**I. Design Planning: Volleyball Unit Plan With Biomechanics**

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| **A. What do I want my students to know?** |
| **Planning Area:** | **REMEMBER to...** |
| 1. **Content**  **Objective(s)**  | Students are able to demonstrate proficient movement skills in **volleyball.** (1.2)Students are able to explain the skill-related components of balance, reaction time, agility, coordination, explosive power and speed that enhance performance levels in **volleyball.**Students are able to explain and demonstrate advanced offensive, defensive and transition strategies as they pertain to **volleyball.** (1.4)Students are able to describe the biomechanical principles used when performing **volleyball** skills. (1.5) |
| 2. **Critical Attributes**  **of the Objective(s)** | **Forearm Pass:**1. Stand with your feet shoulder width apart.
2. Stand in a forward-stride position facing the flight of the ball.
3. Position your weight on the balls of your feet.
4. Bend your waist and knees.
5. Place the back of one hand in the palm of the other hand with your thumbs folded evenly.
6. Straighten your arms at a 45 degree angle to the floor.
7. Position your knees ahead of your toes and your shoulders ahead of your knees.
8. Keep your back straight and your hands in front of your knees.
9. Contact the ball using your forearms between your hips and knees.
10. Straighten your arms from the shoulders on contact.
11. Straighten your legs for control using very little arm swing.
12. Follow through in the direction of flight.

**Set:**1. Move under the ball.
2. Assume a forward-stride position.
3. Hold your hands up with your elbows flexed.
4. Bend your knees and hips slightly.
5. Position your shoulders square to the target.
6. Form a window with your flexed fingers and thumbs.
7. Contact the lower back of ball in front of your forehead with your fingertips.
8. Give with your fingers, wrists, and elbows on contact.
9. Straighten your fingers, wrists, elbows, and knees upward after contact.

**Standing Spike:** 1. Point your non-striking hand at the ball.
2. Hold the elbow of your hitting arm high with your wrist straight and your thumb pointing downward.
3. Lead the swing forward with your elbow reaching for the ball.
4. Contact the ball in front of your body and above your right shoulder.
5. Contact the ball on its lower back half with the heel of your open hand.
6. Snap your arm and wrist quickly upward and forward.
7. Roll your fingers over the top of the ball.
8. Follow through in the direction of the spike dropping your hand to waist level.
9. Land on both feet with your knees bent.

**Underhand Serve:**1. Face the direction of the intended hit.
2. Stand with your non-dominant foot forward and your weight balanced on both feet.
3. Hold the ball in your non-dominant hand near the front of your right hip.
4. Shift your weight to your rear foot and move your dominant hand backward.
5. Step forward with your non-dominant foot as your striking arm swings forward.
6. Contact ball with heel of your dominant hand.
7. Follow through in the direction of the intended flight.

**Spike:**1. Remain at the sideline until the ball is halfway between the setter and you.
2. Approach the ball at a 45 degree angle taking four steps with the last two steps consisting of a step with the outside foot and closing with the inside foot.
3. Plant your heels and swing both arms back to waist height.
4. Transfer your weight to the balls of your feet as your arms swing forward and up.
5. Point your non-hitting hand at the ball.
6. Hold the elbow of your hitting arm high with your wrist bent back and your thumb pointing downward.
7. Lead the forward swing with your elbow while reaching for the ball.
8. Contact the ball on its lower back half with the heel of your hand in front of your body and above your right shoulder.
9. Snap your arm and wrist quickly upward and forward rolling your fingers over the top of the ball.
10. Follow through in the direction of the spike dropping your hitting hand to your waist and landing on both feet with your knees bent.

**Block**1. Position your open hands at shoulder level with your fingers spread.
2. Position your body one half body width to attacker's hit side and one to two feet from the net.
3. Bend your knees slightly.
4. Focus on the setter until the set is made, then focus on the spiker.
5. Squat down and explode straight up pushing with your legs just after the spiker jumps.
6. Reach out with your arms, keep your thumbs close, and penetrate the opponent's court.
7. Keep your fingers spread and firm.
8. Let the ball rebound off your hands and then withdraw your hands.
9. Land on both feet with your knees bent.
10. Turn off the net quickly and look for the ball.

**Overhand Serve**1. Face the net in a forward-stride position with your non-striking foot forward.
2. Hold the ball in your non-striking hand.
3. Position your weight on your dominant foot.
4. Toss the ball into the air two feet higher than your head in front of your hitting shoulder.
5. Bring your striking arm back into a throwing position.
6. Step forward transferring your weight to your non-dominant foot.
7. Swing your striking arm forward.
8. Straighten your arm, flex your wrist, and contact the back of the ball with the heel of your open hand.
9. Follow through in the direction of ball flight and then downward.

**Dink:**1. Wait at the attack line until the set is half the distance from the setter to the attacker.
2. Focus on the ball.
3. Step on your outside foot, then your inside foot, and close with your outside foot.
4. Plant your heels to stop your horizontal momentum.
5. Transfer your weight to the balls of your feet.
6. Swing your arms back to waist height.
7. Swing both arms forward.
8. Contact the lower half of the ball in front of your hitting shoulder with the upper two joints of your fingers with your arm straight.
9. Land on both feet with your knees bent.

**Net Recovery:** 1. Watch the ball hit the net.
2. Bend your knees.
3. Wait for the ball to come out of the net.
4. Get under the ball.
5. Dig the ball upward.

**Back Dig:**1. A back dig is typically performed after chasing the ball.
2. Place the back of one hand in the palm of the other hand with thumbs folded evenly.
3. Reach for the ball with both arms.
4. Contact ball with your forearms at head level.
5. Follow through in the direction of the flight.

**Overhand Floater Serve:**1. Position your feet in a comfortable forward stride position with weight evenly distributed and your non-striking foot forward.
2. Toss the ball in front of your hitting shoulder close to your body with little or no spin.
3. Swing your arm back with your elbow high and your hand near your ear.
4. Contact the ball with the heel of your open hand using a poking action when your arm is straight.
5. Transfer your weight to your front foot, but do not follow through with your arm.

**Ready Position:**1. Position your feet shoulder width apart.
2. Position your feet in a forward-stride position.
3. Bend your knees.
4. Position your weight forward over your toes.
5. Position your arms in front of your body.
6. Focus on the ball.
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| 3. **Key Questions** | * Why use a bump pass for balls below the waist?
* Why are high passes important?
* How do you decide whether to use a set or a bump pass?
* What is the difference between offensive hits and passing to teammates?
* How do angles affect spiking success?
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| 4. **Key Terms and Concepts** | * It is illegal to touch the net or cross the center line.
* Either player involved in a simultaneous tap or block may hit the ball again.
* It is illegal to hit the ball twice in a row, or as a team more than three times.
* The ball may not hit the ground.
* Strategy: Where and when to hit the ball.
* Balance – ability to keep an upright posture while standing still or moving.
* Coordination – ability to use your senses together with your body parts.
* Reaction time – amount of time it takes you to move once you realize the need to act.
* Agility – ability to change your body position quickly and to control your body’s movements.
* Power – ability to use strength quickly. Areas most likely to improve with repeated effort.
* Speed – ability to perform a movement or cover a distance in a short period of time.
* Leverage – a mechanical advantage.
* Proprioception – The ability to sense the position, location and orientation of the body.
* Base of Support – The area of the base or foundation that supports the body. The base of support may include one or more body parts and the distance between them.
* **ACE** - A serve that is not passable and results immediately in a point.
* **ASSIST** - Passing or setting the ball to a teammate who attacks the ball for a kill.
* **BACKCOURT** - The area from the endline to the attack line.
* **BACK SET** - A set delivered behind the setter’s back, which is subsequently hit by an attacker.
* **BACK ROW ATTACK** – When a back row player attacks the ball by jumping from behind the 3m line before hitting the ball. If the back row player steps on or past the 3m line during take-off, the attack is illegal.
* **BLOCK** - A defensive play by one or more players meant to deflect a spiked ball back to the hitter’s court. It may be a combination of one, two or three players jumping in front of the opposing spiker and contacting the spiked ball with the hands.
* **BUMP** – a common term for forearm passing.
* **DIG** - Passing a spiked or rapidly hit ball. Slang for the art of passing an attacked ball close to the floor.
* **DINK** - A legal push of the ball around or over blockers.
* **DOUBLE BLOCK** - Two players working in unison to deflect an attacked ball at the net back to the hitter’s side.
* **DOUBLE HIT** - Successive hits or contacts by the same player. (Illegal)
* **FOUR-TWO** - A 6-player offensive system using four hitters and two setters.
* **FREE BALL** - A ball that will be returned by a pass rather than a spike. This is usually called aloud by the defense instructing players to move into serve receive positions.
* **HELD BALL** - A ball that comes to rest during contact resulting in a foul.
* **HIT** - To jump and strike the ball with an overhand, forceful shot.
* **HITTER** - Also "spiker" or "attacker"
* **JUNGLE BALL** - Any volleyball game with people who don't really know how to play volleyball. A common euphemism for this type of game is "Picnic Volleyball."
* **MINTONETTE** - The original name of the game of volleyball, created by William Morgan.
* **MULTIPLE OFFENSE** - A system of play using different types of sets other than just normal outside sets.
* **OFFSIDE BLOCK** - Player at the net, which is on the side away from the opponent's attack.
* **OFF-SPEED HIT** - Any ball spiked with less than maximum force but with spin.
* **OUTSIDE HITTER** – a left-front or right-front attacker normally taking an approach which starts from outside the court
* **OVERHAND PASS** - A pass executed with both hands open, controlled by the fingers and thumbs, played just above the forehead.
* **OVERHAND SERVE** - Serving the ball and striking it with the hand above the shoulder.
* **OVERLAP** – refers to the positions of the players in the rotation prior to the contact of the ball when serving.
* **PANCAKE** - A one-handed defensive technique where the hand is extended and the palm is slid along the floor as the player dives or extension rolls, and timed so that the ball bounces off the back of the hand.
* **PASS** – see "Forearm Pass"
* **QUICK SET** – a set (usually 2’ above the net) in which the hitter is approaching the setter, and may even be in the air, before the setter delivers the ball. This type of set requires precise timing between the setter and hitter.
* **READY POSITION** - The flexed, yet comfortable, posture a player assumes before moving to contact the ball.
* **ROTATION** - The clockwise movement of players around the court and through the serving position following a side out.
* **SERVE** - One of the six basic skills; used to put the ball into play. It is the only skill controlled exclusively by one player.
* **SERVER** - The player who puts the ball into play.
* **SERVICE ERROR** - An unsuccessful serve in which one or more of the following occurs: 1) the ball hits the net or fails to clear the net, 2) the ball lands out of bounds, or 3) the server commits a foot fault.
* **SERVICE WINNER** - A point the serving team scores when this player has served the ball. The point can be an immediate (in the case of an ace) or delayed (a kill or opponent attack error after a long rally). Therefore, the sum of the team's service winners equals their score.
* **SET** - The tactical skill in which a ball is directed to a point where a player can spike it into the opponent's court.
* **SETTER** – the player who has the 2nd of 3 contacts of the ball who "sets" the ball with an "Overhand Pass" for a teammate to hit. The setter normally runs the offense.
* **SIDE OUT** - Occurs when the receiving team successfully puts the ball away against the serving team, or when the serving team commits an unforced error, and the receiving team thus gains the right to serve.
* **SIX-TWO** – A 6-player offense using 2 setters opposite one another in the rotation. Setter 1 becomes a hitter upon rotating into the front row as setter 2 rotates into the back row and becomes the setter.
* **SPIKE** - Also hit or attack. A ball contacted with force by a player on the offensive team who intends to terminate the ball on the opponent's floor or off the opponent's blocker.
* **STRONG SIDE** - When a right-handed hitter is hitting from the left-front position or when a left-handed hitter is hitting from the right-front position.
* **STUFF** - A ball that is deflected back to the attacking team's floor by the opponent's blockers. A slang term for "block."
* **UNDERHAND SERVE** – a serve in which the ball is given a slight under-hand toss from about waist high and then struck with the opposite closed fist in an "underhand pitching" motion.
* **WEAK SIDE** – When a right-handed player is hitting from right-front position or when a left-handed player is hitting from the left-front position.
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| 5. **Essential**  **Prerequisites** | Students should be able to: * Basic volleyball skills.
* Basic offensive and defensive team strategies.
* Basic transition strategies.
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| **B. How will I know if they have learned the content objective(s)?** |
| **Planning Area:** | **REMEMBER to...** |
| 1. **Initial Assessment**  (*Diagnosis*) | * Observation
* Verbal and written
* Self evaluation
* Peer evaluation with a checklist
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| 2. **Acquisition** **Assessments**  (*Short-Term Learning*) | 1.1, 1.2, 1,4, 1.7, 1.8, 1,9, 1.10, 1.11, 1.12* Have students practice the **forearm pass** in pairs (one partner tosses while the second partner practices the forearm pass, then

they switch roles). * Have students practice the **forearm pass** in pairs (passing back and forth).
* Have students practice the **set** in pairs (one partner tosses while the second partner practices the set, then they switch roles).
* Have students practice the **set** in pairs (passing back and forth).
* Have students practice the forearm pass and **set** in pairs (passing back and forth).
* Have students practice the **standing spike** off a self tossed ball in pairs.
* Have students practice the **standing spike** off a partner tossed ball in groups of three.
* Have students practice the **standing spike** off a set ball in groups of three.
* Demonstrate and describe the **underhand serve**.
* Have students practice the **underhand serve** with a partner.
* Have students practice the **underhand serve** with a partner while focusing on accuracy.
* Demonstrate and describe **spiking.**
* Have students walk through the **spiking** approach.
* Have students practice the **spike** off a partner toss in groups of three.
* Have students practice the **spike** off a set in groups of three.
* Demonstrate and describe **blocking.**
* Have students practice spiking and **blocking** in groups of six to spiker to **blocker** to retriever to retriever 2 to setter to spiker line).
* Have students practice spiking and **blocking** in groups of six (spiker to blocker to retriever to setter).
* Demonstrate and describe the **overhand serve.**
* Have students practice the **overhand serve** in pairs.
* Have students practice the **overhand serve** in pairs while focusing on accuracy.
* Demonstrate and describe the **dink.**
* Have students practice the **dink** off a toss in groups of six (line to dink to blocker to retrievers to tosser).
* Have students practice the **dink** off a set in groups of six (line to dink to blocker to retrievers to setter)
* Demonstrate and describe **net recovery.**
* Have students practice **net recovery** in pairs.
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| 1. **Mastery**

 **Assessments**  (*Long-Term Learning*) | * Students demonstrate good footwork and timing for successful spikes.
* Teams set to spikers during the game.
* Back row players consistently return serve by providing a high pass to the front middle player preparing for a set/spike combo.
* Teams able to determine who are their spikers, setters, strong servers and least likely to control the ball. Placement of team members accordingly.
* Students demonstrate that control and strategy make up for being too aggressive and making offensive mistakes.
* Students able to change the direction of the ball by moving body position.
* Team work: Students able to consistently back up a teammate and not take over.
* Anticipation and Reaction Time: Balls hit in the net are recoverable, how to prepare for a spike, and possible winning angles a player has when hitting.
* Students able to value and maintain good sportsmanship.
* Students able to explore other strategies during their matches – do the unexpected by look like going to spike but hit a soft shot, change directions of the hit, send ball deep, hit to the weakest player on the other team.
* Cognitive Knowledge: Students work together in groups of 4 on a Volleyball Webquest. Students will need to incorporate vocabulary, strategies, history, technology and presentation skills for this project: <http://questgarden.com/q/volleyball>
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| **C. What resources and strategies will I use to teach the objective(s)?** |
| **Planning Area:** | **REMEMBER to...** |
| 1. **Resources** | Bonnie’s:* Volleyball Unit from Complete Physical Education Lessons by Kleinmen
* Skill/Health Related Fitness cards
* Biomechanics handout

SPARK* [www.sparkfamily.org](http://www.sparkfamily.org) (subscription required)
* Middle School Volleyball, Task Cards and Media Files
* High School Volleyball, Task Cards and Media Files
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| 2. **Strategies** | 1. *Learning the importance of teamwork and accepting differences.*
2. *Being prepared – keep eye on ball, position on court depends where the ball is, when receiving get behind the incoming ball, be ready to play the ball until it actually hits the ground.*
3. *Hit the ball up when in doubt.*
4. *Placement of hits – to open court, deep, to weakest player, with change of direction, with power and speed.*
5. *Analyze the strengths and weaknesses of own team as well as opponents.*
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