Toss Juggling for PE Teachers

This toss juggling site provides PE teachers with activities to implement into their classes as well as novice, intermediate, and advanced instructional steps, tips, videos, and juggling benefits.

Welcome
Watch this stunning juggling performance using a variety of different props.

A little about toss juggling

Toss juggling involves the manipulation of one or many objects by using one or many hands and trying to keep them off the ground. Juggling is a repetition of controlled throwing and catching and involves much focus and concentration. The person performing the juggling is called the juggler. The juggler refers to the objects as props.

The top 3 benefits to juggling

1. Increases Gray and White Matter in the Brain
Studies show that due to initially learning to juggle the 3-ball cascade is correlated with an increase in gray matter, whereas further improvement of the skill over time due to training does not seem to alter brain structure. Studies show that the aging brain is able to retain its neuroplasticity in that brain power can be enhanced with new experiences or tasks. Therefore, the brain is able to form new neural connections- pathways and synapses. These finds may have a significant impact on coming up with new treatments for neurological diseases such as multiple sclerosis where neural pathways become degraded.

2. **Sharpen Focus and Concentration**

Juggling engages your problem-solving skills. It helps you focus and direct attention better for different tasks and in many aspects of your life. Juggling has both mental and physical benefits.

3. **Improves Coordination**

Juggling is beneficial to all age groups and body types. Juggling has positive affects on all ability levels from the non-athletes to athletes and from people of elementary age to over senior citizen age. It may be easier for some athletes to perform the juggling skills but these individuals can even take their coordination to higher levels by learning new patterns and moves.

Other benefits include maintains and increases range of motion in the arms and shoulders, it's a gentle no impact workout, relieves stress, little space is needed, props are portable and fairly inexpensive compared to other PE equipment.

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What does research say?

"The brain is like a muscle, we need to exercise it," Dr. Arne May
Beside the many benefits of juggling. According to Oxford University, research shows learning a new complex skill such as juggling can increase gray and white matter in the brain after a certain period of training. Studies also show that once training has stopped after a few months these areas in the brain do not sustain the increased size. Use it or lose it. MRI scans have shown that a 5% increase in white matter can occur when learning the 3 ball cascade when training for six weeks. This white matter change is linked to the time spent learning a new skill not the level accomplished. For more detailed information click on the buttons below.

RESEARCH LINK 1

RESEARCH LINK 2

RESEARCH LINK 3
Jugglers refer to the objects they juggle as props. There are many different kinds of props. Props can come in different sizes, shapes, colors, and materials. The most common are balls, rings, and clubs. I have also seen scarves gain popularity in schools for students at the elementary and middle school levels. Beanbags are also great for novice level jugglers. The square shaped beanbags are the first props I started with as a child and are still my favorite to this day. I will include videos on most props that will be most beneficial to teaching juggling. The bottom of the page includes links to three different juggling equipment websites so you can purchase your props.
Scarf

- These scarves are lightweight and are made of woven nylon
- Due to their lightweight and float I suggest this as the first prop to learning the fundamentals
- This is easiest prop to toss and catch with listed on this site due to its slow fall
- I suggest using the 16"x16" scarves but they come in other sizes such as 24"x24"

Beanbag

- They are great for beginners in learning the fundamentals as well as excellent for learning to juggle three or more
- Some are made from a polyurethane coated fabric for durability and others are sewn and tightly packed with birdseed
- They are moderate in weight- not too heavy but not too light
- They are an ideal weight for juggling and will not bounce or roll

Juggling Balls or Tennis Balls

- They are excellent for learning to juggle three balls or more
- They are slightly lighter than the beanbags unless they are weighted
- Some bounce and others do not depending on the material
- Most juggling balls consist of materials that include vinyl, acrylic, and silicone
• They are a step up in terms of difficulty from the beanbags due to their weight, hollow center, and ability to bounce and roll
• Their lighter weight and hollow inside make them more challenging to catch

Rings

• Are more difficult compared to beanbags and balls due to their lightweight, thin, and flat characteristics
• These rings are molded from polypropylene therefore durable and lightweight
• They are more difficult to toss and catch due to its physical characteristics of thin, round, and smooth
• When juggling your hands can become sweaty, this then makes it slightly more difficult to release your tosses

Clubs

• Clubs come in many different materials such as polyethylene (plastic), foam, wood, and rubber
• Clubs also have different shapes due to their diverse styles
• They are more difficult throw and catch compared to scarves, beanbags, balls, and rings due to shape, weight, and spin
• Start out using foam clubs especially in classes for safety and instructional purposes
Flower Sticks

- Less common but very fun
- I was first introduced to flower sticks when I coordinated Children and Youth Day for the Hawaii Association for Health, Physical Education, Recreation & Dance
- Two shorter sticks are used to toss up one larger stick to perform maneuvers or tricks
Juggling Skills

Start with the recommended props in the following order: scarves, beanbags, juggling balls or tennis balls, rings, and lastly clubs. Complete all the steps 1-4 before moving onto the next prop. This section's instructions are directed toward using beanbags, and juggling balls or tennis balls. The instructions are the same for the other props but the grip on the props is slightly different. Scarves you hold with your fingers rather than cradling in your hand.

Holding the Props
Body Position

- Feet are shoulder width apart
- Knees slightly bent
- Keep shoulders relaxed
- Keep your head up
- Elbows near your body
- Hands about waist height
Beginner Skills

The numbered instructional steps below do not match with the diagram numbers. Read the instructional steps first then view the images.

Step 1: The Drop

1. Take all three props toss them into the air and let them all hit the ground with no effort to catch them. This is the called THE DROP.
2. Practice the drop a few times to familiarize yourself because this will likely occur often as a beginner juggler.

Step 2: The Toss

1. Cradle a ball in the center of your dominant hand.
2. Stand relaxed with elbows near your body and hands about waist height.
3. Throw "scoop toss" ball one up at about eye level in an easy arc from one hand to the other and about as wide as your body.
4. Repeat this back and forth continuously in one motion.

Tip: Keep tosses consistent and use a natural "scooping motion."
Step 3: The Exchange- Two Props

1. Pick up a second ball.
2. You should have one ball in each hand.
3. Stand relaxed with elbows near your body and hands about waist height.
4. Throw "scoop toss" one ball up in an arc toward the other hand at about eye level and just as it starts to drop down into your other hand, "scoop toss" the second ball- exchange the two in one motion.
5. Catch ball #1 then catch ball #2.

Tip: All tosses go up NOT across.

Step 4: The Three Ball Cascade
1. Hold two balls in your right hand and one in your left (for a right-handed juggler, do the opposite if you are left-handed).
2. Toss the ball in the right hand that is closer to your fingers up in an arc to toward your left hand.
3. Right after you toss the first ball then toss the ball in your left hand (second ball) in the same arc toward your right hand.
4. Right after you toss the second ball then toss the third ball in your right hand in the same arc toward your left hand.
5. You should be able to continuously without pauses throw and catch in a figure eight pattern.

Tips: As you throw the ball from one hand to the other, you want to scoop from the outside to the inside. Each time you throw the ball it should peak overhead at the center of your body.

**Beginner Skills and Tricks**

**Outside Juggling**

1. Start with two beanbags in your dominant hand and third one in your non-dominant hand
2. Toss one beanbag up from your dominant hand to the other hand
3. Toss the beanbag in your non-dominant hand to the outside (over the top) of the other down going beanbag
4. Do the same with the other hand

**The Reverse Cascade**

To begin, this is the same as the Three-Ball Cascade but instead you throw over the top circles and have the balls fall at the center of your body

1. Start with ball #1 and #3 in your dominant hand (right) and ball 2 in your left hand
2. Toss ball #1 up in an arc-like motion to your left hand, when it peaks at your center begin to toss ball #2 over the top of ball #1, then catch ball #1
3. Toss ball #3 over ball #2 then catch ball #2
4. Lastly catch ball #3 and repeat this pattern continuously

Tip: The key to the Reverse Cascade is to throw the balls in outside circles and have them fall at the center of your body.

**Two in One Hand Columns**
1. To begin, have two juggling balls in one hand (start with your dominant hand)
2. Place your other hand on your hip or down to your side
3. Throw ball #1 up in a straight line
4. When ball #1 peaks at eye level, throw ball #2
5. Keep ball #1 and ball #2 in their own separate column
6. Catch ball #1 then catch ball #2
7. Repeat the pattern
8. The balls stay in a linear column pattern in the center of your body

Tip: Be sure to throw straight up to eye level without throwing to the inside or outside of your body.

Two in One Hand Shower
Instead of the balls traveling in a column pattern, the balls will travel in a circular motion between the hand and air.

1. To begin, have two juggling balls in one hand (start with your dominant hand)
2. Place your other hand on your hip or down to your side
3. Throw ball #1 up in a circular clockwise motion to the outside of your body
4. When ball #1 peaks at eye level, throw ball #2 in the same direction (creates an arc for a circle throw)
5. Catch ball #1, toss, then catch ball #2
6. Repeat the pattern

Circle Juggling

1. Start with two beanbags in your dominant hand and third one in your non-dominant hand
2. Toss both beanbags from your dominant hand up in quick succession in identical arcs to your other hand
3. As soon as you cleared your dominant hand, you'll have to cross the third bag into it with a quick underneath throw (cross-over toss)
4. The beanbags will move in a counterclockwise direction if you are right hand dominant and a clockwise direction if you are left hand dominant
5. Repeat this pattern
The Shower

This pattern is a big circular motion of juggling. One hand throws and the other hand catches. This move uses a quick hand-off pass motion. Like in the Two in One Hand shower pattern, you will want the balls to move in an arc-like circular pattern. The steps below pertain to a right-handed dominant person. The opposite would be done if you're a left-handed dominant person.

1. Start with balls #1 and #3 in your right hand and ball #2 in your left hand
2. Throw ball #1 up to catch it in the left hand, when ball #1 reaches its peak above the head, throw ball #3 from your right hand (same direction as ball #1)
3. Quickly pass ball #2 (in your left hand) to your right hand while the other two are in the air
4. Catch ball #1 with your left hand and quickly pass it to your right hand before you catch ball #3
5. Repeat the pattern

Tips: The shower only moves in one direction at a time (clockwise or counterclockwise). In this case counterclockwise. This pattern requires a steady pace and quick speed.
Overhand Grabbing

Instead of passively letting the beanbag land in your hand, reach up and grab with an overhead motion. The beanbag is caught in a downward snatch.

1. Flick your wrist upward releasing the beanbag, this will leave your hand in a position to grab the next beanbag

Tip: To make the toss after you have grabbed a bag, don't turn your hand over- keep your palm down.

The Claw

The Claw is basically the three ball cascade but with a different technique of catching the ball. Instead of juggling with your palms up and letting the balls fall to catch them, you will juggle with palms forward and claw the ball out of mid-air.

1. Practice with one ball first, take a ball in your palm, throw it up and snatch it out of the air with your palm facing forward
2. Try this a few times with both hands until you feel comfortable
3. When you are ready pick up three balls (like the three ball cascade)
4. As your first ball peaks, claw it out of the air and do this with the rest of the balls

Tips: Throw the ball high from the claw position, so that when you are juggling they won't travel towards the floor. Keep a very fast and steady pace.

Intermediate Skills and Tricks
All tricks in this section are performed with three props.

Columns With Three Balls- The Fork

For this trick, the balls move straight up and down like a column in a synchronized manner, the balls do not cross each other as in the Three-Ball Cascade.

1. First practice juggling two balls in one hand columns with both right and left hands then add a third ball
2. Put ball #1 and #3 in your dominant hand (right) and ball #2 in your non-dominant (left)
3. Throw ball #1 up, when it peaks, throw ball #2 and ball #3 up in a straight line at the same time, catch ball #1 with your right hand
4. Throw ball #1 up again, then immediately toss ball #2 with the left hand and ball #3 with the right hand
5. Catch ball #1 with the right hand, catch ball #2 with the left hand and ball #3 with the right hand
6. You are throwing balls #2 and #3 up and down like continuous columns, catching and throwing in the same hands
7. Ball #1 is also thrown like a column, it moves
through the center

Tip: Both hands move together and throw at the same time. This trick can be performed in different combinations. Ball #1 does not have to move from right hand to left hand, it can stay in the same hand (The Fork).

Fake Columns

For this trick, you are basically performing two in one hand columns while moving the third ball up and down in the other hand.

1. Begin by juggling two in one hand columns with your dominant hand, place the third ball in the opposite hand
2. As one of the balls in the dominant hand travels up into the air, move the hand holding the third ball up and down in sync with the other ball, repeat

Tips: Make sure you are throwing the balls in a linear column, the ball moving up and down should be even with the ball being thrown. The third ball is never tossed into the air.

Above the Head

This trick requires you to juggle the Three-Ball Cascade overhead.

1. Begin with two balls in your dominant hand and the other one in your non-dominant
2. Place your hands above your head with palms facing up toward the sky
3. As you begin to juggle push the balls upward as if you are popping them like popcorn
4. Make sure to use smaller crosses with the balls than you would if juggling a standard Three-Ball Cascade
Tips: Keep your elbows bent and point them outward from the head at about neck level. Forearms should stay up in the air while juggling and do not lock your knees- keep them slightly bent.

The Flip

This is the basic move in club juggling.

1. Start with one club in your dominant hand then flip it over to your other hand- it should peak just a little over your head- and catch it around the neck/chest area
2. You will know you have done this correctly when you don't have to move your catching hand, the club just lands in it
3. After you become comfortable with one club you can begin the exchange with two, this is the same as using beanbags- just as the first club peaks out and moves downward, toss the other one just to the inside of the dropping club

Tip: The one new variable in the flip is the speed at which you turn the club- too quickly or too slowly will make catching the club around the neck a challenge.

Advanced Skills and Tricks

Four-Object Juggling

In order to juggle with four, you will need to develop your "off-hand" or non-dominant hand in the same way you developed your "good" or dominant hand for the "Two in One Hand" patterns.

Four-Ball Fountain
"Fountain" refers to juggling an even number of balls. The Four-Ball Fountain refers to juggling a "Two in One Hand" technique using both hands at the same time. The balls never cross each other, they move in a slight arc pattern.

1. Start out by juggling "Two in One Hand" then practice with the opposite hand
2. When you are comfortable place two balls in your right hand and two balls in the left hand
3. Begin by juggling "Two in One Hand" on one side
4. When one of the balls is at peak eye level begin juggling "Two in One Hand" with the opposite hand
5. You can try juggling synchronous (hands move/throw the balls at the same time) or asynchronous (hands move/throw the balls at different times)

Tips: Make sure you are throwing the two balls in each hand to the outside of your body in a slight arc pattern. Focus on what the balls are doing in the air and not on your hands.

Over The Shoulder

1. Start with one ball, slightly bend backwards, throw the ball, releasing it somewhere around the lower middle of your back
2. You'll want the ball to follow over your shoulder and then you'll catch it
3. Practice this on both sides until you feel comfortable with the timing
4. Now start out juggling the Three-Ball Cascade and every couple of throws try one "Over The Shoulder" maneuver, then continue cascading and repeat

Tip: Make sure you throw the ball behind your back high enough to go over your shoulder. If you get really good at this trick, try back crosses. This is where you do consecutive back throws, that is, you cross behind your back every time you
catch and throw without stopping to do a cascade. The difference between "Behind The Back" and "Over The Shoulder" is that when performing "Behind The Back" the ball is thrown higher than "Over The Shoulder."

**Under The Knee**

1. Start out by juggling the Three-Ball Cascade
2. After a few times, simply make your throw by lifting one of your legs and catching the ball in front of your center, then continue juggling
3. After about three cascades, repeat again
4. You can use the same knee every time or you can alternate

Tip: Make sure to raise the knee high enough so the ball can pass smoothly. Aim your throw to the center for the catch.

**The Kick-Up**

The idea is to pick up a dropped club with your foot and flip it back up into a juggling pattern.

1. Rest the neck of the club over the top of your foot (laces)
2. The trick is to catch knob on your shin as you swing your foot out and up in one motion
3. When properly done the club will come up with a single flip
Lesson Activities

The tasks below consist of exercises and complete patterns to teach 6th through 10th grade students juggling. I suggest having students start with individual basic tasks then individual challenges then partner tasks and challenges. The goal would be for students to gain confidence and have fun while still obtaining the benefits and feeling challenged. Due to a variety of skill levels you may find the need to work with students having more difficulty and challenge the more proficient students with advanced skills/tricks. The main way to improve is through practice.

Individual Basic Tasks
One Ball Exercise- The Toss

1. Start with one ball
2. Throw the ball in an arc pattern from hand to hand at about eye level
3. Keep in mind the pattern will be an arc, not a circle
4. Also, have the students try practicing the "scoop toss"

Two Ball Exercise- The Exchange

1. Start with one ball in each hand
2. Toss ball #1 with your right hand in an arc pattern at about eye level to catch with your left hand
3. When ball #1 reaches it's highest point in it's arc then toss ball #2 in an arc pattern from your left hand to your right
4. Ball #1 should be caught with your left hand and ball #2 should be caught with your right hand

The Three Ball Cascade

Try With:

- Scarves
- Beanbags
- Juggling Balls
- Rings
- Clubs
Individual Challenges

I highly recommend having students try these patterns in this order, if students become frustrated with a pattern, have them try using different props first before moving onto a different pattern.

Beginner Skills/Tricks

- Reverse Cascade
- Two in One Hand Columns
- Two in One Hand Shower
- The Shower
- The Claw

Intermediate Skills/Tricks

- Columns With Three Balls (The Fork)
- Fake Columns
- Above The Head
- The Flip

Advanced Skills/Tricks

- The Four-Ball Fountain
- Over The Shoulder
- Under The Knee
- The Kick-Up
Partner Tasks and Challenges

Warm-Up Exercise #1

1. While you're holding a beanbag in each hand, have your friend toss you a third- into your left hand
2. Before it lands, do an exchange and begin your own juggling
3. After a few moments juggling on your own, throw her one back- from your right hand- and stop

Warm-Up Exercise #2

1. Start by holding three beanbags and giving your friend a fourth
2. Begin juggling and continuing and then on "three" make the toss over to your friend who- at the same time- should feed your hand with a nice easy toss
3. Your friend won't be juggling during this exercise, her job is strictly to catch your one toss while feeding you another
4. If it's done smoothly, you can juggle along without skipping a beat

Partner Passing

You will need a partner, an open space, and at least two props.

1. Start with two of the same props with about a 12 feet distance from your partner, facing each other
2. Partner A and B both should have one beanbag
3. Partner A juggles one beanbag from hand to hand then after 6 repetitions Partner B will toss the beanbag to the open hand of Partner A
4. Partner A juggles for 6 repetitions performing the exchange with two beanbags
5. Try to perform this continuously and smoothly without hesitation
6. Switch tosser and juggler roles
7. Try with other props if this is too easy

Variation

1. Both partners stand side by side and start with one beanbag in their hands and the inside hand behind your back
2. Your partner tosses one beanbag up and over to the target (your hand)
3. You wait until her toss has peaked out, then you toss your beanbag back and catch hers
4. Your throw should go just inside her incoming beanbag
5. Try with other props if this is too easy
6. If this becomes too easy, add a third beanbag and instead of doing one exchange and stopping, you will do many exchanges from side to side

Is this too easy?

Try this

1. Each partner starts with one club
2. Partner A tosses his club up in the air for Partner B to catch
3. Then Partner B tosses his club to Partner A
4. Also have both partners toss their club at the same time straight across to each other
5. Try throwing straight across and in diagonals to your partner using both hands

Still too easy?
Try this

1. Partner A starts with two clubs and Partner B with one club
2. Partner B tosses the club from his right hand to Partner A's left hand
3. Partner B continues to juggle three clubs and then switches roles after several repetitions

Victim and Thief

1. One partner is the victim and the other the thief
2. The victim starts with two beanbags in your dominant hand (outside hand) and one in your non-dominant (inside hand)
3. The thief stands next to the victim shoulder to shoulder to try and steal a beanbag with his outside hand
4. With his outside hand, the thief steals from the victim's outside hand
5. The thief then steals the very next throw with his inside hand which is leaving the victim's inside hand
6. The victim cooperates then tosses the last beanbag over to the thief using the outside hand and landing in the thief's outside hand The victim is left empty-handed and the thief juggles away

Problems & Solutions

Are you having difficulty keeping your throws under control?

Try this

1. Practice in front of a wall so you can't throw too far out in front of you
2. Try it sitting down
3. Imagine there is a wire loop attached to the dropping ball, after each exchange ask yourself "did my throw go through the loop?" if not ask yourself how far off you where, then concentrate on the placement of the second toss
4. Mark your hands with targets using a non-permanent marker on your palm where the ball should land
5. If you get frustrated take a short break

Project Idea

Have students create an iMovie (or program they are familiar with) to demonstrate their juggling skills, it could be a partner or individual assignment. Students will create a routine of juggling skills/tricks and put them together to show the skills they learned. They can even add music.
Instructional Videos

Here is a place to find additional skills. Do not be fooled by the title "Learn 12 of the simplest 3-ball juggling tricks," these tricks are not easy. Niels Duinker explains some problems and solutions and details of juggling certain skills in slow motion and at normal speed. He breaks skills down into instructional steps to make learning easier. Here are some additional resources from a world-class juggler who shows some other skills I did not include such as "The Box," The "W," "The Giraffe," "Over The Top & Tennis," "Juggler's Tennis," and "Three Balls Mills Mess."
Demonstration Videos
One, Two, and Three Scarves

One, Two, and Three Beanbags
One and Two Ball Juggling, and the Three-Ball Cascade

Two and Three Juggling Rings

Reverse Cascade With Juggling
Two in One Hand Columns

Two in One Hand Shower
The Shower With Beanbags

The Claw
Columns With Three Balls- The Fork

Fake Columns

Above The Head Juggling
The Flip

Over The Shoulder
Under The Knee

The Kick-Up
Juggling Routines
3/11/2016  0 COMMENTS

I thought it would be a good idea to include some advanced examples of juggling routines with jugglers of different ages to inspire people of all ages to learn juggling.

Juggling Routine 1

This video is outstanding! I think this video will be engaging for students at the middle school and high school level.
Juggling Routine 2

The music in this video is slow as well as the performance in the beginner but the pace picks up. I have never seen some of the tricks he performances. His performance is outstanding!
Juggling Routine 3

Here is another incredible video with kids juggling. This video shows partner juggling which is a great example of how you can incorporate partner or group juggling into a routine.

Juggling Routine 4

This video is unbelievable! I thought it was great because Steve juggles for elementary aged students.
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http://doi.org/10.1177/1053825914540836


https://www.youtube.com/watch?v=nH5DV8LeJ6E
