

TOM PETRANOFF / MARK SWIGER



JAVELIN THROWING CURRICULUM

THROWING ZONE TZ

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Javelin THROWING CURRICULUM

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INTRODUCTION TO “LEARNING TO THROW SYSTEM”

CURRICULUM

“LEARNING TO THROW SYSTEM”

Welcome to the Curriculum Section of the “Learning to Throw Teaching Unit”. In 1991, I started to develop the TurboJav as teaching tool that I used in clinics in the Republic of South Africa. At that time, I received a patent for the implement and devoted my life at that point to training athletes from youngsters, to elite, to disabled, to masters throwers. My clinics focused on teaching a stigmatized section of the South African population: township youth and athletes with disabilities. My Olymkids Program emphasized the teaching of multiple disciplined concepts to youth in a variety of activities ranging from measurement, biomechanics, sports physics, and motivation. For youth in the townships of South Africa, this was an exciting period.

Upon my arrival back in the United States in 1997 and my new position as USATF Youth Development Chair for throws and Vice-President of USATF/New England, I found that not a whole lot had been done in the areas where we had excelled in South Africa. In fact, we have regressed in world rankings. Although the number of sports clinics had increased, items like curriculum for schools and activities that are aimed at proficiency in athletics had not been developed. It is for this reason that we have developed this curriculum model. Throwing properly is equally important to all sports that implement throwing as an integral part of the sport. Further, conceptual knowledge of gravity, leverage systems, as well as other key ideas emphasized in this curriculum is crucial to all physical activity.

This is the first phase of a total throwing curriculum, running curriculum, and jumping curriculum. The concept of power, leverage, and center of gravity are the centerpieces of this curriculum. No sport can be performed effectively without utilization of these concepts. When I was a young athlete, I struggled to find my “center”, but once I did I was able to throw an implement that weighs two pounds and is nine feet long over 327 feet. Good coaches and teachers were able to instill in me the value of balance between both arms (hands), removing old tendencies, and relearning conceptual throwing, running and coordination over my “center”. My elite career spanned over 17 years of injury-free throwing with a heavy emphasis on cross-training, and dynamic movement training. It is in this vein that our team of curriculum developers and consultants drive this simple to use and fun system into schools. We have put all of this into easy-to-read, easy-to-implement lesson plans.

Our team is poised to make proper throwing, running and jumping (regardless of the implement or sport) a priority.

Towards the end of my throwing career in 1995, NAPCOSA appointed me Head Coach of the Paralympics team in the Olympic Games in Atlanta for 1996. During that time, my challenge was to teach concepts such as “leverage over center of gravity” to athletes that had a different center of gravity than traditional ones, including throwing and other activities from wheelchairs. It was during that time that I reflected much upon how fortunate I was during my career to have been surrounded by excellent resources; both human and material ones. As a world record holder in elite track and field, I found my work with Paralympic athletes rewarding. For these reasons, I cherish that part of my career in development. The end result of this system speaks for itself. Out of 40 competitors on the national team, 28 of our athletes won medals and eight achieved world records in their events. These athletes found their “center” as I had.

I have successfully presented this curriculum in clinic form for years. For teachers concerned about accountability and standards, the teaching of this unit and ones to follow utilize National Association of Sport and Physical Education (NASPE) Standards. These standards can be found within the first unit plan. Pedagogically speaking, standards-based education is essential for success in developing what should be a lifelong pursuit; activity in sport related activities. These Units and its Lesson Plans follow traditional formats for instructors to follow, but add optional activities and cross-curricular opportunities for

teachers in your school that can help integrate core area disciplines with physical education.

I sincerely hope that your curriculum opportunities abound with this model and that our concepts for athletic and recreational activities are engaging to your students and others that find them useful. As a World Champion and World Record Holder, it has always been a feeling of mine that a keen understanding of science, math, language arts, and social studies are connected to my career as professional athlete. Making the connections between disciplines is imperative for complete learning from a physical, cognitive, emotional and affective perspective. Further, it is the sincere hope that your dreams as teacher of health and/or physical education to develop a love for sport and fitness come to fruition in your students’ lives. By all means, attempt to connect these concepts to other disciplines such as physics, math, language arts, and social studies. I think that all of those who use these materials, regardless of the curriculum area where you teach, will see the value in blending curricular areas to achieve broad-based knowledge for your students.

Another feature of the curriculum is an extension of the classroom into our development program for Olympic Athletics. We are including the opportunity (encouraged) to log on to our online database and log your students’ performances with us.

The database allows those who wish to assess student achievement at the classroom, school, state, and national levels to utilize this measurement tool for evaluating the effectiveness of the curriculum. The culminating feature of the program is to track performances that could lead to student scholarship and competition opportunities at the collegiate, post-collegiate, professional and elite levels. All required privacy features for your students will be enforced. Any third party contacts will be made only if participants and their parents allow it. If you do not have access to the Internet at school, instruction concerning logging on at home will be provided. If you have no access, send us the form included in the kit and we can log the information for you. I honestly believe that by tracking athletes at an early age, our international teams in all sports can benefit, but mostly this approach to assessment will allow schools to be more effective in teaching conceptual physical education. In fact, back when I entered the development level in javelin throwing, our sport was successfully tracking athletes like me. That's how I was discovered. In retrospect, I only wish that these concepts were available in this format for my teachers. This technology is provided at no cost to you as a subscriber to our curriculum and product line. Another feature of the database is that it will allow you to enter your students' performances, compare them to other sites, and even perform virtual competitions with other schools, whole districts, and even other countries.

Included with this curriculum kit are all of the implements that you need to engage many students at the same time, the ability to perform games and cooperative learning activities, and ideas for extension with drills, sample competitions and forms for logging information. If you feel like all of the work that you have done in the past has gone unnoticed by the elite structures for collegiate, professional, and international sports, let's attack this issue together with this fun, engaging, and effective process. By teaming up with us now and registering your products, we can stay in touch and upgrade all facets of the curriculum and database to match your needs.

Tom Petranoff





01 . NEW EDUCATIONAL FRONTIERS IN THE UNITED STATES

NEW EDUCATIONAL

Born out of one of the most tumultuous times in global history came a concept that helped a nation transcend out of a dark period in history and into the global spotlight. In the early 1990s as South Africa emerged as a bright shining light in the world following Apartheid, Tom Petranoff started Olymkidz and helped bring cultures together into the New South Africa. The OlymKids program encouraged South Africans of all races to engage in fun physical activity focusing on throwing, jumping and running. In the throes of some of the most violent times following the end of Apartheid, OlymKids and Turbojav founder instituted this program through community leaders in cities, towns, and townships throughout the country. Exxon- Mobil was the key sponsor of this goodwill mission to educate South African youth the value of knowing how physical activity and nutrition were crucial to a healthy society. The Germiston/Katlehong Parks and Recreation got it started. The irony is they needed more food as they were poor people and there was no obesity at all.

In 1995, educator/coach Mark Swiger visited the nation shortly after their first all- race election representing the U.S. Department of Education/Fulbright funded study abroad, “South Africa Today”. Upon completion of the study, Mark called Tom to investigate the OlymKids program and to document the impact of programs like this on bringing the revitalized nation together. Upon visiting some of the most volatile townships, such as Katlehong, Tom and Mark had begun a mission that brings us to today and back to the United States. Mark’s continued involvement in federal grants, national, regional, state and local education programming has provided him viable networks in schools. He has managed federal, state, and foundation grants that have made an impact in the world of sustainability, fitness, Science Technology, Engineering and Math (STEM) fields, and most recently has coached a high school team of entrepreneurs to the semifinals of the Conrad Foundation Spirit of Innovation Awards. His work as a board member for several organizations and foundations has only strengthened his ability to design and deploy program and every level. Tom and Mark want to model the same successes of OlymKids into the schools of the United States.

Mark ranks as one of the most successful coaches in all sports in West Virginia Intercollegiate history winning 21 Conference Championships in Cross Country and Track and Field, coached 3 NCAA Champions, hundreds of all conference athletes, and 22 All-Americans from 1990-2003 with many more qualifying for NCAA Championships, US Track and Field Championships, and even coached a World Junior Champion who came to compete for Mark at the collegiate level. During that time, he hosted several national level coach’s clinics often bringing Tom and other notable track coaches/athletes to train local and regional level coaches. His total in-conference record was 290-41, a .876 winning percentage.

Mark Swiger has maintained his ties to education hierarchy and consulting with numerous entities, including NASA’s Sponsored Classroom of the Future, the U.S. Department of Education, working for three years for the West Virginia Department of Education’s Regional Education Service Agency. He continues to consult yearly with the WVDE with nearly every division, including Healthy Schools, School Building Coordinators, Career and Technical Education including Agriculture Education. He served as the key evaluator for the textbook adoption of materials for Agricultural Education teachers for the department during a recent instructional materials adoption cycle. He is also a consultant for the Education Information Resource Center in Mullica Hill, New Jersey, a Local Education Agency and the sole k-12 supplemental service agency in the entire New Jersey schools network. He serves on the Board of Directors for the US Green Building Council, Create West Virginia, a grassroots economic development organization focused on community transformation to the new economy, and is a co-founder of the Green Schools Leadership Institute, a multi-state program whose mantra is “healthier schools at lower cost”. He is engaged with state school board members, state superintendents, department executive directors, and bridges gap between schools and the business community.

NEW EDUCATIONAL FRONTIERS IN THE UNITED STATES



02 . FITNESS AND NUTRITION EDUCATION

NEW EDUCATIONAL

Upon Tom Petranoff's return to the United States, Mark and Tom began to work on the impending obesity issue as a problem with multiple arms:

- children lacked overall fitness;
- children lacked discipline when it came to nutrition;
- we were falling behind other nations in major indicators in education;
- and these problems were connected and did not operate in silos.

It was this multiple-tier problem that has created a stalemate on the war on obesity. John L. Parker wrote in his novel, *Once a Runner*, "If the furnace burns hot enough, it could burn anything, even BigMacs". Schools were concerned with nutrition and fitness, but too often they were separate. Then, there was the issue over student engagement in meaningful, relevant learning. American education had put disciplines in different silos so that students, parents, teachers, and hierarchy resorted to nothing more than a shotgun approach to solving the problem.

On the academic side, test scores had begun to plunge due to a lack of student engagement. Mark and Tom and the Throwing Zone know that achievement gaps are really a by-product of a more devastating gap, the engagement gap. Student self-esteem, physical efficacy, and high octane fuel have mutuality. Most seemed to judge teaching as the culprit, but what had happened was that students nobody was making the correlation between academic success, fitness, and nutrition. Recent studies show the importance of breakfast in schools and physical activity that gives the brain a boost of oxygenated blood to academic success. Since our days in South Africa and programs that we've instituted before, we've seen:

- student engagement in physical activity through our program;
- increased ability levels in students of all ability levels, including Special Olympics athletes;
- increased motivation to do more of the physical activity.

Recently, Throwing Zone protected a gaming system where students enter nutrition zones in throwing, running and jumping. This is done similarly to the gaming system that OlymKids used in South Africa and what Throwing Zone has been doing with youth athletics and is piloting in the Boston City Schools presently. Testimonials of teachers in Boston include:

- many of these kids who are down here on the floor never participate in gym class;
- I've never seen these kids as engaged for the entire class period before;
- and, when are you coming back.

Our goal is to extend this system through a varied approach.

- Utilize our extension network of elite athletes, coaches, and teachers to implement this system. This is a work intensive program that will penetrate schools throughout the country.

· Provide in-person instruction by visiting athletes, coaches, experts in order to assist hard-working teachers in applying standards-based instruction. Although there is "star power" in our approach, this program will not be a flash in the pan, shotgun approach to solving the obesity problem. It will be a program that instills an understanding and the application of the connections between physical activity, nutrition, and academic performance.

· Provide schools with tools to connect physical activity to nutrition to academic performance in subjects like health, science, math, civics, and reading/language arts. This will be done by revising existing curricula and extending learning into the culture of the school. This needs to be done by creating easy to follow, standards based units of instruction that tie physical activity to physics, nutrition to chemistry, and student self- efficacy that allows them to live Tom's mantra of "I can, I will, You watch me". The tools need to be developed and will be done with the support of master teachers and curriculum developers in our vast network.

· Engage administrators and school boards at the highest levelsto promote this program as the one that increases engagement, ties physical activity to nutrition, and promotes a healthy and successful academic setting at the schools that implement our programs.

03. THE THROWING ZONE PREMISE

THROWING ZONE

The Throwing Zone and its affiliates agree to the following principles. This is who we are.

1. Throwing Zone manufactures their own materials and is a one-stop development and deployment company.
2. Throwing Zone is a knowledge-based company founded on the principle that the more physically involved in learning students are, the more they learn cognitively.
3. Problem-Based Learning, or PBL, and inquiry-based learning (see special section on PBL, below), when combined with paying attention to variations in learning styles and learning modalities, are ground-breaking, effective strategies in teaching and learning in all areas, to students from all backgrounds and abilities. Student engagement is our key goal to learning.
4. Tying physical activity to learning environments in many classroom settings not only encourages learning that is relevant, but also instills in teachers and learners the need to address all of the domains of student learning; cognitive, physical, social, emotional, and the affective domains of learning.
5. Learning through relevant, physical experience is how our pioneering leaders in history who succeeded—regardless of their background, advantage or disadvantage, both from long ago and in early The United States—achieved their success.
6. The United States's own history and people provide a wonderful key to — and platform for —an exciting new knowledge- based enterprise that promises to bring much to the state across educational and economic lines (in addition to increased State- based measures of health and wellness), for decades to come.
7. Throwing Zone only creates and distributes educational curricula, products and programs that extend, support and lend themselves to accepted standards in their respected curricular areas.

Throwing Zone's holistic approach to learning has deep roots — meaning it is both fundamental and cutting-edge in scope, yet simple to understand. Regardless of what school of thought, research-based theory, or content area in which one is involved, one clear point emerges: The more actively engaged anyone is at any age—the more they learn, the healthier they are, and the more fruitful life will be for them. By scaffolding experiences in learning centers together with activities and curriculum provided by Throwing Zone, students become lifelong learners with longer, richer lives.

04. MORE ABOUT THROWING ZONE

NEW EDUCATIONAL

Learning vicariously through teacher experience, or relevant learning experiences for students?

Throwing Zone understands that students learn best when the learning is relevant to their experience. Throwing Zone' concept of using the "Human Body as the context for learning" is the epitome of relevance. In fact, what is more relevant to a person than the body in which they live? There are extensions to science, math, social studies, and language arts in every thing a person does every moment of their day. Throwing Zone creates problem-based learning/standards-based learning products and curricula that "connect the dots" for teachers and students that allow them to learn more about the most relevant of things in their lives, their own classroom, their own bodies.

Tying physical activity to Coordinated Science and Math content may sound sophisticated on the surface, but Throwing Zone creates lessons that make what seems complex or difficult-to- reach, simple through "curriculum connections." Indeed, herein lies the promising opportunity for The United States schools.



WHAT THROWING ZONE CAN DO FOR THE UNITED STATES?

05. WHAT THROWING ZONE CAN DO FOR THE UNITED STATES?

THROWING ZONE

Closing gaps between demographic, gender, and special needs groups throughout the country, starting with and focusing on The United States (and piloted in partnership with SaveMark in the OlymKidz Program), is the goal of Throwing Zone. Indeed, the particular mix of challenges and resources that characterize the State, as well as the years our founders have already spent working to make a difference in around the country and the world, have taught us that using the human body as an activity-based context for learning is an especially promising approach here at home for achieving lifetime learning. The United States has many educational and economic challenges. And yet, the Throwing Zone approach works despite—and in fact to designed specifically to overcome—these challenges.

In a gripping but powerful irony, given the global issues and markets represented by those all over the world who live extremely rural and urban and greatly challenged lives, finding a way that works in The United States will open up vast markets for other opportunities — across even completely unrelated industries. Building universally fun, interactive ways to engage students in physical activity is what Throwing Zone does through its products and programs. These same products and programs also engage schools and students in fun interaction and learning from and about one another through writing, reading, and more cross-curricular extensions of the basic Throwing Zone curricula. Success from what we have already done is how we can assert the following: Tying physical activity to Coordinated Science and Math content may sound sophisticated on the surface, but Throwing Zone creates lessons that make what seems complex or difficult-to-reach simple through “curriculum connections.” The result can be a body of curriculum that not only crosses fundamental disciplines, it generates that undying spark educators everywhere seek. This can be recognized by educational leaders all over the world as the wave of the future, and is accessible to all.

Quilting together knowledge that is connected, relevant, fun, and effectively deployed will make Throwing Zone, and also The United States, a true leader in bringing real kinesthetic learning to schools. It will also put the State at the leading edge of education excellence for years to come.



06. THROWING ZONE: NO CHILD LEFT BEHIND

THROWING ZONE

With sweeping changes across the country as a result of “No Child Left Behind” legislation and policy, schools are faced with the reality that there is accountability built into the concept of No Child Left Behind — and not just for policy purposes. The idea of “No Child Left Behind” in the literal sense means that children should be healthy regardless of their gender, ethnicity, special needs and so forth.

Utilizing Throwing Zone to engage students in inquiry that addresses state and national standards in classrooms as well as leveling the playing ground for students in activities that are appropriate for all students is both a qualified professional and personal mission of Throwing Zone. Schools everywhere, specifically including The United States schools as we will demonstrate in the SaveMart OlymKidz Program, will, for example, be able to utilize Throwing Zone to raise student attendance and performance levels, both critical outcomes assessed at the elementary and middle school levels in the No Child Left Behind policy. Extensions of the Throwing Zone curricula are further appropriate for newly instituted The United States “After School Learning programs,” another area where students can be encouraged to learn content in areas of need.

WHAT THROWING ZONE CAN DO FOR THE UNITED STATES?



07 . THROWING ZONE LEARNING PRODUCTS

THROWING ZONE

The best curriculum development is naturally evolutionary. Throwing Zone learning curricula are evolutionary on many levels. First, we start with expert subject matter knowledge and ever-deepening experience in our core areas. Then we take that knowledge, in combination with new directions forged through our own educational research and development (R&D), to deploy products that are at the cutting-edge of education. Next, and building out from (but always based on that dynamic core strength), we expand into new subject areas—again, drawing in only the best, and most effective expert knowledge—to repeat the process! This insures that our products remain at the cutting-edge of education, as well as enhance ever more disciplines as we go!

Our products are always standards-based, if National standards exist that pertain to a given discipline. For example, there are well-known National standards at various grade levels for fitness, for mathematics, and for reading achievement. Our curricula in these areas conform to such standards so they promote assessable achievement and improvement in formal testing. Throwing Zone curricula address The United States Content Standards where applicable, and in most cases, takes a multi-curricular approach.

We also deploy our learning products in an evolutionary way, as well. The first learning modules we typically distribute to new students are standards-based physical education modules that take the form of traditional lesson plans placed into Learning Kits. Included in each kit are physical learning aids to be used in carrying out the lessons. Embedded in these traditional plans are extensions to learning across various disciplines (e.g., science, technology, and mathematics). This paves the way for additional cross-discipline learning modules to be deployed, also in kits, that again include both curriculum and physical learning aids. Component parts of all these lessons and extensions include, but are not necessarily limited to:

- Learning Objectives based upon National Standards in topical areas of focus (e.g., fitness-oriented objectives are based on NASPE/NETS Standards)
- Curriculum in written form
- Video either DVD, On Line format that demonstrates learning activities for teachers and students

- Manufactured Throwing Zone equipment and products as accompanying learning tools/aids

- Online “virtual games” database and tracking system for evaluating and assessing student improvement

Essentially, learning activities can and will be developed constantly and consistently around the needs and challenges facing schools, both from a policy and learning perspective. Infinite is the word to describe where we can go from here and what kinds of opportunities can evolve from learning communities fostered by Throwing Zone.

WHAT THROWING ZONE CAN DO FOR THE UNITED STATES?

08. “LEARNING TO THROW SYSTEM”

CURRICULUM UNIT PLAN

TEACHER PREPARATION

Teacher Preparation

How much knowledge do students have regarding throwing, especially in a safe and effective manner? Do they understand throwing over their center of gravity, or even understand the concept? Did you know that Track and Field is called “Athletics” all over the world because of the sheer nature of the sport? Every possible activity, whether it is running, jumping, or throwing is utilized to perform at high levels. Teachers should plan to view videos, visit resource websites concerning throwing, and inquire about track and field from local experts. They should also look into attending clinics for coaches such as ones that are provided in track and field or sports specific clinics. There are a tremendous number of resources for sale at minimal cost for coaches and teachers. Each of the throwing events requires various body-positioning techniques, but all emphasize either rotation around or throwing over the body’s center of gravity. Teachers are encouraged to read, attend clinics, watch competitions, as well as ask experts in the area of throws where young athletes are concerned.

REQUIRED MATERIALS

Required Materials

“Learning to Throw System”

Training Video, and targets will be utilized. Accompanying Lesson Plans for the throws should be utilized to teach the module within the “Learning to Throw Unit”. These implements can be taught indoors or outdoors. In the early parts and last parts of each module in the “Learning to Throw Teaching Unit”, teachers are encouraged to log pretest and post test results into the database at the Edusportz Website. Opportunities beyond individual classrooms can be coordinated this way. An Internet connection at either home or school is recommended.

Rationale

The “Learning to Throw Throwing System” was developed by Tom Petranoff, former world record holder and world champion in the javelin throw with a team of curriculum writers. They developed this system as a way of developing young throwers in all sports through a thorough program emphasizing proper technique and leverage. Utilization of this system has resulted in increased distance and accuracy with the use of a unique implement. Because the javelin is an elongated implement with a long axis, it is the most difficult implement to throw. For this reason, it acts as the perfect tool for teaching and learning how to throw any ball, or implement correctly. Regardless of implement, whether a ball in sports that emphasize multiple tasks like throwing or field implements in the sport of track and field, use of the system results in increased distance and accuracy of the throw.

The sport of track and field takes into account the differences in ability levels and learning styles. Proper coaching and teaching of athletics requires reflection upon how to reach the student or athlete. It is with this in mind that this throwing system encourages fun while testing through games in order to identify the needs for throwing instruction. Thus the program emphasizes drills, proper biomechanics, practice and games as integral parts of identifying how students best learn and how teachers can reach every student in a fun, engaging manner.

Goals and Objectives

Goal:

to provide students with the opportunity to understand proper throwing technique and to apply it to their daily physical activity in sports and in play.

Objectives

1. Students will be able to demonstrate proper throwing motion through proper biomechanics and leverage.
2. Students will demonstrate sportsmanship through games and cooperative activities
3. Students will apply throwing concepts into games and implement this knowledge into the other sports/games that they play.
4. Students will utilize the game system to enhance their lives socially, cognitively, and affectively, as well as physically.
5. Students will increase their general fitness level through cross training techniques.
6. Students will utilize drills in order to throw more accurately and to throw further.
7. Students will set goals and learn how to develop a plan for progression to achieve their goals and encourage lifelong improvement in throwing in an effective manner.

Knowledge needed by Teachers

Physical Education Standards that are an integral part of state curriculum. General standards for Physical Education as developed by the National Association for Sport and Physical Education (NASPE) are as stated below. If your state's standards cannot be found, these standards are a tremendous starting point in teaching physical education. National Content Standards are imperative in developing a national conscience in any area, in this case Physical Education and Physical Fitness.

A physically educated student

- Demonstrates competency in many movement forms and proficiency in a few movement forms.
- Applies movement concepts and principles to the learning and development of motor skills
- Exhibits a physically active lifestyle.
- Achieves and maintains a health-enhancing level of physical fitness.
- Demonstrates responsible personal and social behavior in physical activity settings.
- Demonstrates understanding and respect for differences among people in physical activity settings.
- Understands that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction.

Implementing the Program

This program is best used in a space large enough to allow for long, accurate throws. The best location for throwing any implement is in a field outside or in a gymnasium where the usual physical education classes meet. Be sure to read all safety guidelines in the "Athlete Instructions and Coaching Guide" booklet in your "Learning to Throw System" Kit.

Prior Knowledge for Students

What do students know about throwing motion, center of gravity, grip, as well as other components of throwing? Students have seen baseballs, footballs and basketballs being thrown, but have they ever seen a javelin being thrown? The accompanying video should help students gain insight to all of these areas as well as motivate them to know more before starting the "Learning to Throw System" Program.

Emerging Issues

Because the "Learning to Throw System" implements in this curriculum kit were designed to be a safe and enjoyable way to learn how to throw, not many safety issues should arise. As with any implement that is being thrown, proper throwing etiquette should be encouraged and enforced. Some ideas to consider in your setting are:

Making sure that ALL students and teachers know when an implement is being thrown is imperative, particularly where the thrower has his back turned to the direction in which the will be throwing.

- Never let students throw without physical education staff members present.

· The "Learning to Throw System" games are fun. Always present students with a goal for throwing, such as hitting the target, throwing for accuracy, winning a team competition. Keep classes structured for best results.

· As with any lesson, setting, routine, and goals for students should be emphasized. Active people devote much to practice and emphasize dedication to their lifestyle. These are learned behaviors and need to be modeled at school.

· As with any class setting, your school administrator should know what is going on in your class. Use standards-based lessons in order to justify the fun that your students will have from the "Learning to Throw System" Program.

· When establishing the setting for the garbage can throw, cans should be inspected before throwing into them, and appropriate liners should be added to keep students clean during the process of the game.

RESOURCES

Although the “Learning to Throw System” System is comprehensive, extending knowledge through other resources is a key to lifelong learning. Below, you will find a URL guide to sites on the Internet that has been reviewed for throwing. As well, techniques for searching effectively for what a teacher may want to find in reference to any site whether it be track and field throwing or to help someone with a history lesson are discussed by the asterisk below.

United States Track and Field <http://www.usaft.org>

The governing board for track and field in the U.S. Learn who the leaders are in the sport in the United States as well as upcoming events where young athletes can compete.

International Amateur Athletics Federation <http://www.iaaf.org> The international governing board for track and field in the world. Here you can find out who the leaders are internationally and stay up to date on world records and recent competitions.

Throwing Zone: <http://www.throwingzone.com> Online version of this curriculum available once you register these products with the Throwing Zone. Other products and accessories for throwing are available online as well as links to other throwing sites.

M-F Athletic <http://www.mfathletic.com> A comprehensive company that serves the track and field community with products, clinics, learning materials, as well as support and advice. Optional equipment such as tape measurement devices, cones, as well as other items can be obtained from M-F Athletic.

Yahooligans Search Engine <http://www.yahooligans.com> This is a “filtered” search engine that returns sites that have been reviewed to be acceptable for school children and for use in school. Teachers should read all disclaimers online and establish their own when using the Internet in schools.

Dogpile Multi Search Engine <http://www.dogpile.com> A multi search engine allows a person to comprehensively search the Internet through various search engine with one query. This is only suggested if teachers are supervising the search process. This search engine is not filtered and should be utilized only under the regulations outlined in your district or school’s Acceptable Use Policy (AUP). AUPs have been established nationally to limit Internet use for educational purposes only in schools. Do a simple search for “Acceptable Use Policy” if your district needs to research policies already in use across the United States.

NASPE (National Association for Sports and Physical Education) Physical Education Standards can be found at [http:// www.aahperd.org/naspe/publications-nationalstandards.html](http://www.aahperd.org/naspe/publications-nationalstandards.html)

Here teachers can find the national teaching standards for physical education.

Physical Education publications are available from NASPE Standards and it is suggested that one browses this site for ideas for teaching in the field of Physical Education and Sport. EduSportz endorses teachers’ membership in the national organization for teachers in any area in which they teach.

NASPE, a division AAHPERD, is the professional organization for Physical Education teachers.

Long and Strong Throwers <http://www.longandstrong.com> Site that shares interesting information on the throws and shares the mission of the track and field throws.

SEARCH SUGGESTION!

When searching the Internet for resources in any area, one should utilize a “boolean” technique in order to narrow the search results to include desired sites only. When adding a query to the search engine type the subject or subjects as follows: throws AND records; javelin AND Olympics; discus AND track meets as examples. The “boolean” technique requires that one type the subject with the word “AND” in capital letters. This search technique should return meaningful results. There are no guarantees that the search query the one enters will return positive results due to the changing nature of the Internet, however, diligent searching and trial and error will get you eventually where you want to go online. Be aware that any time that you include the words “photos”, “images”, or “pics” into a boolean search other than at a “filtered search engine” or any search query for that matter, your query may return sites that may not be fit for classroom use. It is highly encouraged for all teachers to do preliminary searches for their classes rather than having students search a certain query for results.

EduSportz, Inc.

MedCore Overview and Outline

The EduSPortz MedCore Unit is a foundation unit in future lines of curricula surrounding the spirit of how physical education, wellness, and recreation programs should be taught. At the “core” of human movement lies major concepts involving physics such as “center of gravity”, “leverage systems”, as well as application of force using all of the body. Humans apply such force over their “center of gravity” by utilizing the body’s “leverage system”. It is the premise of the MedCore Unit that all of these systems can be trained to perform in unison by repetitively employing these systems to perform on cue when asked.

Through the use of Medicine Balls, MedCore proposes to develop the trunk, as well as train stretch/reflex movement supporting running, jumping, and throwing. In the case of trunk development, medicine ball training supplies the body with tools for development of the body systems that allow one to run faster, throw further and more accurately, and to jump higher and farther by requiring the body’s “tower of power”, the trunk, to handle the explosive movements that it takes to achieve the aforementioned results.

In this overview, a synopsis of the full unit is outlined for development of video and auxiliary materials that support the curriculum and database that lie at the core of the MedCore Unit of the Learning to Throw Systems. Similar uses of MedCore will find its way into future units involving Learning to Run, and Learning to Jump Systems. An outline and overview of the MedCore Unit follows.



LESSONS

LESSONS

LESSON 1

Lesson One: Pretest

Lesson one of the MedCore Unit is the diagnostic or Pretest Lesson. In this lesson, students will perform a variety of tests to provide educators with a frame of reference for teaching individual students at their own level. Pretest data should be recorded on the EduSPortz, Inc. homepage. The MedCore Unit comes with 2k medballs for elementary and 3k medballs for middle schools. Testing Items include, but are not limited to: (following items are included in the online database)

- Single hand over shoulder throws (left and right for all students)
- Two hand underhand forward throw
- Two hand underhand reverse throw
- Two hand overhand forward throw
- Optional single hand over shoulder basketball throw

Once these tests are given and recorded, the instructor should move onto the next lesson: MedCore Video lesson.

LESSON 2

Lesson Two: MedCore Instructional Video

Lesson two of the unit will involve viewing the video that comes with the MedCore Unit. The unit video gives instruction by watching and demonstrates proper usage of medball in movement development. A variety of optional activities as well as Lesson One and Lesson Five activities will be demonstrated and reviewed.

This video acts as one of the centerpieces of the curriculum due to its instructional nature. The MedCore unit is a “learn by doing” unit. In this video, demonstrations and suggestions will be provided for teachers and students so as to develop core strength as well as enhance human movement.

LESSON 3

Lesson Three: Getting Started With MedCore

“Getting Started with MedCore” gives teachers and students insight into how to

- Partner assisted Exercises

By “reviewing by doing”, students master the concepts and prepare for post test to follow. In the next lesson, students and teachers learn additional drills as well as continue practicing technique in reference to the test items already tested and to be tested in Lesson Five.

LESSON 4

Lesson Four: Practicing Concepts and New Drills

The “Practicing Concepts and New Drills” lesson, students and teacher will learn sport specific exercises, as well as general drills to enhance human movement and encouraging the learning and mastery of pre-taught concepts from earlier lessons in this unit.

Additional exercises

properly place feet, grip technique, body position and the basic movements for effective use of medicine balls. Glossary concepts will be reviewed as well as in-class practice to “learn by doing”. Concepts to be covered are as follows (but are not limited to):

- Foot Placement
- Center of Gravity
- Leverage Systems
- Various grips for testing items as well as optional activities with Medicine Balls
- Body Position
- Human movement
- Stretch/Reflex Movement

and drills include the following activities:

- Two hands above head “T” formation
- Single hand, right and left hand “T” formation
- Overhead two hand side to side (partner assisted)
- Two hand underhand (partner assisted)
- Single hand underhand (partner assisted)
- Alternate hands (partner assisted)
- Side to side reverse pass (partner assisted)
- Overhead throw
- Underhand throw
- Standing forward throw
- And more

This lesson is almost entirely student-centered and educators serve in the facilitator/coach role.

LESSONS

LESSON 5

Lesson Five: Post Test for Proficiency

The Post Test lesson of the MedCore Unit is a culminating event to measure mastery of concepts by testing results through performance. Each student has already tested with these items, thus assessment and evaluation of outcomes is natural through this process. The same tests in Lesson One will be revisited in this lesson and comparative analysis of test items/results serve as the evaluation of the success of the unit. The following tests will be measured:

- Single hand over shoulder throws (left and right for all students)
- Two hand underhand forward throw
- Two hand underhand reverse throw
- Two hand overhand forward throw
- Optional single hand over shoulder basketball throw

Like the Pretest, all items should be recorded on the EduSPortz, Inc. homepage.

LESSON 6

Lesson Six: EduSPortz, Inc. Talent Assessment (Optional)

The following test can be given in conjunction with EduSPortz, Inc. in assessing athletic ability and logging results in order to track athletes in a variety of sports.

Medicine Ball Activities

- Overhead Single hand forward throw (both hands) - Underhand Two handed forward throw
- Underhand Two handed reverse throw

Running Activities

- 30 meter running sprint - 400 meter run
- #### Jumping Activities

- Vertical leap
- Standing long jump
- Standing triple jump (optional)

Throwing Activities

- Mini Javelin throws (both hands)
- Over shoulder basketball throw (both hands)

LESSON 3

APPENDIX

APPENDIX 1

Appendix 1: Hints for Coaching/Teaching the Mini-Javelin

Key: To Motivate students/athletes to participate.

Problem: Traditional coaching and teaching athletics/track and field is often associated with short bursts of activity, followed by long waiting periods. This is a tremendous way to de-motivate. Motivation is our goal.

Solution: Ensure maximum group participation. Strategies: Look for alternative ways to organize activities.

Do everything you can to avoid long lines of students/athletes waiting for “their turn”. You have multiple TurboJavs. Use them! The number of students/athletes waiting in line should not be more than four. Call us for solutions beyond the curriculum kit.

Have an extensive repertoire.

Having a large repertoire of TurboJav drills and games at your disposal helps to motivate and challenge athletes while preventing repetition and boredom.

Learn the basic teaching points.

An intricate and technical knowledge of javelin throwing is not needed to successfully teach or coach the TurboJav. Simple awareness of several main points of technique will help to ensure a successful TurboJav learning session.

Make it fun.

With some thought, almost any drill or skill practice can be made into a fun activity. It is very difficult for young people to motivate themselves to perform practice unless there is an immediate or very short term “reward”. While drills have the goal of improvement, games generally have an outcome that is more tangible and appealing to young people. In initiating skill practices with a game element, you are organizing activities that will motivate and help students/athletes improve.

APPENDIX

APPENDIX 2

Appendix 2: Coach's/Teacher's Guide: What to Look For

Collect implements after throwing only when instructed to do so
Hold the TurboJav Properly
Feet should be planted firmly on the ground and the body facing forward
Do not allow throwers to lose control of the point of the implement
Do not allow throwers to bend their elbow when drawing back
Do not allow throwers to throw off to the side of the body and ignore their center of gravity
Do not allow throwers to apply too much force to the implement before they have learned and successfully mastered the correct technique

APPENDIX 3

Appendix 3: Safety Comes First

Despite TurboJav's safety benefits over a regular javelin, strict safety guidelines should be enforced to ensure the student's/ athlete's safety.
Students/Athletes should be instructed to:
Throw only when instructed to do so
Throw only in a defined area and only when the area is clear of by-standers
Never turn one's back on another thrower during the throwing process
Never attempt to catch a TurboJav when it is flight
*Note: the safest place for those not throwing, but watching, is behind all throwers!
Appendix 4: Coach's/Teacher's Guide to Competition and Scoring
Mini-Javelin Competition: (In or Out of School Activity)
Mini-Javelin competitions should be conducted as any other javelin competition. Age groups or grade levels should be determined in both girls and boys sections. An example of breakdown of groups would be as follows:
Boys:
Under 14 Under 12 Under 10 Under 8
Girls:
Under 14 Under 12 Under 10 Under 8

APPENDIX

In order to keep the competition running smoothly, it is suggested that you limit the amount of children competing in each various age group. The more athletes that compete, the more time in between throws and subsequent boredom and distraction will ensue. We recommend that six children per age group compete against one another or in flights as they are called in the sport of track and field.

Rules

Only one thrower on the field at a time
After each throw is completed officials will mark the throw, before the next thrower is allowed to throw
Each thrower is allowed three throws in the order that is specified by the officials
The thrower must not step over the toe board or line. If a thrower does step over the board or line, the throw will be called a foul and thus not marked.
The thrower must throw the Mini-Javelin within the guidelines set up by the marker cones. If the thrower throws outside of the marker cones, the throw will be called foul and thus not marked.
The Mini-Javelin must land nose first. If the Mini-Javelin lands facing the wrong way or the tail hits first, the throw shall be called foul and thus not marked.
The winning throw will be determined by the athlete that throws the furthest for 1st place, second furthest for 2nd place, and third furthest for 3rd place, and so on.

GLOSSARY OF CONCEPTS

GLOSSARY OF CONCEPTS

Key Aspects to Throwing the Mini Javelin and Javelin

- Applying Force: the act of pulling the TurboJav past the point of delivery. By applying force to the Mini Javelin, the thrower can put the implement where they want it in terms of accuracy and distance. The force point where a thrower feels the force of the throw is in the area around the upper chest and shoulder muscles and the index finger at the back of the grip.

- Carrying: the process of holding the Mini Javelin or Javelin during the period before throwing and just before the “drawback”. The implement should be carried level and the point facing forward. The implement should be as close to the center of gravity as possible.

- Center of Gravity: the location somewhere below the thrower where the body is most stable. Usually the center of gravity changes with the movement of the body, head, arms, and legs through the process of running, jumping, and throwing or any other activity. The center of gravity is the location in an area below the body where balance, power, leverage and speed can be optimized or created best.

- Foot Placement: Placement of the feet for the Mini Javelin, as well as the javelin should be shoulder width apart as seen in the photo above. By placing the feet in this position, the implement will thus be directly over one’s center of gravity, and will allow all levers used in throwing the implement to be properly moved over the center of gravity.

- Drawback: the process by which a thrower moves a Mini Javelin or Javelin from a “carrying” position to a position whereby the implement is “cocked” in preparation for the throw. Like the “carry” the implement must be level and the point facing forward.

- Grip: this term means two things. First, it is the part of the Mini Javelin or Javelin where the thrower holds, or “grips” the implement. Secondly, is how the implement is held throughout the duration of the process of throwing. The index finger and thumb of the throwing hand must be at the back of the grip where the grip cord and metal start on a Javelin.

- Leverage: the ability to balance the body through any process and to keep it able to perform at an optimum level. It is important to have a Mini Javelin or Javelin thrower to “apply force” and “leverage” over his/her “center of gravity”.

- Leverage System: the utilization of the body’s levers; arms, legs, head to gain complete control and balance. If one hand is behind a thrower, then one has to be in front and legs have to be placed properly, along with head positioning in order to gain complete control without losing the body’s ability to apply force over the center of gravity. The center of gravity of a thrower changes when the thrower changes the position of his/her levers. When these levers work together and the control of body positioning in the process of carrying, drawback, and release, the thrower will experience his/her best performances.

- Overshoulder Throwing Motion: the process of bringing the Mini Javelin or Javelin over the shoulder in order to throw. By bringing the implement over the shoulder instead of around the body, like the way that some people throw baseballs, the center of gravity of the thrower never leaves the center of his/her body. By keeping the center of gravity underneath the thrower instead of out to the side, the thrower will experience more accurate and more powerful throws with less stress on the joints. By throwing out away from the body, the arm is susceptible to injuries and is not using the body’s leverage system and the large powerful muscles in the chest and shoulder.

- Throwing through the Point: a common fault of any thrower in any sport is to think that throwing is a pushing motion. With the Mini Javelin and the Javelin, this is maybe clearer than any other implement. Javelins are elongated, or long and slender, implements. The level carry and drawback are imperative to long, accurate, and safe throws. When someone “throws through the point” they are “pulling”, not pushing the tail of the implement through where the point was only fractions of seconds earlier. By throwing the tail through the point, one is optimizing the flight pattern of the implement.

LESSON 1.

ASSESSING SKILLS AND
ACCURACY: PRE-TEST

LESSON 1.

ASSESSING SKILLS AND ACCURACY: PRE-TEST

PRE TEST

Rationale: In order to gain a frame of reference a pretest has been developed in order to help plan instruction included in the Learning to Throw Module. A series of cooperative learning games thrown into the learning and training process for a few reasons:

Assessment and evaluation of set goals and objectives before, during and after instruction

Encouragement to continue progress at the onset of instruction

To provide a baseline by which to measure individual progression and to help develop instructional strategies

To provide a fun and competitive game that motivates and satisfies the natural instinct to excel in personal and/or team physical activity.

It is with these factors in mind that the following activity was developed. As part of the curriculum, an online database was developed in order to log overall results of the pretest, the post- test, and the game program at the end of the module. An added feature of the “Learning to Throw System” curriculum is the ability to effectively track young athletes that show promise in throwing.

The online environment where results can be stored provides for data analysis and the possibility of extension activities such as “Virtual Games” where various locales can compare results with others and enter into a fun cross-cultural exchange in the spirit of sportsmanship. Classes are encouraged to log in and compare results and set goals.

It is important to stress that these “games” can extend into sports practice and recreational activities for the community, as well as at home in sports other than track and field throwing. Accuracy games have always been a focus of recreational and fun activities for people in “play” mode and can be the center of social activity and human interaction. Their usage in the physical education classroom should encourage fun, yet productive activity involvement in the learning process of throwing and its associated connection to sports, in this case, the mini-javelin.

Required Materials

“Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems will be utilized. Use Appendices at the end of the Teaching Unit for rules and ideas for teaching drills and other games before, during, and after the lesson. A tape measure will be needed in order to measure the distance/accuracy throwing activity.

LESSON 1.

ASSESSING SKILLS AND ACCURACY: PRE-TEST

Goals and Objectives

- Goal: to assess student ability and knowledge of throwing and technique through a skills and accuracy game system pretest.

- Objectives:

Students will demonstrate sportsmanship through inclusionary games

Students will apply what they already know about throwing concepts through engaging in games opportunities

Knowledge needed by Teachers: Teachers should have reviewed the Standards listed in the Unit overview included in this kit. Teacher should have reviewed the variety of teaching resources in the “Learning to Throw System” Kit, the “Learning to Throw System” Instructional Video, and the glossary of concepts included in the Teaching Unit Plan.

Prior Knowledge for Students: Students need to apply only what they already know about throwing into performance pre-testing. They should be told that the results will be utilized to assess their improvement at the end of the module.

Procedures

Following are teacher procedures for utilizing the pretest game system as an assessment tool for this curriculum. It is imperative that teachers review “Hints for Coaching/Teaching the Mini-Javelin”, “Coaches/Teachers Guide of What to Look For”, and “Safety Comes First” following this lesson.

For the warm-up and first stages of the game, students should be 5-10 meters away from the target. As they master accuracy, the students can be moved further away from the target. Points should be awarded if the front tip of the TurboJav hits the target. Each group is responsible for keeping their own score or neutral students can be assigned the task. (*Students that do not dress for PE could be assigned to this exciting activity, thus encouraging involvement in the class.)

Organize students into groups relative to the number of TurboJavs available. (ex. Six TurboJavs come in a kit, splitting a class of 30 into six groups of five throwers per group.)

Place each group into a safe throwing formation.

Each group ultimately should be stationed behind straight lines heading toward the target.

Students will wait in line at a safe distance behind the thrower that is “up”.

Once all results are collected, teachers can log results onto the Internet database provided with this curriculum.

For the warm-up, students should be 5-10-15 meters away from the target. As they master accuracy, the students can be moved further away from the target. Component systems pre-test include five basic tests:

During the following tests, students should have their feet flat, shoulder width apart on the ground facing the direction of the throw. Teachers will measure all throws for distance and accuracy, using both metric and imperial measurements from the tape measure.

LESSON 1.

ASSESSING SKILLS AND ACCURACY: PRE-TEST

Basketball Strong Hand:

The first test will be to throw a basketball using the over the shoulder throwing technique. Students will be measured for distance using metrics and imperial distances. See asterisk note above for foot placement with all throws in the

Football Strong Hand:
Same as test one.

TurboJav Strong Hand:

Same as tests one and two.

Target Throws with Strong Hand:

The fourth test will provide extra throws with the strong hand of the student at targets again. Using the same stance as the last two tests (feet should be flat on the ground 5, 10, 15 meters from the target), the student will aim at the target and attempt to gain points from the scale listed below.

Target Throws with Weak Hand:

The fifth test will provide extra throws with the weak hand of the student at targets again. Using the same stance as the last two tests (feet should be flat on the ground 5, 10, 15 meters from the target), the student will aim at the target and attempt to gain points from the scale listed below.

Target

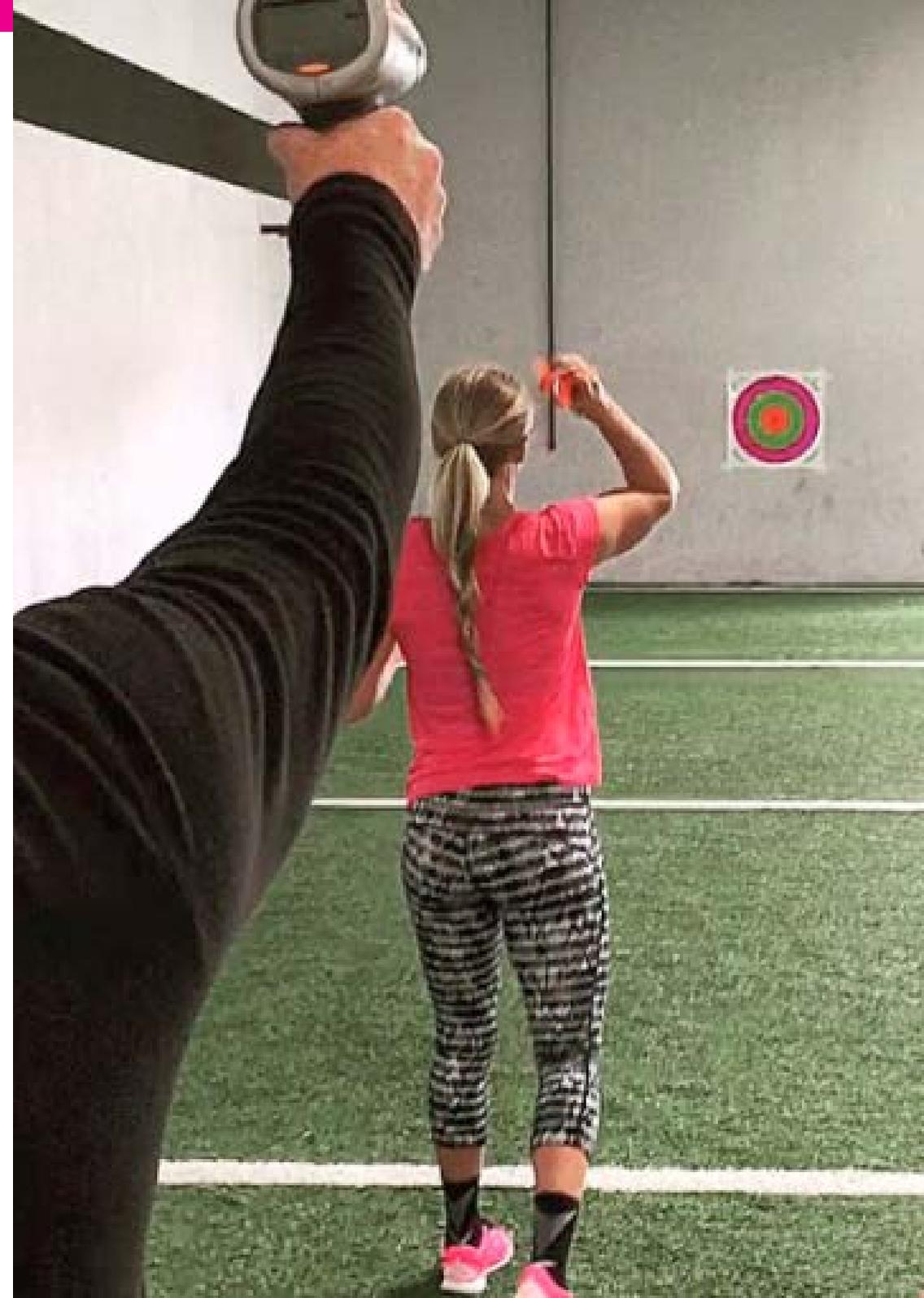
Points are only awarded for the tip of the Mini-Javelin hitting the target. Suggested point system is as follows:

5 Points for hitting the Inner circle 3 Points for hitting the Center circle 1 Point for hitting the Outside circle

NOTE

Teachers should emphasize the reviewing of terms and should emphasize using the terminology in teaching or coaching the throw used in the glossary of concepts. It is important to repeat discussions about leverage and center of gravity, as well as over-shoulder throwing technique with proper foot placement in order to achieve accuracy during these tests and, more importantly, throughout the lessons in this unit.

*Teachers should log onto the website to record data and look for optional evaluation and assessment activities as well as extension beyond the classroom. Check out the various options for recording data into our online database.



LESSON 2.

VIDEO FOR LEARNING
TO THROW THE
MINI-JAVELIN

LESSON 2.

VIDEO FOR LEARNING TO THROW THE MINI-JAVELIN

THROW THE MINI-JAVELIN

Rationale and Teacher Flexibility: Although these lessons are put together in a clinic format, teachers should feel that there are flexibility options for teaching these lessons. It is suggested that you follow the format being given in these lessons due to the sequential nature of successful throws development. This lesson includes a video. Some teachers would rather show the video to visual learners first, then demonstrate, then practice, while other teachers would rather demonstrate and then show the video for reinforcement. Depending on learning styles of students, teachers should weigh what they think is best for their students depending upon what type of learners are in your setting. If you will be throwing in a group setting, organize groups according to learning styles for best results. Remember that all learners learn best while doing. It is their initiation to new concepts (in this case throwing) where presentation is the key factor in developing understanding.

Teachers should utilize their best instincts and judgment as to when the video is shown. Always preview videos before showing them to students. Although all video materials are aimed at teaching technique, teachers know best as to how to use a video to teach in each individual class. It is for these reasons that teachers are the best at transferring knowledge to their audience. It is recommended that teachers weigh the advantages and disadvantages of showing a video before initiation into the throws. Discussion topics are included with the video and a worksheet. One may wish to provide students with the discussion topics before viewing so that students know what the focal points are during the viewing. From an assessment standpoint, it makes sense to attempt to determine the prior knowledge of students before entering into curriculum ventures.

Required Materials

“Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems instructional video as well as demonstration videos for the various throws are needed. The Glossary of Concepts and review questions at the end of this lesson plan are to accompany the video viewing.

LESSON 2.

VIDEO FOR LEARNING TO THROW THE MINI-JAVELIN

Process

This curriculum is designed to both show technique through video viewing and to allow students to practice the technique through a fun game system in the days to follow. The implements that accompany this curriculum are the key components to the throws curriculum.

Goals and Objectives

Goal

to teach and learn proper throwing technique through video presentation and check for understanding through a discussion period and worksheet.

Objectives:

Students will view a video of throwing.

Students will demonstrate knowledge of factors that go into throwing implements orally through discussion.

Students will exhibit knowledge of factors that go into throwing implements on a worksheet.

Knowledge needed by Teachers: Teachers should have reviewed the Standards listed in the Unit overview included in this kit. Teachers should always preview videos before showing them to a class routinely due to the facilitating role of the teacher during the discussion process and in order to help students answer questions about the subject they are about to encounter.

Prior Knowledge for Students: Students need to know what they should be focusing on during the video viewing. This is done best by covering discussion questions prior to viewing.

Diagnostic Activity: Discussion before/during viewing

What does “Center of Gravity” mean?

Why is it important to use an “overshoulder throwing motion” instead of rotating a throw around one’s Center of Gravity”?

What is the proper foot placement for learning to find your “Center of Gravity” for fully using your “leverage system”?

What is “neuro-motor memory”?

What is “grip” and how does it affect the direction and force of a throw?

What is “leverage” and how does the body utilize a “leverage system”?

What does “applying force” mean?

What does “carrying” and “drawback” in javelin throwing mean? What does “throwing through the point” mean?

Why is the mini javelin a good tool for learning to throw any object?

LESSON 2.

VIDEO FOR LEARNING TO THROW THE MINI-JAVELIN

Procedures

See Glossary of terms for understanding the answers to the questions that will be asked.

Actively engage students by asking the seven questions listed above and determine prior knowledge of and understanding of concepts that will be encountered during the video.

Show video to students. Check for understanding whenever needed. The teacher may wish to have students take notes during the video and provide the diagnostic questions as a quiz when completed.

Discuss the answers to diagnostic questions at the end of viewing the video.

Evaluation and Extension Activity: Assign the following essay:

How does the body's leverage system operate? How does the concept of "center of gravity" affect the leverage system in regard to throwing accuracy and throwing distance? Why is a mini javelin a great tool for learning to throw any object?



LESSON 3.

GETTING STARTED :
THROWING THE
MINI-JAVELIN

LESSON 3.

GETTING STARTED : THROWING THE MINI-JAVELIN

GETTING STARTED

Rationale

As stated in the unit introduction and lesson one, the Mini- Javelin Curriculum Unit is designed to bring a throws clinic to the classroom. What students have learned from Lesson One: Pre- test, Lesson Two: Video for Learning to Throw will be executed in Lesson Three: Getting Started: Throwing the Mini-Javelin. The idea is to apply what the teacher and students know into performance stations. In the K-8 Classroom, these concepts should be revisited with less emphasis on distance overall and more emphasis on accuracy and skills development and introducing neuro-muscular memory drills discussed in this lesson. The following Lesson Four will explore neuro-muscular memory and how to enhance it through drills and activities. It is imperative that these technical aspects of throwing the Mini- Javelin be mastered before moving into distance throwing. Particular emphasis on safe throwing and the rules outlined in the Appendix section of the curriculum be copied or posted for students to see as they enter the realm of Javelin throwing. In the 5-12 Classroom, concepts learned, applied, and mastered can be extended into throwing more for distance as seen in Lesson Six. Lessons Three and Four need to be revisited from time to time.

Required Materials

“Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems. Use Appendices at the end of the Teaching Unit for rules and ideas for teaching drills and other games during, and after the lesson.

LESSON 3.

GETTING STARTED : THROWING THE MINI-JAVELIN

Goals and Objectives

Goal

to teach and learn proper over-shoulder throwing technique through demonstration and teaching.

Objectives:

Students will demonstrate knowledge of the various parts of the throw and the throwing motion through practicing the technique and movements.

Students will apply throwing concepts into games and implement this knowledge into the other sports/games that they play.

Students will utilize drills in order to throw more accurately

Students will demonstrate sportsmanship through games and cooperative learning.

Students will understand the general safety rules while being present when implements are being thrown.

Knowledge needed by Teachers: Teachers should have reviewed the Standards listed in the Unit overview included in this kit. Teacher should have reviewed the variety of teaching resources in the “Learning to Throw System” Kit, including the flipbook of the Javelin throw, the “Learning to Throw System” Instructional Video, and the glossary of concepts included in the Teaching Unit Plan.

Prior Knowledge for Students: Students should have viewed the “Learning to Throw System” Instructional Video and reviewed concepts with the teacher before attempting the throw. Students should know how important it is to utilize the body’s leverage system and emphasizing its importance over their center of gravity in order to throw any implement correctly and safely.

Procedures

The amount of time spent on concepts and practice will be determined by the teacher, based upon the teaching assignment. Teaching assignments vary for school to school and district to district. Special consideration should be taken into account when planning the time spent on task during the class period. At all times, the teacher must be involved in the supervision of these activities. The procedures used in this lesson are:

Students should review ALL safety rules and practice proper behavior prior to and during this lesson.

Students MUST warm-up according to the guidelines set up by the teacher.

The teacher should divide students into six groups lined up along lines perpendicular to the wall at which they are throwing.

Each group should have a number of students in each line watching the thrower with the implement.

During each demonstration, the teacher should check for understanding of the arm, leg, and body positioning so that the concepts already learned are being reinforced.

LESSON 3.

GETTING STARTED : THROWING THE MINI-JAVELIN

For extension, the teacher should have the freedom to continue the coaching/teaching demonstrations during the following days.

These concepts and practices should be reinforced often. The order in which demonstrations should take place will be: (see glossary for details on each concept)

Grip-emphasize the importance of the direction of the implement and the ability to apply force to the implement accurately.

Center of Gravity (Check as it changes throughout the throwing process.) and leverage system-the “overshoulder” throwing motion requires that the implement must be as close to the throwers center of gravity as possible and should not go “out around” the center of gravity.

Carry and Drawback

Flight release and follow-through

Repetitions of these activities are encouraged as to aid in the development of neuro-muscular systems within the body. More practice will be available in the next lesson.

During this lesson and subsequent days of practice, targets (or other options seen in the game system appendix) should be utilized as well as throwing along a line perpendicular to the wall holding the target. Targets should be placed on a wall at various distances (5-10-15 meters from targets) depending on progress of students and/or their special needs. These strategies work particularly well with students with disabilities.

Repeat any and all activities as deemed necessary in the days following the initial exposure to the glossary terms to students.

Evaluation and Extension Activity

Use game system for Skills and Accuracy (lesson #5-Post-Test) in the curriculum unit. Point systems and ideas for competitions are included in the section (also available in “Athlete Instructions and Coaching Guide). For Middle School and High School students, Lesson Six provides for more practice. Utilize Special Education resource personnel and support staff to assist children with disabilities in teaching these same concepts centered around those students’ special needs.



LESSON 4.

TRAINING FOR
NEURO-MUSCULAR
RESPONSE:
MOTOR MEMORY

LESSON 4.

TRAINING FOR NEURO-MUSCULAR RESPONSE: MOTOR MEMORY

MOTOR MEMORY

Rationale

“Good Coaches are Good Teachers, Good Teachers are Good Coaches”. All successful teachers/coaches realize the effects of proper repetition, especially when learning a new skill, and re-learning over old habits. The emphasis of this lesson is to teach students how to throw through proper throwing dynamics and to provide an opportunity to develop “neuro motor memory” or “muscle memory”. It is widely accepted by experts that repetitious biomechanical movements improve performance in the chosen movement.

Required Materials

“Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems will be utilized. Use Appendices at the end of the Teaching Unit for rules and ideas for teaching drills and other games during, and after the lesson.

Goals and Objectives

Goal

to give students the opportunity to develop neuro motor memory and neuro muscular mechanics.

Objectives:

- Students will demonstrate a knowledge of concepts of the unit
- Students will apply throwing concepts into effective drills
- Students will utilize the game system to practice the skill of over shoulder throwing
- Students will utilized drills in order to throw more accurately

Knowledge needed by Teachers: Teachers should have reviewed the Standards listed in the Unit overview included in this kit. Teacher should have reviewed the variety of teaching resources in the “Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems., including the “Learning to Throw Instructional Video, and the glossary of concepts included in the Teaching Unit Plan.

LESSON 4.

TRAINING FOR NEURO-MUSCULAR RESPONSE: MOTOR MEMORY

Like the students, teachers should reinforce conceptual thinking in preparation for the game system by encouraging focus activities that remind students that all concepts need to be followed when throwing accurately. In this case, the practical use of these concepts is imperative in developing good habits and to relearn over old habits.

Prior Knowledge for Students

Students should have viewed the “Learning to Throw System” Instructional Video and reviewed concepts with the teacher before attempting the throw. Students should know how important it is to utilize the body’s leverage system and emphasizing its importance over their center of gravity in order to throw any implement correctly. Further, students should be aware of the importance of practicing skills during the acquisition of new concepts.

Procedures

Following are teacher procedures for practicing skills learned in the earlier phases of this curriculum. By practicing and drilling activities, students develop a neuro muscular response to movements emphasized repetitively. It is imperative that teachers review “Hints for Coaching/ Teaching the Mini-Javelin”, “Coaches/ Teachers Guide of What to Look For”, and “Safety Comes First” following this lesson.

Organize students into groups relative to the number of TurboJavs available. (ex. Six TurboJavs come in a kit, splitting a class of 30 into six groups of five throwers per group.)

Place each group into a safe throwing formation.

Students in all groups will be instructed to take three throws toward the target on the wall at 5-10-15 meter increments using the five tests performed in the pre test and the post-test.

Strong hand throws

Weak hand throws

Strong hand throws for points at target

Garbage can throws (or Basketball Hoop throws) Throwing for distance

Additional activities should be two hand throws over the center of gravity, one step throws, and drawback emphasizing over the shoulder movement, and throwing through the point concepts from the Glossary of Concepts.

Students will wait in line at a safe distance behind the thrower that is “up”.

See additional activities in the “Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems in order to drill with other activities.

The game system consists of drills that encourage accuracy by hitting the allocated target. The game system scoring listed below works best. For further ideas, view the “Learning to Throw System™” Athlete Instructions and Coaching Guide for other ideas.

LESSON 4.

TRAINING FOR NEURO-MUSCULAR RESPONSE: MOTOR MEMORY

Review the curriculum video for help in teaching students how to position feet, levers, grip, carry, and drawback and throw.

Once all students have had adequate practice and repetition, teachers should make a decision as to whether they should move on to Lesson Five: Post Test or take another day of practice using this lesson.

Standing Strong Hand Throw:

Feet should be flat on the ground five (5) meters from the target, facing the direction of the throw. The Mini Javelin should be held at “eye level” with the right hand gripping the Mini Javelin properly and with the Mini Javelin parallel to the ground with the point facing in the direction of the throw. The non-throwing arm should also be in the direction of the throw (review grip, leverage, and center of gravity concepts). Drawback the Mini-Javelin, being careful not to bend the throwing arm and not allowing the nose of the Mini-Javelin to rise or fall. In a smooth, continuous motion, the Mini-Javelin is pulled forward and thrown over the shoulder. Start with very short distances and when the correct flight is achieved, students may then work on longer distances.

Standing Weak Hand Throw:

Feet should be flat on the ground five (5) meters from the target, facing the direction of the throw. The Mini Javelin should be held at “eye level” with the left hand gripping the Mini Javelin properly and with the Mini Javelin parallel to the ground with the point facing in the direction of the throw. The non-throwing arm should also be in the direction of the throw (review grip, leverage, and center of gravity concepts). Drawback the Mini-Javelin, being careful not to bend the throwing arm and not allowing the nose of the Mini-Javelin to rise or fall. In a smooth, continuous motion, the Mini-Javelin is pulled forward and thrown over the shoulder.

Start with very short distances and when the correct flight is achieved, students may then work on longer distances.

*Emphasize review of terms and teachers should emphasize using the terminology in teaching/coaching the throw. It is important to repeat discussions about leverage and center of gravity, as well as the over-shoulder throwing technique with proper foot placement in order to achieve accuracy.

Target Throws with Strong Hand:

The third test will provide extra throws with the strong hand of the student at targets again. Using the same stance as the last two tests (feet flat 5, 10, 15 meters from the target), the student will aim at the target and attempt to gain points from the scale listed below.

Garbage Can Throw (Basketball Hoop throws can be substituted): A prerequisite for this test is to provide a clean garbage can with one or two liners taped to the rim of the can for cleanliness.

LESSON 4.

TRAINING FOR NEURO-MUSCULAR RESPONSE: MOTOR MEMORY

Using 5 and 10 meter increments and using the original stance in the previous tests, students will attempt to throw the mini javelin into the garbage can. Use the point matrix following these instructions in rewarding points.

For Distance:

Using proper foot placement, students will be given an opportunity to throw the mini javelin for distance. Each student will be given three throws. Using a 100-150 foot tape measure that has a metric side, students should throw three throws and be measured for distance from a split leg stance such as in previous tests. Students should be given both imperial and metric measurements per throw. The metric distance should be used to log results onto the Internet website. *For extension opportunities for math and science classes, have students provide the conversion of distances from imperial measurement to metric measurement.

Skills and Accuracy Games Points System

(See Athlete Instructions and Coaching Guide)

Target:

Points are only awarded for the tip of the Mini-Javelin hitting the target. Suggested point system is as follows:

5 Points for hitting the Inner circle
3 Points for hitting the Center circle
1 Point for hitting the Outside circle

Garbage Can

Points are only awarded for the nose hitting the can or the Mini- Javelin going into the can.

5 Points for going into the can

3 Points for hitting the rim of the can with the tip
1 Point for hitting the can with the tip

Basketball Hoop:

Points are awarded for the nose hitting the backboard, hitting the square on the backboard, or going into the basket and into and through the net.

5 Points for going through the basket and through the net
3 Points for hitting the square on the backboard

1 Point for hitting the backboard outside of the square

Extension and Enrichment: Write an explanation of how “practice makes perfect” applies to the concept of neuro muscular response training. How can repetition and drills allow students to progress through practice? How important is it to train muscles, joints, and connective tissue (ligaments, cartilage, etc.) to perform the way that you want them to perform through repetition?

Add your own questions or partner with a language arts or health education instructor to assign this activity for a writing assessment grade.

LESSON 5.

ASSESSING SKILLS AND
ACCURACY: POST TEST

LESSON 5.

ASSESSING SKILLS AND ACCURACY: POST TEST

POST TEST

Rationale

With any effective curriculum or development program comes the option of games thrown into the learning and training process for a few reasons:

Assessment and evaluation of set goals, objectives and standards
Encouragement to continue progress through a break in instruction and to begin the assessment and evaluation following instruction

To provide a baseline by which to measure individual progression given results of the pretest and to provide a comparative analysis of progress following instruction

To provide a fun / competitive game that motivates and satisfies the natural instinct to excel in personal and/or team physical activity.

It is with these factors in mind that the following activity was developed. This is a culminating event of assessment as a means of lesson and student evaluation. As part of the curriculum, an online database was developed in order to log overall results and to effectively track young athletes that show promise in the javelin throw. The online environment where results can be stored provides for data analysis and the possibility of extension activities such as “Virtual Games” where various locales can compare results with others and enter into a fun cross-cultural exchange in the spirit of sportsmanship and competition. Classes are encouraged to log in and compare, browse, and set goals.

It is important to stress that these “games” and cooperative learning activities can extend into track practice and recreational activities for the community, as well as at home in sports other than javelin throwing. As stated before in this unit, accuracy games have always been a focus of recreational and fun activities for people in “play” mode and can be the center of social activity and human interaction. Their usage in the physical education classroom should encourage fun, yet productive activity in the learning process of throwing and its associated connection to sports.

LESSON 5.

ASSESSING SKILLS AND ACCURACY: POST TEST

Required Materials

“Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems will be utilized. Use Appendices at the end of the Teaching Unit for rules and ideas for teaching drills and other games during, and after the lesson. A tape measure will be needed in order to measure the distance/ accuracy throwing activity.

Goals and Objectives

Goal:

to assess progress and technique through a skills and accuracy game system.

Objectives:

Students will demonstrate sportsmanship through games Students will apply throwing concepts into games

Students will utilize the game system to enhance their lives socially, cognitively, and affectively, as well as physically

Students will utilize drills in order to throw more accurately

Knowledge needed by Teachers: Teachers should have reviewed the Standards listed in the Unit overview included in this kit. Teacher should have reviewed the variety of teaching resources in the TurboJavVII Kit, the TurboJavVII Instructional Video, and the glossary of concepts included in the Teaching Unit Plan. Like the students, teachers should reinforce conceptual thinking in preparation for the game system by encouraging focus activities that remind students that all concepts need to be followed when throwing accurately.

Prior Knowledge for Students

Students should have viewed the “Learning to Throw” Instructional Video and reviewed concepts with the teacher before attempting the throw. Students should know how important it is to utilize the body’s leverage system and emphasizing its importance over their center of gravity in order to throw any implement correctly.

LESSON 5.

ASSESSING SKILLS AND ACCURACY: POST TEST

Procedures

Following are teacher procedures for the game system as an assessment and evaluation tool for this curriculum. As a post-test activity, the basic procedure for this lesson should be followed as closely to that of the pretest environment. Utilization of same environment from pre-test to post-test should ensure the validity of the pretest and the post-test. It is imperative that teachers review “Hints for Coaching/Teaching the Mini-Javelin”, “Coaches/ Teachers Guide of What to Look For”, and “Safety Comes First” following this lesson.

For the warm-up and first stages of the game, students should be 5-10 meters away from the target. As they master accuracy, the students can be moved further away from the target. Points should be awarded if the front tip of the TurboJav hits the target. Each group is responsible for keeping their own score or neutral students can be assigned the task. (*Students that do not dress for PE could be assigned to this exciting activity, thus encouraging involvement in the class.)

Organize students into groups relative to the number of TurboJavs available. (ex. Six TurboJavs come in a kit, splitting a class of 30 into six groups of five throwers per group.)

Place each group into a safe throwing formation.

Each group ultimately should be stationed behind straight lines heading toward the target.

Students will wait in line at a safe distance behind the thrower that is “up”.

Once all results are collected, teachers can log results onto the Internet database provided with this curriculum.

For the warm-up, students should be 5-10-15 meters away from the target. As they master accuracy, the students can be moved further away from the target. Component systems pre-test include five basic tests:

During the following tests, students should have their feet flat, shoulder width apart on the ground facing the direction of the throw. Teachers will measure all throws for distance and accuracy, using both metric and imperial measurements from the tape measure.

Basketball Strong Hand:

The first test will be to throw a basketball using the over the shoulder throwing technique. Students will be measured for distance using metrics and imperial distances. See asterisk note above for foot placement with all throws in the

Football Strong Hand

Same as test one.

TurboJav Strong Hand:

Same as tests one and two. Target Throws with Strong Hand:

The fourth test will provide extra throws with the strong hand of the student at targets again. Using the same stance as the last two tests (feet should be flat on the ground 5, 10, 15 meters from the target), the student will aim at the target and attempt to gain points from the scale listed below.

LESSON 5.

ASSESSING SKILLS AND ACCURACY: POST TEST

Target Throws with Weak Hand: The fifth test will provide extra throws with the weak hand of the student at targets again. Using the same stance as the last two tests (feet should be flat on the ground 5, 10, 15 meters from the target), the student will aim at the target and attempt to gain points from the scale listed below.

Target

Points are only awarded for the tip of the Mini-Javelin hitting the target. Suggested point system is as follows:

5 Points for hitting the Inner circle
3 Points for hitting the Center circle

1 Point for hitting the Outside circle

*NOTE: Teachers should emphasize the reviewing of terms and should emphasize using the terminology in teaching or coaching the throw used in the glossary of concepts. It is important to repeat discussions about leverage and center of gravity, as well as over-shoulder throwing technique with proper foot placement in order to achieve accuracy during these tests and, more importantly, throughout the lessons in this unit.

*Teachers should log onto the website to record data and look for optional evaluation and assessment activities as well as extension beyond the classroom. Check out the various options for recording data into our online database.

LESSON 6.

ASSESSING DISTANCE
AND ACCURACY: GAME
SYSTEM EXTENSION

LESSON 6.

ASSESSING DISTANCE AND ACCURACY: GAME SYSTEM EXTENSION

GAME SYSTEM EXTENSION

Rationale (middle and high school recommended)

Like Lesson #4 this lesson using a game system to assess the effectiveness of the previous lessons and awareness of learned concepts. This lesson is aimed at increasing accuracy and distance in throwing. World Records are measured in distance, however, it is important for students to understand that the throws that go farthest are ones that remain close to the center of the throwing sector. Conceptual knowledge of “Overshoulder throwing”, the use of the body’s “levers” and the “leverage system”, and the emphasis of the maintaining “leverage over the body’s center of gravity” are key to success in this assessment and evaluation lesson. Once throwers have successfully completed the target drills, they will then move on to throwing for distance, keeping in mind the importance of technique and accuracy.

Required Materials

“Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems. Use Appendices at the end of the Teaching Unit for rules and ideas for teaching drills and other games during, and after the lesson. An Internet connection for logging results to the EduSportz Website is recommended.

Goals and Objectives:

Goal:
to assess progress and technique through a distance and accuracy game system. To log results onto the database section of the website.

Objectives:
Students will demonstrate sportsmanship through games
Students will apply throwing concepts into games
Students will utilize the game system to enhance their lives socially, cognitively, and affectively, as well as physically
Students will utilized drills in order to throw more accurately and for distance

LESSON 6.

ASSESSING DISTANCE AND ACCURACY: GAME SYSTEM EXTENSION

Knowledge needed by Teachers: Teachers should have reviewed the Standards listed in the Unit overview included in this kit. Teacher should have reviewed the variety of teaching resources in the “Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems. Also, reviewing the included flipbook of the Javelin throw, the “Learning to Throw System” Athlete Instructions and Coaching Guide, Targets and Game Systems Instructional Video, and the glossary of concepts included in the Teaching Unit Plan is recommended. Like the students, teachers should reinforce conceptual thinking in preparation for the game system by encouraging focus activities that remind students that all concepts need to be followed when throwing accurately.

Prior Knowledge for Students

Students should have viewed the “Learning to Throw System” Instructional Video and reviewed concepts with the teacher before attempting the throw. Students should know how important it is to utilize the body’s leverage system and emphasizing its importance over their center of gravity in order to throw any implement correctly and safely.

Procedures

Following are teacher procedures for the competitive game system and assessment tool for this curriculum. It is imperative that teachers review “Hints for Coaching/Teaching the Mini-Javelin”, “Coaches/Teachers Guide of What to Look For”, and “Safety Comes First” following this lesson.

Students should warm-up properly by throwing short distances, stretching properly, and preparing focus activities and visualizing proper throwing technique. The teacher should reinforce proper and safe throwing.

Organize students into groups relative to the number of Mini Javelins available. (ex. Six TurboJavs come in a kit, splitting a class of 30 into five groups of six throwers per group would be one option.)

Place each group into a safe throwing formation.

Each group ultimately should be stationed behind straight lines heading toward the target or the throwing sector.

Students will wait in line at a safe distance behind the thrower that is scheduled to throw.

The game system consists of drills that encourage accuracy and distance by hitting the allocated target.

The point system will be based upon the combination of distance and accuracy such as seen in the diagram explaining the rules of measurement in this competition. The two components of this game system are as follows:

LESSON 6.

ASSESSING DISTANCE AND ACCURACY: GAME SYSTEM EXTENSION

Three, Five and Seven Step Approaches:

A right-handed thrower will start with the right foot forward and the right arm back. The Mini-Javelin should be drawn back and the left arm should be pointing in the direction of the throw. Both arms should be held high, slightly above the shoulder level. The first step would be with the left foot, second with the right foot moving quickly to allow the third step off of the left foot or the block leg to be placed down quickly. The left arm at the plant (or block) should pull into the rib cage quickly, which allows the right shoulder and hip to accelerate over the leg as the throw takes place. This should allow the body to continue to follow through. Once students have mastered the three-step approach, two additional steps could be added to the run. Once the five-step

approach is mastered, two more steps should be added, thus making this a seven-step approach.

Full Approach: The full approach should be added only after students have mastered the standing, three-step, five-step, and seven-step approach successfully. Following the same guidelines as above, the students must learn to run smoothly, drawback the Mini-Javelin with control and keep the point of the implement always toward the target or in the direction of the throw. The most common problem confronted by javelin throwers is the loss of the direction of the point. The implement should always be parallel to the ground throughout the full approach, not allowing the implement to move up or down when they begin to apply force to the implement. Most throwers do not use more than 25 meters for a full approach. Once the implement leaves the hand of the thrower, he/she must continue to move throughout the follow-through. See appendices for tips on what to look for in a good throw and tips for teachers and coaches.

Evaluation and Extension Activity

Utilize the scoring sheet in this Unit Plan to record scores during the game system and competition. Use the same score sheet that was used in the lesson #4 “Distance and Accuracy” games. There are enough categories to complete so that tracking student progress and assessment of mastery can be determined. All measurements used to log performances should be recorded in metric distances. Imperial measurements can be taken and used as a frame of reference, but because measurements internationally and in major competitions are taken in metric distance, they should be recorded onto the database as such.

*Teachers should log onto the website to record data and look for optional evaluation and assessment activities as well as extension beyond the classroom. Check out the various options for recording data into our online database.

AUTHORS

AUTHORS

TOM PETRANOFF

YOU CAN'T, YOU WON'T AND YOU NEVER WILL

I was a baseball and football player and had just come back from baseball practice at Palomar Jr. College in San Marcos, California, in the spring of 1977. I saw a fellow throwing the javelin, who just happened to be the best junior thrower in the country. I asked him if he could teach me to throw and he told me to get lost! I then found another fellow to show me how to throw! At that time the coach came out for the school team and told me that club throwers were not allowed to be practicing at that time. I told him I was not a club thrower and that it was my first time out! He asked me my name and would I please come out for the school team. The next day, my first meet, I threw 66.90m (219') in a pair of baseball shoes. Two weeks later I threw 70m. The fellow that would not show me how to throw was a French Canadian by the name of Luke Lapperier! He told me that I was lucky, but that I wouldn't throw any further. Since then, my motto has been, "You can't, you won't and you never will." Six weeks later, I threw 77.50m (254') which was the leading throw for a junior at the time. I then went on to throw 79.64 at a junior invitational meet (USA VS Russia). I of course beat his best throw and was considered the best junior thrower in the world! To say that Luke Lapperier was devastated is an understatement, as I don't think he ever competed again! In early 1979, I moved to California State Northridge to train under Bill Webb.

Also training there was Bob Roggy, who at the time was the top senior thrower in the country. In that year I progressed to 80m on April 12th, but came in second to Bob Roggy, who again told me that I couldn't throw any further. Again I was up against, "you can't, you won't and you never will." I knew after that meet, that I had the ability to become a world class javelin thrower and more that that I had the will! 1980 was Olympic year and the Olympic Trials were held in Eugene, Oregon. I threw 82.74, which believe it or not tied for third place. Duncan Atwood, won third place because his 2nd best throw was further than mine. After this meet I was asked to join the United States Olympic Committee Elite Athletes Program. I was provided with the tools necessary to participate with the best in the world. Our program consisted of not only coaching, but biomechanical filming and analysis, but also mental and medical information which proved to be a major part of my success. Juris Terauds who provided the biomachanical film information, predicted that I would throw 100 meters.

At the time it was difficult for me to believe! In 1981, I just continued to work hard and put all the information that I had learned together to become a more all-around javelin thrower. was my first world ranking. In 1982, I had a best of 88.40 and was ranked 9th in the world, which was my first world ranking.

Then 1983 started off with a bang! I knew early in the year that I was in top form. I went to Australia in January and threw an Australian record of 90m or 294ft which was then 2nd to Bob Roggy's all-time US record of 315 feet. On May 15th, 1983 at the UCLA Pepsi Invitational, under the best coaching in the world by Bill Webb, javelin support and technology by Dick Held, and metal preparation of Bob Nideffer, I went on to set my first world record of 327ft 2inches, or 99m72. It turned my world upside down! I certainly new I had the ability, but to actually accomplish that distance was a real dream come true. It was definitely a team effort, everyone from my coach to my wife has to be thanked for the all out effort that was generated. In July of 83 at the Collessium in Los Angeles, I competed in a dual meet between the US and East Germany. I beat Detlef Michael with a throw of 310ft 4 inch to his 302ft, which was at the time the longest losing throw in history. I had a great year with many throw's over 300 ft. The first world championships in Helsinki, Finland, where Detlef Michael beat me in the pouring rain with a throw of 295 to my 282, was a big disappointment to me. After a super year, they actually placed Michael first in the Track and Field News world rankings above me, which I felt was totally unfair. In early 1984 Uwe Hohn from East Germany threw the javelin 104m, which surpassed my world record, but also prompted the change in the javelin that we now know as the current javelin. I was predicted to be the favorite to win the 1984 Olympics, having won the qualifying round with a throw of 86m. My only real memory of the Los Angeles Olympics, was standing on the runway! I looked up and saw myself on the big screen at the track! That was the beginning of my downfall! I did not produce a throw long enough to entitle me to compete with the final 8 throwers. Arto Harkenin won that Olympics with a throw of 85m something. The irony is, if I could have only had my qualifying throw, I could have won that Olympics.

Back to the javelin change! By changing the center of gravity on the javelin, it allowed the difference in the weight distribution to make the javelin turn over sooner, which shortened the distance and actually allowed the javelin to stick in the ground, which virtually eliminated flat throws! In 1986, I set my second world record of 85.38m, which I did at the World Games in Helsinki, Finland (There is no better place to set a world record)! I did receive my status of #1 in the world, according to Track and Field News that year! Attaining world rankings again in 1987, which was my 6th year in a row, I proceeded onto the Seoul Olympics in 1988.

Again I performed poorly and had decided to go on a Rebel tour to South Africa! I was disillusioned with sport in the US, needed the extra money being offered and felt it unfair that South Africa, through political reasons, could not compete with the rest of the world.

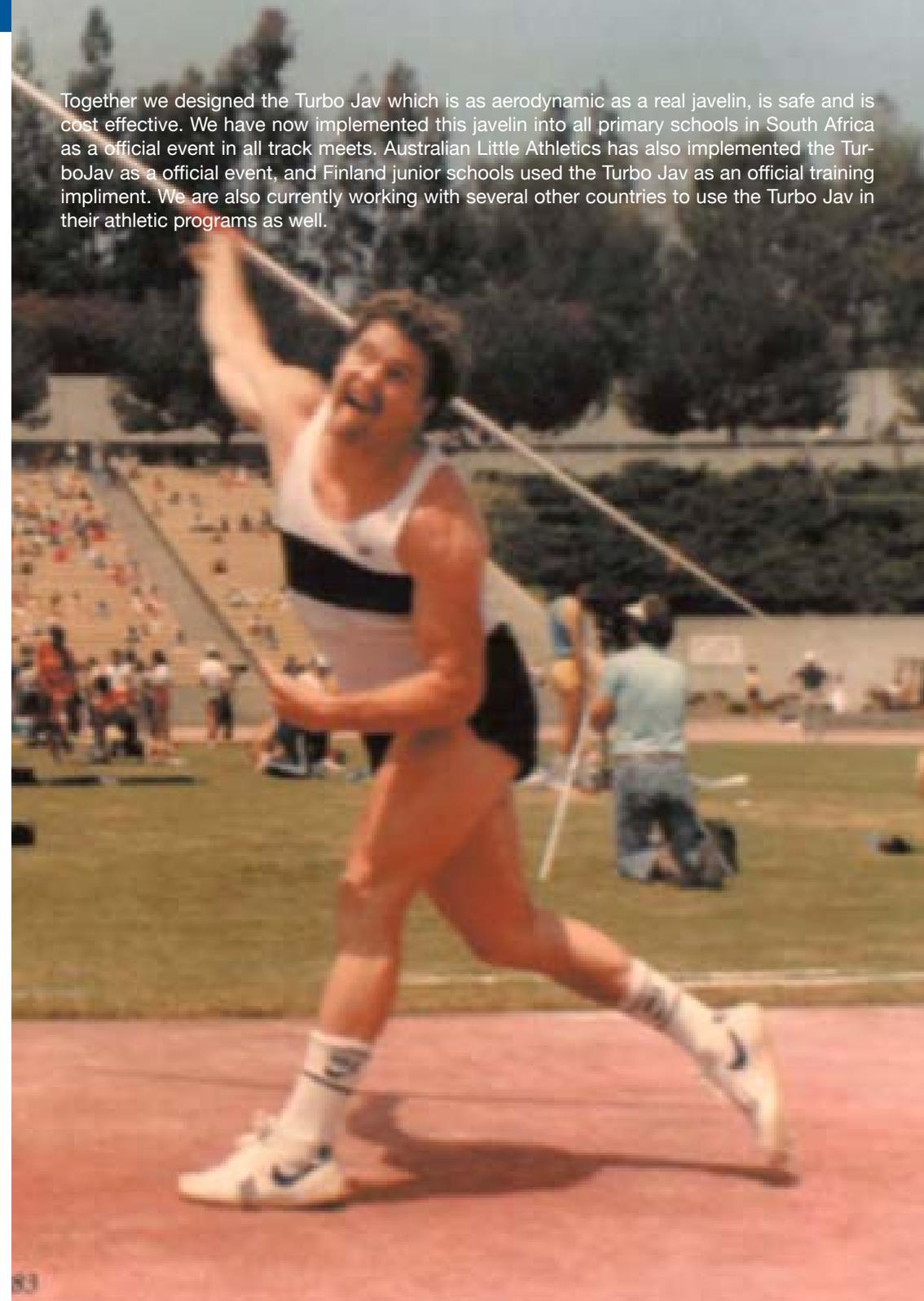
AUTHORS

TOM PETRANOFF

In 1980, the US team couldn't compete in Russia, in 1984 at Los Angeles, the East did not compete, for political reasons. I truly believed this was wrong in sport. I had decided that I would be a pawn in the political field of athletes and show that it was wrong to mix athletics with sports. This competition gave me world wide coverage on the sports pages, but also provided me with a ban from the TAC (The Athletics Congress) of 6 years. Funny enough, Ben Johnson had just been involved in the biggest drug scandal in Olympic History, by testing positive for steroids in Seoul and only received a 2 year ban. Zola Budd was allowed to compete in Los Angeles because her grandfather held a British passport! It just goes to show you how they bend the rules, which is often totally unethical. To ban just one country in the who world, because of the countries political beliefs, not the individuals beliefs, seems totally barbarian to me. Iraq, Iran, Libya and even China are involved in human rights violations, much equal or worse than South Africa, but yet they are allowed to compete in the international arena. With that behind me, I decided I wasn't ready to give up javelin throwing and I enjoyed support from the public. At that time athletics was one of the three major televised events on TV. South Africa was a sport mad country and due to the sanctions, they were very interested in international athletes. I then moved my family to South Africa in March of 1989. My spirit and juvenation was totally focused as I was receiving recognition, like never before. When I first came here, people said that I was washed up and was on my last pay day. I was out to prove them wrong. In 1990, I threw 85.40 on April 8th, which was not only a African record, but also a American record. At that time I was banned, so it was not recognized by the US. I was recogniszd by Track and Field News who then decided to rank me 7th. I was duly impressed! Then 1991 was a great year, as I set several African and American records with the best throw of 89.16. Later in the year I went on to become a South African citizen, but it was not early enough to allow my throw of 89. to be recognized as a South African Record. In 1992 South Africa was let back into the international arena and I had a throw of 87.26, which is now the South African record! In 1992 due to problems with unity within the old and new governing athletics bodies, I was in the unfortunate position of being used as a political pawn and was unable to compete in theOlympics. Two weeks beforethe games in Helsinki, Finland, I threw 86.90, which would have been a silver medal at those Olympics. What is the saying "C'est La Vie"? By this time, I was sick and tired of all the politics that were involved in sport and decided to concentrate all my efforts on development. I then retired in 1992.

In 1990, I started working in the disadvantaged townships teaching the javelin throw to youngsters. It didn't take me long to realize that it was a very difficult event that was very dangerous as well as expensive in areas that didn't have the proper infrastructure. I then designed a childrens training javelin called the Turbo Jav. Now 7 years later, 5 molds later and alot of money, time, and research, I have developed the perfect training implement for any class of javelin thrower. After my fouth mold, I was not happy with the quality, so I took it to a engineer who works for one of the world's most acclaimed missile making companies.

Together we designed the Turbo Jav which is as aerodynamic as a real javelin, is safe and is cost effective. We have now implemented this javelin into all primary schools in South Africa as a official event in all track meets. Australian Little Athletics has also implemented the TurboJav as a official event, and Finland junior schools used the Turbo Jav as an official training impliment. We are also currently working with several other countries to use the Turbo Jav in their athletic programs as well.



AUTHORS

MARK SWIGER

REGEN CEO
CONSULTANT

Mark ranks as one of the most successful coaches in all sports in West Virginia Intercollegiate history winning 21 Conference Championships in Cross Country and Track and Field, coached 3 NCAA Champions, hundreds of all conference athletes, and 22 All-Americans from 1990-2003 with many more qualifying for NCAA Championships, US Track and Field Championships, and even coached a World Junior Champion who came to compete for Mark at the collegiate level. During that time, he hosted several national level coach's clinics often bringing Tom and other notable track coaches/athletes to train local and regional level coaches. His total in-conference record was 290-41, a .876 winning percentage.

Mark Swiger has maintained his ties to education hierarchy and consulting with numerous entities, including NASA's Sponsored Classroom of the Future, the U.S. Department of Education, working for three years for the West Virginia Department of Education's Regional Education Service Agency. He continues to consult yearly with the WVDE with nearly every division, including Healthy Schools, School Building Coordinators, Career and Technical Education including Agriculture Education. He served as the key evaluator for the textbook adoption of materials for Agricultural Education teachers for the department during a recent instructional materials adoption cycle. He is also a consultant for the Education Information Resource Center in Mullica Hill, New Jersey, a Local Education Agency and the sole k-12 supplemental service agency in the entire New Jersey schools network.

He serves on the Board of Directors for the US Green Building Council, Create West Virginia, a grassroots economic development organization focused on community transformation to the new economy, and is a co-founder of the Green Schools Leadership Institute, a multi-state program whose mantra is "healthier schools at lower cost". He is engaged with state school board members, state superintendents, department executive directors, and bridges gap between schools and the business community.