
<tr>
<td></td>
<td>7. fun</td>
</tr>
<tr>
<td></td>
<td>8. atmosphere</td>
</tr>
<tr>
<td></td>
<td>9. relationship training</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2</th>
<th>PDQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• When should this be done? <em>Before group training class begins and individually.</em></td>
</tr>
<tr>
<td></td>
<td>• What two pieces of specific information will you be sharing with the group from each individual to help build a team? <em>goal</em> and <em>motivation.</em></td>
</tr>
<tr>
<td></td>
<td>• Give each client a number depending on their style. What style is each number?</td>
</tr>
<tr>
<td></td>
<td>1. Traditional</td>
</tr>
<tr>
<td></td>
<td>2. Hybrid</td>
</tr>
<tr>
<td></td>
<td>3. Progressive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3</th>
<th>DR.O/ MOVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• These appraisals should be performed individually and used when? <strong>At the beginning of each session.</strong></td>
</tr>
<tr>
<td></td>
<td>• Once you recognize possible areas of restricted motion, what can you do? <strong>Assign helpful tissue enhancement.</strong></td>
</tr>
<tr>
<td></td>
<td>• If you have red flags in the physical and lifestyle buckets, what should you do concerning...</td>
</tr>
<tr>
<td></td>
<td>1. Load - less</td>
</tr>
<tr>
<td></td>
<td>2. Tempo - decrease</td>
</tr>
<tr>
<td></td>
<td>3. Rest and Water Breaks - more</td>
</tr>
<tr>
<td></td>
<td>4. Mobilizers – between sets</td>
</tr>
<tr>
<td></td>
<td>• If you have red flags in the mental/emotional bucket, what should you do concerning...</td>
</tr>
<tr>
<td></td>
<td>1. Go to’s: <em>The Timer and Whistle Blower</em></td>
</tr>
<tr>
<td></td>
<td>2. Games and Relay Races – <em>minimize or remove competition</em></td>
</tr>
<tr>
<td></td>
<td>3. Group Challenge - <em>avoid</em></td>
</tr>
<tr>
<td></td>
<td>4. Give and Go – <em>keep intensity fair</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4</th>
<th>3DC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• When can the 3DC be utilized to individualize each participant’s workout? <strong>In tweaking exercises and drills (consider goal, style and level).</strong> Some portions of the workout may not be able to be tweaked such as a competition.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Gears</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• When should you introduce each client to heart rate, Gears and rest and recovery? <strong>Prior to the start of group training.</strong> <em>(This is important for seamless integration.)</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 6</th>
<th>Kaizen-6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• What can you do to assess the engagement and satisfaction during the session? <strong>Watch body language and ask questions</strong></td>
</tr>
<tr>
<td></td>
<td>• What can you do to assess satisfaction after the session? <strong>Obtain bio-feedback scores, watch body language and ask questions</strong></td>
</tr>
<tr>
<td></td>
<td>• What can you do to assess satisfaction with the program? <strong>Perform Kaizen-6 individually and in a group.</strong></td>
</tr>
</tbody>
</table>
**Answer Key: Learning Activity 8.4: 10 Keys to Client Retention**

**Instructions:** Each statement below relates to one of the ten keys to client retention. Label the statements with the key that it relates to. Refer to the presentation *Client Retention Solutions* for assistance.

<table>
<thead>
<tr>
<th>10 Keys to Client Retention:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Market to existing clients</td>
<td>Consistency</td>
</tr>
<tr>
<td>Solicit Feedback</td>
<td>Focus on their Reason</td>
</tr>
<tr>
<td>Have FUN!</td>
<td>Connect</td>
</tr>
<tr>
<td>Deliver Results</td>
<td></td>
</tr>
</tbody>
</table>

1. You play a game with your client such as balloon taps or fun agility drills. Your client is laughing and having a good time. This is an example of **Have FUN!**
2. Weekly, you send your active or inactive client articles via email on nutrition and movement related content that relates to him/her. Also, you send your client a birthday card on his/her birthday. This is an example of **Be a life resource**.
3. You have a client or two that train with you twice a week because they really can’t afford to train three days a week. You are offering a group class that would be a perfect to help your client afford more training days. You suggest your client join your new class. This is an example of **Market to existing clients**.
4. Your client told you during your client orientation session the reason she wants to lose 20 lbs. is for her upcoming wedding. You use this information to help your client stay motivated to follow the nutrition and exercise plan. This is an example of **Focus on their reason**.
5. You use the PDQ initially and Kaizen-6 continually to build rapport and engage with your client. This is an example of **Connect**.
6. You use the PDT and the 3DC to continually give your client a structured plan that progresses to deliver appropriate results and matches what he/she wants. This is an example of **Consistency**.
7. Your client is doing great and has achieved their first short term goal. You give your client a gift card to the club’s pro-shop for their hard work. This is an example of **Reward**.
8. You are demonstrating integrity with your client. You always have them on your schedule in advance, you are on top of their billing and you are always ready to go on-time. This is an example of **Following through**.
9. You have delivered a program that meets your clients wants and needs because you have used empathetic listening while conducting client interviews and have developed a program using the PDT and 3DC that matches your client. Your client is obtaining changes in their appearance and attitude that he/she really likes. This is an example of **Results**.
10. You ask your client confidence scale type questions to see how they like the exercises you are giving them during the session, and you perform a Kaizen-6 after session on a weekly basis. This is an example of **Solicit feedback**.