Lesson #1 Background and Benefits

*Joseph Pilates was born in Germany in 1883
*Father was a prize winning gymnast.
*Joseph was a sickly child (asthma, rickets, rheumatic fever)
*Dedicated his life to improving his health
*Studied body building, yoga, Kung Fu and gymnastics
*By age 14 he was fit enough to pose for anatomical charts
*He believed that “Modern life”, bad posture and inefficient breathing were the roots of poor health.
*He devised a series of exercises and training techniques and engineered all equipment to teach his methods.
*Called his method “Contology”
*Contrology encourages mind to control the muscles
*Pilates focuses on core muscles that keep body balanced and provide support for the spine.
*All movement comes from core stabilization. Momentum should not be used to generate power.
*We will work opposing muscles throughout routine to get a full body workout.

Pilates can be defined as a mix of practical movement styles from various modalities such as gymnastics, martial arts, yoga and dance

Benefits of Pilates—
1. Increases joint mobility, flexibility and balance
2. Develops muscle strength and body awareness
3. Improves posture, endurance and alignment
4. Improves postural disorders, back strain and general mobility.

Basic Scientific Principles of Exercise:

Cardio—Endurance for heart and muscles. Intervals for health and performance.
Strength—increases lean/fat body ratio
Flexibility—reduces injury. Maintains healthy muscle.
Lesson #2 Stance and Breathing

Stance:
* Relaxed foot position (warm-up, C-curve, roll-up)
* Pilates V-- Squeeze abs, adductors, glutes (calf raises, overhead, neck pull)

Transvers Abdominals:
* locate standing—draw abs away from hand (feel them move)
* Pilates V—Zip up from heels. Draw abs to center
* Seated—scoop the stomach
* Supine—cough

Breathing:
* Breathing is an automatic, necessary activity that influences the body’s ability to work. “it is the first act of life and the last” (JP) Proper breathing can help us optimize our health and wellness, whereas poor breathing can set the stage for illness and disease.
* Breathing releases toxins from our bodies
* Complete exhalation eliminates the stale air that accumulates at the bottom of our lungs. We tend to inhale more air then we exhale.
* Range of motion increases with deep breathing.

Diaphragmatic breathing:
* Massages the internal organs as the diaphragm drops down into the abdominal cavity on each exhale. It is calming and relaxing.

Lateral breathing:
* Breathing deeply and fully into the sides and back, or the lower lobes of the lungs. You can keep the abdominal muscles contracted providing support for the lower spine and back. (C-curve)

Staccato breathing:
* Short breaths in and out. (Hundred)

Inhale is short, exhale is long. (Roll up)
Lesson #4 Musculoskeletal Anatomy

Neck
Sternocleidomastoid—Cervical flexion (forward and back)
   Hundred
Scalenus—Flexion, rotation, extension (side to side)
   Double leg kick

Arms
Biceps—elbow flexion (decreasing the angle)  - **curls**
Triceps—elbow extension (increasing the angle)  - **push-up**

Shoulders
Deltoids—flexion, extension (anterior, medial, posterior)
   L
   **Lateral Raise, press back, press forward**
   Rotators—rotation. **Double leg stretch**

Chest
Pectorals—**push-ups**

Upper/Mid back
Trapezius & rhomboids—scapular elevation and retraction
   **Jackknife**

Anterior Torso
Rectus Abdominals—Spinal Flexion and rotation (six pack)
   **Roll up w/bent knees**
Transverse Abs—abdominal compression and expiration
   **Double leg drop**

Posterior Torso
Erector Spinea—Spinal extension  **Dead lift**

Buttocks
Gluteus Maximus—Hip extension & external rotation
   **Posterior leg lift**

Ant. upper thigh
Iliopsoas and Quads. –Hip flexion & knee extension  **d-leg drop**

Post. Upper thigh
Hamstring—Hip extension & knee flexion (back)

Abductors
Gluteus Medius &Tensor Fascia latae (TFL)-Hip Abduction
   **Side leg lift away from body**

Adductors
Hip adduction -- **Leg crosses over body (to midline)**

Ant. Lower leg
Anterior Tibialis—dorsi fexion (bending backward)
   **Point and Flex**

Posterior lower leg
Gastrocnemius & Soleus—Plantar Flexion (away from body)
   **Calf raises**
Lesson #5 Movement & Equipment

Pilates Movement:
* We will be working on the floor using a mat. Pilates is also done on a machine called a reformer.
* Pointing the toe and flowing the foot during Pilates can prevent pain. The ankle should be free of rigidity and stiffness.
* We will repeat movement several times in class to perfect alignment, strength and flow of the movement.

Equipment:
It is appropriate to use small hand weights, (no more then 8 lbs.), Pilates circle, band, yoga mat, squishy balls and stability balls.
* weights over 8 lbs are not advised due to stress on the joints. We want to create long lean muscles.
* Pilates is done in bare feet so we can feel connected to the mat. Shoes stop sensory nerves from feeling the ground and offering proprioceptive feedback. (A sensory receptor found in muscles that detect motion or body position)

Muscle balance and Lengthening:
* Muscles can be broadly classified into two types: Stabilizers & Mobilizers

Stabilizer:
* Primarily responsible for assisting in postural holding & stabilizing a joint
* Smaller muscles
* Tend to be shorter muscles that lie deeper w/in the body.
* Need to be able to work for prolonged periods. Endurance
* Work at 20-30% Stand on one leg --BOSU

Mobilizers:
* Responsible for muscle movement
* Tend to lie near the surface of the body
* Long muscles
* Work at 40-100% of maximal voluntary contraction - Squats on BOSU

Lengthening:
* Pilates encourages length and space in your spine in every exercise. After awhile those muscles remember how good it feels to be tall and you will carry yourself differently. Having a strong core and a flexible spine makes you feel good, stand straighter and actually appear taller.

Stress:
Flexibility helps to relieve stress. Healthy muscles are supple and flexible. When you are focused on breathing properly, with complete concentration, your mind is quiet and free from stress and anxiety. Practice deep abdominal breathing to soothe the nervous system and relax the muscles.

Q. What happens inside your body when you are stressed?
* Tight muscles *upset stomach *elevated HR
* Insomnia *sugar cravings *headaches

5 min. Relaxation time at the end of class.
Lesson #5 Principle of Pilates

1. **Relaxation**—The starting point in a Pilates session, releasing unwanted tension from the body. **Warm-up**

2. **Breathing**—The breath should lead the movement. It emphasizes a deep diaphragmatic inhale, followed by a forced exhale. It helps maintain proper alignment, oxygenates your body and aids in flow of movement. **Roll up**

3. **Concentration**—Allowing the mind to control and move the body. Being present while doing the moves to get the most benefit. Full commitment without momentum to re-balance and re-align the body. **Rocker**

4. **Control**—Each move is controlled and should never be wasted. Keep movement within your capabilities to maintain alignment and stability. **Teaser 3**

5. **Centering**—Everything is originated from the center of the body, called the “Powerhouse” or core. A strong core makes for a strong body overall. **Roll over**

6. **Precision**—having a place for each part of your body to go making each movement correct. Focus on quality, not quantity. Each movement has a purpose.

7. **Fluidity**—Having all muscles working together, synchronized with the breath. Movement should be performed without strain or awkward painful positions. Each movement should flow gracefully into the next. **Jackknife**

8. **Alignment**—Putting the joints in the proper place to ensure unnecessary Stress is avoided. All parts affect each other. **Side Bend**

9. **Coordination**—Using upper and lower body effectively for safe and sound Movement. Incorporates the concept of mindfulness with movement. **Lengthened side crunch**

10. **Stamina**—The physical or mental strength to resist fatigue and improve the ability to perform over time. The ability to work through the patterns. **Stomach series**