Athletics 365
Developing the Next Generation of Athletes

Youth Development in the UK

Scott Grace
England Athletics
National Technical Lead for Youth Development

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Building The Foundations For The Next Generation Of Athletics Champions

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How do you build the next Generation of Athletes?

Retain

Recruit

Develop

Excel

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Underpinning Research

Reasons for participating in sport

- Fun and Enjoyment (Excitement)
- **Mastering a Skill (perceived Competence)**
- Parents / Teachers
- **To Learn New Skills**
- Friends / Peers (belonging to a group)
- Being Successful
- **Gaining Recognition**

Reasons for dropping out

- **Boredom (doing the same thing too much)**
- **Lack of success**
- **Too much pressure from parents, coaches and peers)**
- **Loss of Interest**
- **Friend Leaving the Sport**

WORKSHOP REPORT

The International Athletic Foundation Workshop on Youth Athletics

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In 1999, the IAAF took the first of two bold initiatives to provide services for target groups that it has traditionally left to its national federations and others. That year it added a biennial World Youth Championships in Athletics, for athletes aged 16 to 18 years old, to the sport's cycle of major championship events. Among the objectives for the meeting was the provision of a world stage for competitors who were younger than those taking part in the well established World Junior Championships in Athletics, in the hope that some could use it as the first rung on the ladder to success in the senior ranks.

The second initiative, called IAAF Kids Athletics, provided Member Federations with a pre-packaged programme of modified athletics activities and equipment for introducing large numbers of youngsters to the sport. It was envisaged that Kids Athletics would help to promote the sport to a new generation of participants (and future fans) and provide a useful tool for talent identification.

The first editions of the World Youth Championships rewarded the IAAF's boldness by proving successful from both the participation and competition points-of-view as 131 teams and the young athletes responded with some impressive performances. Kids Athletics is still in the process of becoming established but there is no reason to presume that it will not be well received.

onships reported that a worryingly high percentage of the competitors required treatment for injuries and during the last three or four years "youth athletics" has become a hot topic for debate at the national and international levels. Among the issues to emerge are:

- The pros and cons of specialisation, performance-oriented training and international competition at an early age
- Appropriate age-groupings for training and competition
- The phenomenon of young athlete drop-out
- The training of coaches to best support the development of young athletes.

It is clear that having gone down this road the IAAF Council, Committees and Commissions must stay engaged with this area of the sport and be prepared to make adjustments when appropriate. In order to do this effectively there is a need to keep abreast of the latest research and thinking.

To this end, the International Athletic Foundation, with special support from the Real Federacion Espanola de Atletismo (Royal Spanish Athletics Federation), hosted an international working group of ... from a range of ...

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Review

Intensive training in young athletes

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An increasing number of children take part in organized sporting activities, undergoing intensive training and high level competition from an early age. Although intensive training in children may foster health benefits, many are injured as a result of training, often quite seriously. This paper reviews some of the areas of research dealing with intensively trained young athletes, and focuses on physical, cardiovascular and muscular effects, sports injuries and psychological effects of intensive training. It is concluded that measures should be taken to modify present training and competition schemes to avoid the deleterious effects of intensive physical activity on these children.

Keywords: Intensive training, children, sports injuries

In the past few years, competitive sport participation has become an established feature of Western society[1]. Youngsters in their early teens may have already undergone intensive training and high level competition for several years in sports like gymnastics, swimming or tennis[2]. Rowley has reported that early participation of children in competitive training activities is due to the 'catch them young' philosophy[3], and to the belief that, to be able to achieve international acclaim, it is necessary to start intensive training before puberty.

The number of children taking part in competitive sports is so high that some medical bodies have issued guidelines regarding participation[4-6]. Although all the risks of injury in these youngsters are, at present, unknown[7], an epidemic of sports injuries, as children change from free play to the stereotyped demands of the specialized patterns of movement imposed by a single sport, has been predicted[7-9].

The emphasis on intensive training and high level competition in a single sport begs the following questions:

Should young children participate in intensive training and high level competition?
Are children involved in intensive training at risk of injuries to their developing musculo-skeletal system?
Can psychological problems arise from intensive sports participation at a young age?

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Physical, cardiovascular and muscular effects

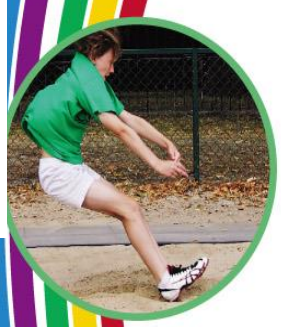
Increase in strength and endurance are an established feature of growth and development[7] and of training[10]. The effects of physical training are difficult to separate from those of normal puberty[7]. Studies involving children have detected a wide range of results, from certain ill effects, such as growth retardation[11], and no effects at all[12-14]. It is known that a certain amount of physical activity is required for normal growth[5,11], but the minimum needed has not been identified, and the ill effects of intensive training have not been fully clarified[12,13,15-17].

In girls, one of the most sensitive areas of research has been menarche and menstrual disorders. The age of achieving menarche, and the incidence and duration of menstrual disturbances in young athletes engaged in intensive training have been reviewed[1-3]. With few exceptions, menarche is delayed in athletes[1]. Moreover, female athletes engaged in intensive training show an increased frequency of menstrual irregularities[18]. The data dealing with this issue have not been convincingly researched. Factors that could influence the time of menarche, such as genetic influences or nutritional status, must be systematically controlled for meaningful conclusions to be drawn.

Also, the skeletal maturation of young male athletes engaged in cycling, rowing and ice hockey was followed from 12 to 15 years by Kotulan *et al.*[19] who concluded that regular physical activity has no effects on the growth of young male athletes.

The question of athletic potential has been addressed. The response of a given athlete to a particular training regimen is due to an inherited genotype[20]. Only approximately 30% of the maximal oxygen uptake (VO_2 max) and maximal force and power of top class competitors can be accounted for by training.

Young athletes undergoing vigorous training were found to be taller and to have less body fat and higher VO_2 max than sedentary controls[21]. In another study, 34 boys aged between 12 and 16 years old engaged in competitive middle and long distance running were compared with 56 controls not undergoing intensive training[22]. The runners had been training for 2 to 5 years, and had less body fat and lower resting heart rates. Statistically significant differences were only achieved between the 16 year olds. The young runners in this study also had larger heart volumes,



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England Specific Research

Bridging the Gap 2011

- UK Top 20 U15 Age Group from 2006
- Tracked the progress of 660 young athletes over 5 years
- 49% Where still active
- 37% Where still in their original event
- 12% Where still in the UK top 20 ranking as an U20

Three Key Findings from the Research

1. Building LTAD principles into initiatives for recruiting, developing and retaining athletes.
2. Using athleticism as the building block for athletics.
3. Having pathway products that are consistent with LTAD to underpin delivery of the sport.

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Youth Development

Outcome
Performance Against Others

→ **Competitions**

Outcome
Performance Against Yourself

→ **Awards Programme**

Process
Development of Skill and Conditioning

→ **Athletics 365**

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What is **Athletics 365?**

- A consistent approach to young athlete development across England ('like for like' activities in every club);
- A young athlete progression pathway (From playground – Podium);
- A delivery Syllabus for coaches for every athletics event (and other areas such as physical conditioning);
- Extensive support resources for youth and club coaches
- A Recognition and Reward scheme for athletes;
- A system which provides the fundamental skills which underpin all athletics events and that are applicable to all other sports (Developing athleticism, not just athletic development);
- A Club Youth Development Programme

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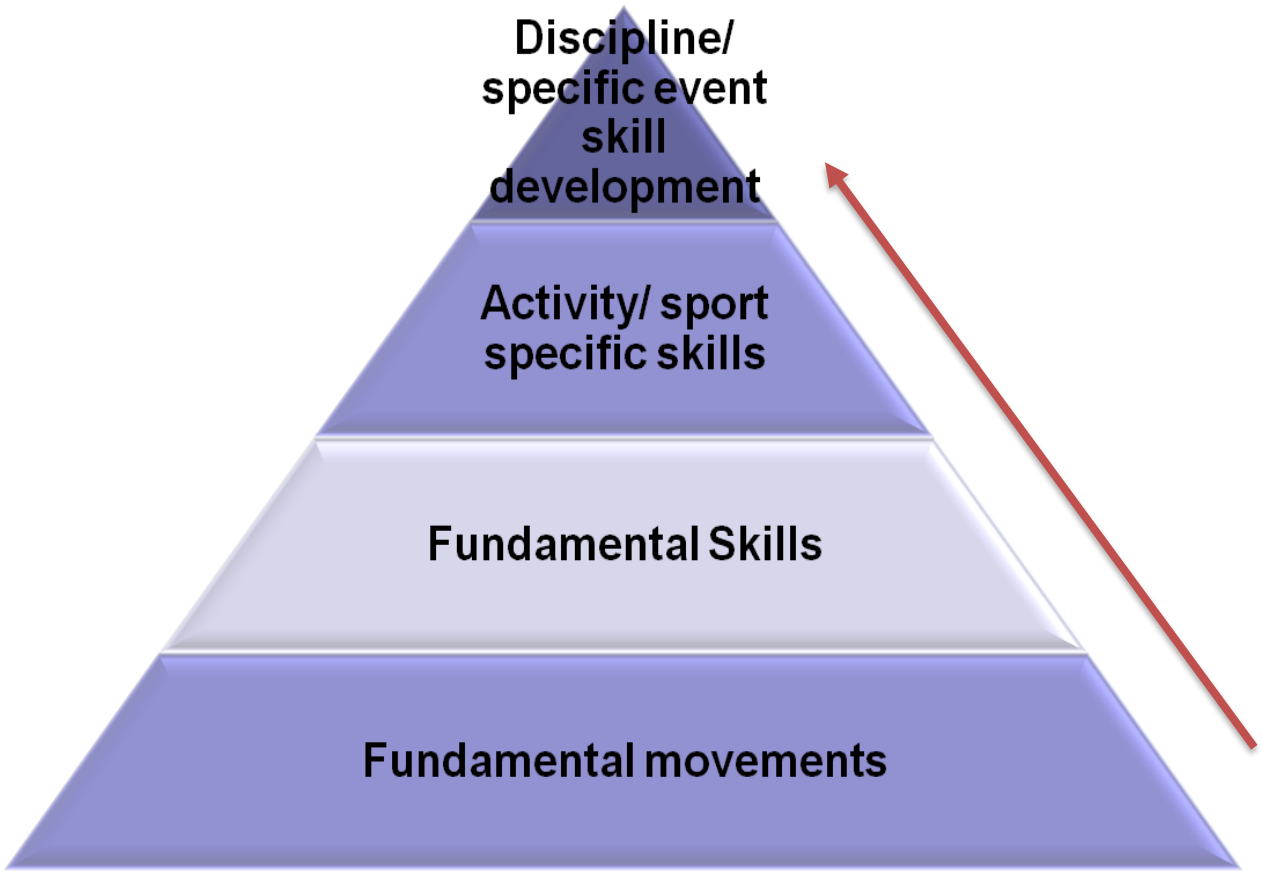
Athletics 365: Pathway



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Athletics 365: Challenges & Curriculum

- 9 Stages of progression (Red – Gold);
- Recognition and Reward for competence;
- **Process** and outcome driven;
- Based on other successful sports;
- Developed using existing resources;
- Four key area of athlete development:

  - *Physical conditioning;*
  - *Technical and tactical (Athletics events);*
  - *Lifestyle and support;*
  - *Psycho behavioural;*

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Why do we need **Athletics 365**?

There is some great work and good practice happening across the UK and this we need to build upon.

There is also a range of challenges that face grass roots athletics, these include:

- Inconsistent delivery of child development activities across UK;
- Coaches with the least experience working with children;
- Athletes are specialising too early;
- Too much focus on outcome (i.e. distance jumped or time run) rather than **on Process** (i.e. technique when running or jumping);
- Groups based on chronological age not developmental stage.

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Every athlete is different

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Previous Situation

- Excessive ratios of coach to athlete;
- Lack of volunteers;
- Junior sections have limited areas to use due to senior groups;
- Lacks structure and excitement ;
- Losing out to other sports;
- Support resources for junior club sections where too confusing and there are too many.

Athletics 365 *has set out to address the above issues while building on the existing good practice*

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Athletics 365 Benefits

To Clubs and Sport

- Skilled ‘children coaches’ leading *Athletics 365* sessions;
- Greater Retention of athletes *(90% plus in several clubs)*
- Focused on Long Term Athlete Development;
- Focuses both on **process** and outcome;.
- Recognition and reward system;
- Focused on development stage, not chronological age;
- Development of new Professionalised Clubs / Academies
- More competitive with other sports

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Athletics 365 Benefits

For Coaches

- A Structured approach to coaching within every club
- A clearly defined curriculum of delivery
  - ‘Like for like’ coaching across the UK
  - Coaches aware of athletes stage of progression at all levels
- Excellent supporting resources;
- Adult and young leaders given specific skills required to work with young people;
- Curriculum and resources imbedded into the Coach Education Pathway

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Challenges and Curriculum

	Beginner	Developing			Practising			Emerging		
	White Stage 0	Red Stage 1	Yellow Stage 2	Green Stage 3	Purple Stage 4	Blue Stage 5	Black Stage 6	Bronze Stage 7	Silver Stage 8	Gold Stage 9
Jumping for Distance Long Jump and Standing Long Jump	18. LONG JUMP AND STANDING LONG JUMP	18a) Demonstrate various jumps in response to instructions (jumps for height, distance, 2 feet to 2 feet, etc).	18a) Use backward to forward arm swing to increase jumping distance.	18a) Identify preferred take off leg.	18a) Demonstrate fast controlled approach (optimum speed) with limited run up: 10 - 12 strides.	18a) Achieve optimum speed after a controlled run up.	18a) Perform a consistent sprint technique on the approach run.	18a) Demonstrate minimum bending of the take off leg.	18a) Sell technique: Hold thigh parallel to the ground during flight phase.	18a) Demonstrate best technical competence of Hang Technique.
		18b) Demonstrate soft landing - bending at the knees to cushion impact.	18b) Jump for distance from two feet to two feet.	18b) Use a short run (2 strides) to jump from one foot to two feet (both feet).	18b) Demonstrate 'Active' flat foot at take off (dynamic down and back motion).	18b) Drive the free knee up and forwards.	18b) Take off with power and control after a fast run up.	18b) Bring arms above head during flight phase.	18b) Arms reach for toes just before landing and trunk is bent forwards.	18b) Demonstrate plyometric ability using jumping, hopping and bounding drills.
		18c) Take off from, and land in, different positions.	18c) Demonstrate control and balance on landing - feet shoulder width apart; Centre of Gravity over base.	18c) Demonstrate soft controlled and landing into sand pit.	18c) Demonstrate basic head up, chest up, drive up and forwards.	18c) Keep body upright and hips high at take off.	18c) Demonstrate full extension of hip, knee and ankle joint (à that order) at take off.	18c) Bring legs forward together prior to landing.	18c) Collapse body forwards or sideways pulling heels into the sand and hips towards heels.	18c) Analyse own jumping technique and that of others.
			18d) Jump for distance from one foot to two feet (both feet).	18d) Focus à forwards not downwards.	18d) Demonstrate awareness o the take off point.	18d) Keep a tall upright body position in flight phase of jump.	18d) Hold take off extension (body tension) during early flight.	18d) Reach legs out in front at landing.	18d) Sound with fluency and control (single and double footed).	18d) Performance of good technique in competition conditions.
				18e) Move body parts in an effective order to aid jump distance and efficiency.	18e) Mark out basic run up to achieve optimal speed and accuracy.	18e) Judge distances accurately.	18e) Land with heels first, and bend knees to absorb momentum.	18e) Demonstrate understanding of flight techniques through jumping off a raised surface.		
Multiple Jumps Triple Jumps, Standing Triple Jump & Hopscotch	19. Triple Jumps And Standing Triple Jump	19a) Demonstrate all of Long Jump Stage 1 (Red).	19a) Demonstrate all of Long Jump Stage 2 (Yellow).	19a) Demonstrate all of Long Jump Stage 3 (Green).	19a) Demonstrate all of long Jump Stage 4 (Purple).	19a) Demonstrate all of Long Jump Stage 5 (Blue).	19a) Demonstrate all of Long Jump Stage 6 (Black).	19a) Demonstrate all of Long Jump Stage 7 (Bronze).	19a) Demonstrate all of Long Jump Stage 8 (Silver).	19a) Demonstrate all of Long Jump Stage 9 (Gold).
		19b) Perform hop and jump combinations with balance and control (both feet for hops).	19b) Demonstrate a basic Hopscotch technique with control and balance (See Coordination).	19b) Demonstrate basic triple jump sequences from short run up (2 strides) with rhythm, balance and control.	19b) Active take off foot through each phase (see Long Jump Blue).	19b) Identify optimal distance between markers to maintain even jump pattern (rhythm) within triple jump grid.	19b) Demonstrate full extension of hip, knee and ankle joint (à that order) at take off in each phase of the jump.	19b) Bring take off leg through with thigh parallel to the ground in Hop Phase.	19b) Perform a basic triple jump off a maximum of 8 strides.	19b) Fluency and consistency of technique.
		19c) Link multiple step/jump combinations with balance and coordination.	19c) Demonstrate basic hop, step and jump movements with speed and balance from stationary position.	19c) Perform combination jump sequences with rhythm, balance and control.	19c) Maintain even jump pattern (rhythm) between markers within triple jump grid.	19c) Maintain a tall upright body position throughout jump phases.	19c) Demonstrate the ability to keep the head and hips high and body upright throughout the jump phases.	19c) Drive knee high and hold it high and parallel to ground during flight in Step Phase.	19c) Demonstrate speed with even rhythm, balance and range throughout the three phases.	19c) Demonstrate perception and the ability to adjust.
			19d) Hop for distance.	19d) Move body parts in an effective order to aid hop and step distance and efficiency.	19d) Move body parts in an effective order to maximise hop and step distance and efficiency.	19d) Use arms to balance leg action.	19d) Demonstrate controlled vigorous use of arms to aid balance, distance and power.	19d) Demonstrate an Active free leg.	19d) Demonstrate gradual increase in height at each phase.	19d) Performance of good technique in competition conditions.

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The Support Resources

For Coaches and Clubs

- Athletics 365 App
- Athletics 365 Coach Pack / Manual
- Athletics 365 DVD Pack
- Athletics 365 Kit Bag

For Athletes

- Athlete's Handbook
- Reward wristbands and certificates

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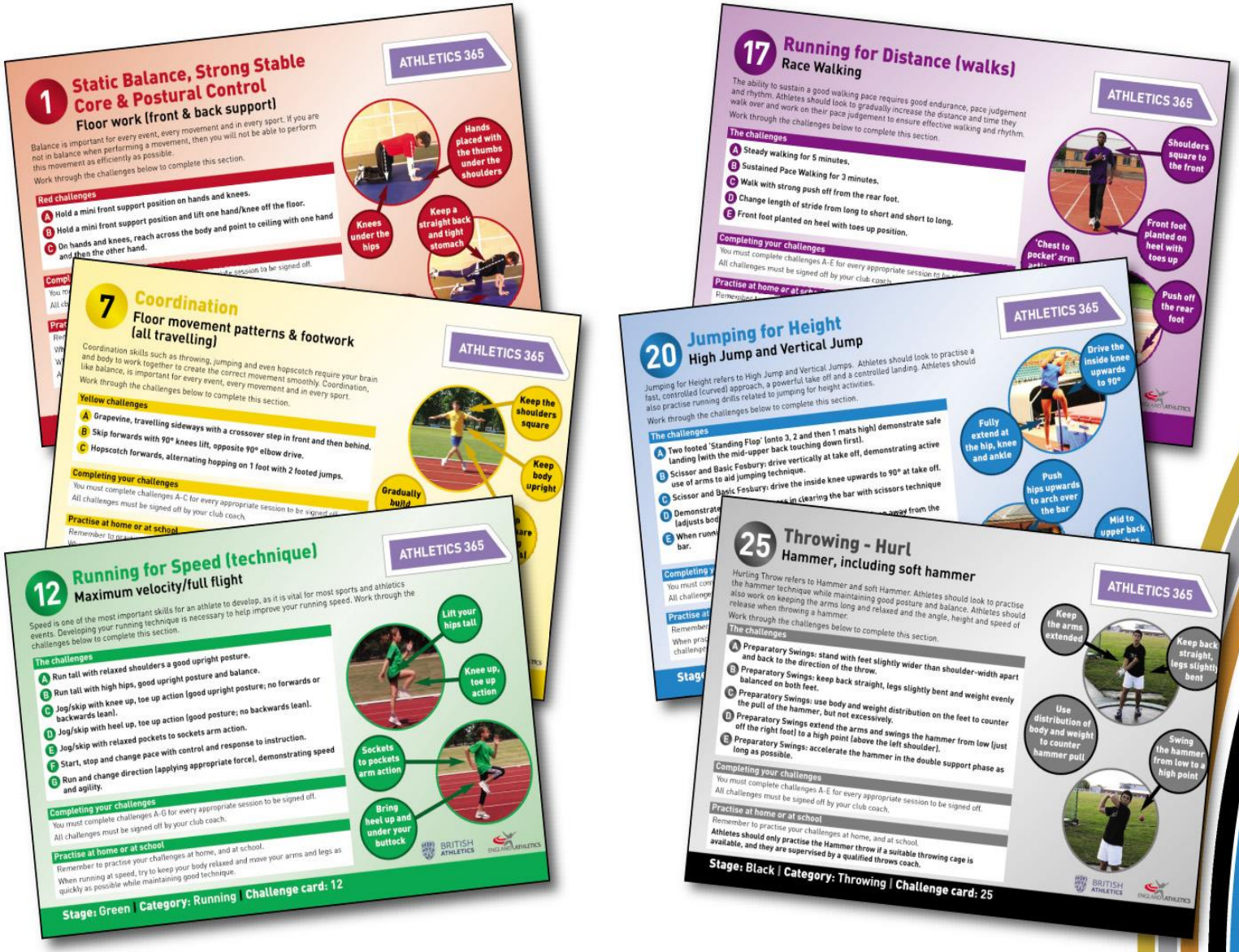

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The Challenges

- Assessing Athletes Skill Stages
- Using Games or Drills to Develop Skills
- Planning Youth Development Programmes
- Challenges from others (coaches/parents)
- How is it working elsewhere? (Sharing Good Practice)

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Delivering Athletics 365

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Everyone is Different

- Stages of development will be different
  - Physically;
  - Mentally;
  - Socially;
  - Emotionally;
- The support they require from you will be different
- Their skill background will be different

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The Coaching Approach

Games Based (Leading)
Fun Driven
Easy to Set Up
Limited Skill Learning

Specialised Training (Event Coaching)
Outcome Driven
Develop Technique
Adult Orientated
Foundation Skills?

Developmental Coaching
Fun and Progressive
Skill based learning
Stage related coaching
Empowering the athlete

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Coaching Environment

Should be:

- Fun and Inclusive
- Progressive - Based on athletes ability
- Relevant (what is the purpose of the activity / drill / session)
- Structured and exciting
- **Focused on the long term, all round development of the athlete**

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Coaching Environment

Should have:

- Good athlete to coach ratio (10/12 : 1)
- Safe welcoming environment
- Clearly defined groups and coaches

(Stage /Age)

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60 Minutes TRAINING

: - 20 athletes

x 1 COaCH

= 3 minutes of

coaches' time per

athlete

Think about how you can ensure that you give time to every athlete so they get the most from their training time

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Practical Session

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Practical Examples Covered

- **Hopscotch**
  - Developing Coordination
  - The importance of athlete centred coaching
- **Plank Progressions**
  - Developing Core Stability, Posture and Balance
  - Allowing athletes to select their own level of challenge
- **Running Progressions Drill**
  - Developing Full Flight Mechanics
  - Progressive Delivery and Stage Observations
- **Shot Put Golf and Grid**
  - Developing Pushing / Shot Put Action
  - How to use a Game or Skill session to develop athletes
- **Triple Jump Grid**
  - Developing Combination Jumps
  - Multiple Stages doing the same task

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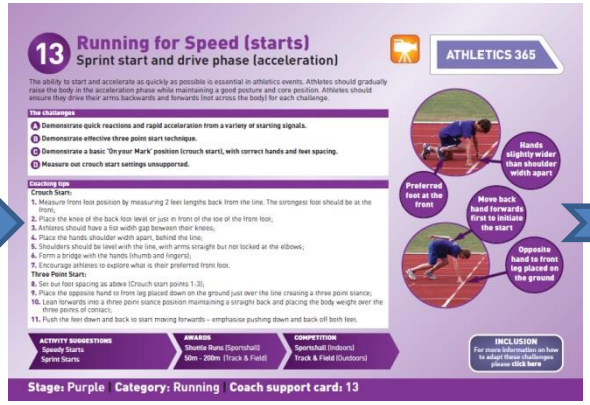
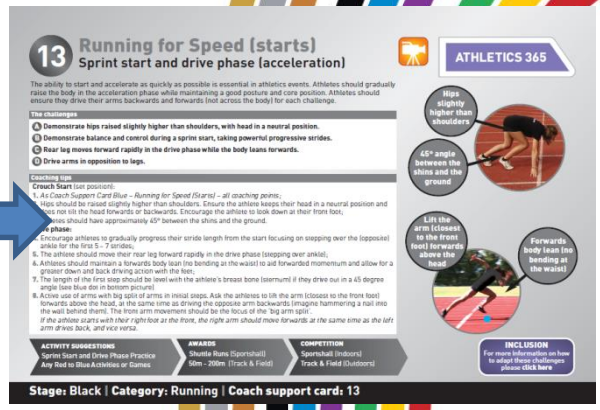
Progression of Athletics 365 Card





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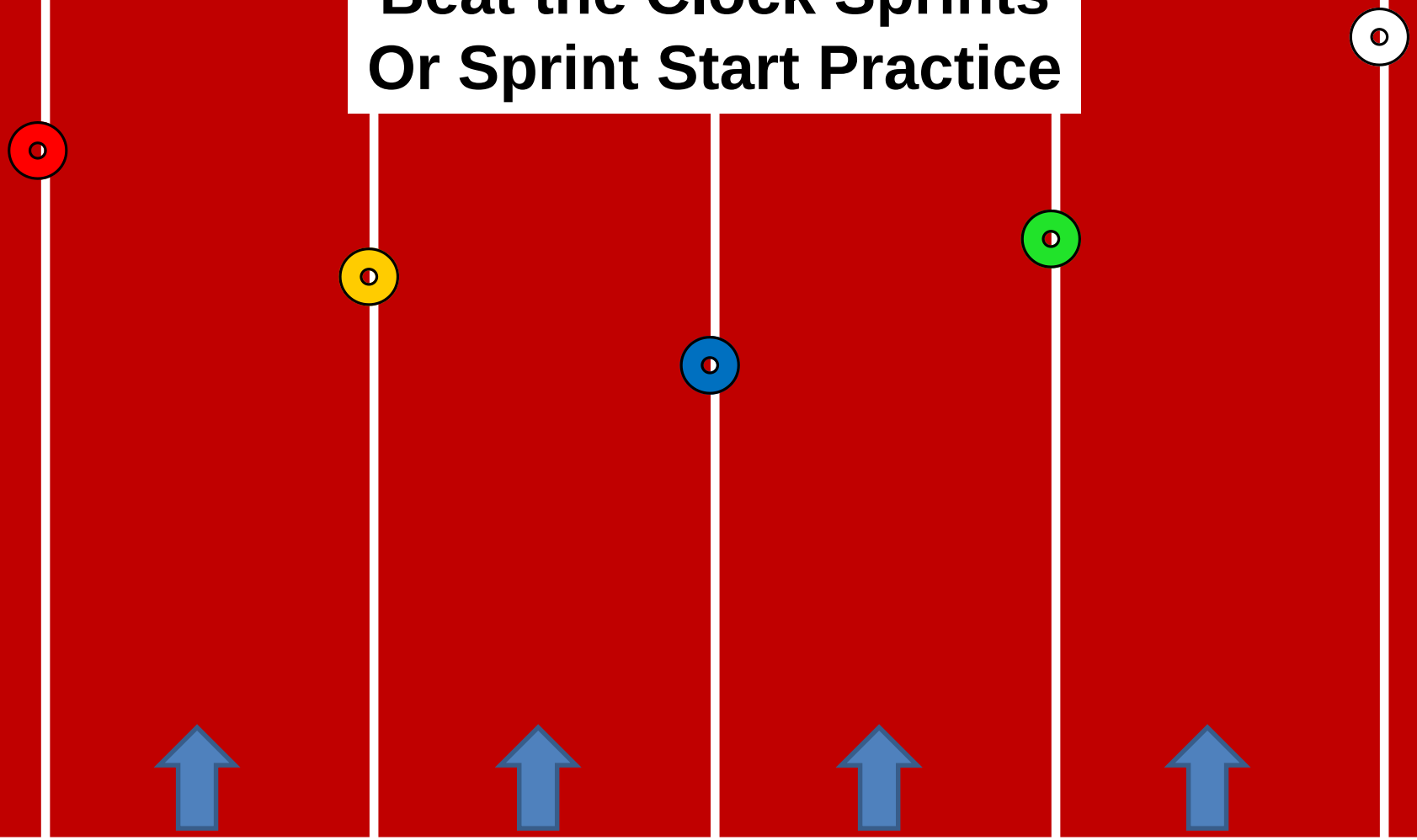
Beat the Clock Sprints Or Sprint Start Practice



Standing Start

Kneeling Start

Falling Start

Three Point Start

Crouch Start

Game Card: **RUNNING FOR SPEED & DISTANCE**

BEAT THE clock SPRINTS

YOU WILL NEED
6 x bean bags (multiple colours), whistle , stopwatch, tape measure

TURN OVER...

SAFETY TIPS

1. Ensure the athletes are not competing at speed over to longer distance and to regularly.
2. Ensure athletes stay in lane.

Game Card: **THROWS – PUSH THROW**

PUSH golf

YOU WILL NEED
Hoops, bean bags, coloured spots

AIM

Athletes perform push throws to reach a target on the ground.

GET SET

1. Set out a number of hoops 20-50m apart around a field, with a coloured spot 5m away from each hoop.
2. Explain that each hoop represents a hole on a golf course and the spots represent the T off.
3. Athletes try to get their bean bag from one hoop to the next in as few throws as possible.
4. Divide the class into groups of 4. Allocate each group a different hoop to start the game.

ON YOUR MARKS

1. One player stands on the coloured spot and throws their bean bag towards the next hoop, using a push throw.
2. Each pupil takes their first turn.
3. Athletes throw again from where the first throw landed (furthest away from the target throws first).
4. Continue until all pupils have thrown into the hoop.
5. Athletes should never throw while others are in front of them and should shout "FORE" if a throw is likely to hit anyone.

GOOD FORM

1. Stand with feet staggered with opposite leg to throwing arm forwards.
2. Keep the bean bag close to the neck (with a high elbow),
3. Extend arm and push the bean bag up and away from the body in the direction of the hoop.

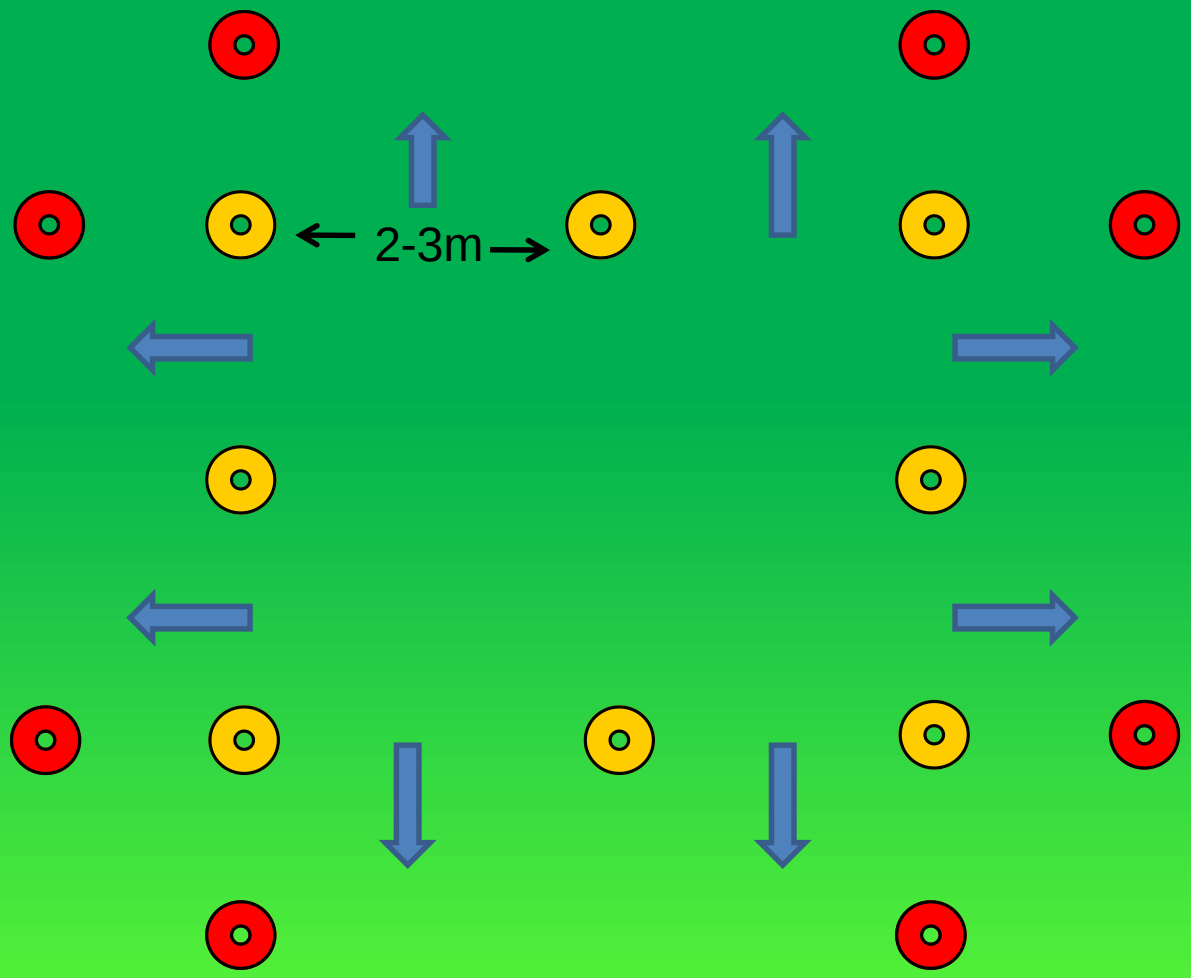
HARDER/EASIER OPTIONS

1. Vary the distances between hoops
2. Focus outcomes on technique: add bonus points (a minus score) for an effective push throw action
3. Play as a team game with combined scores counting as the final score.

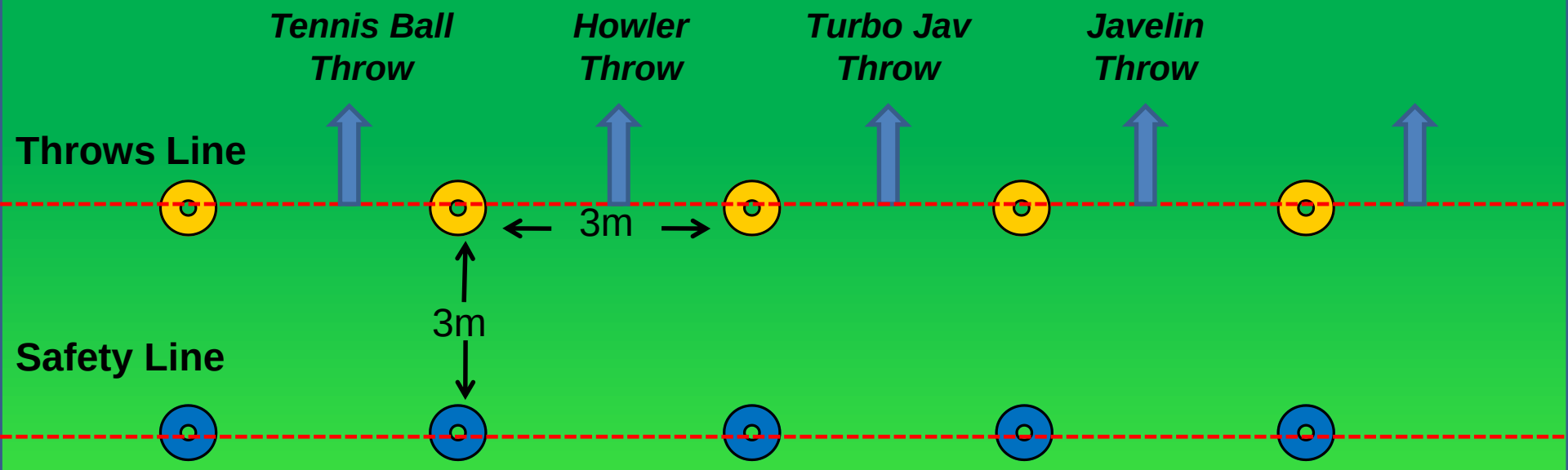
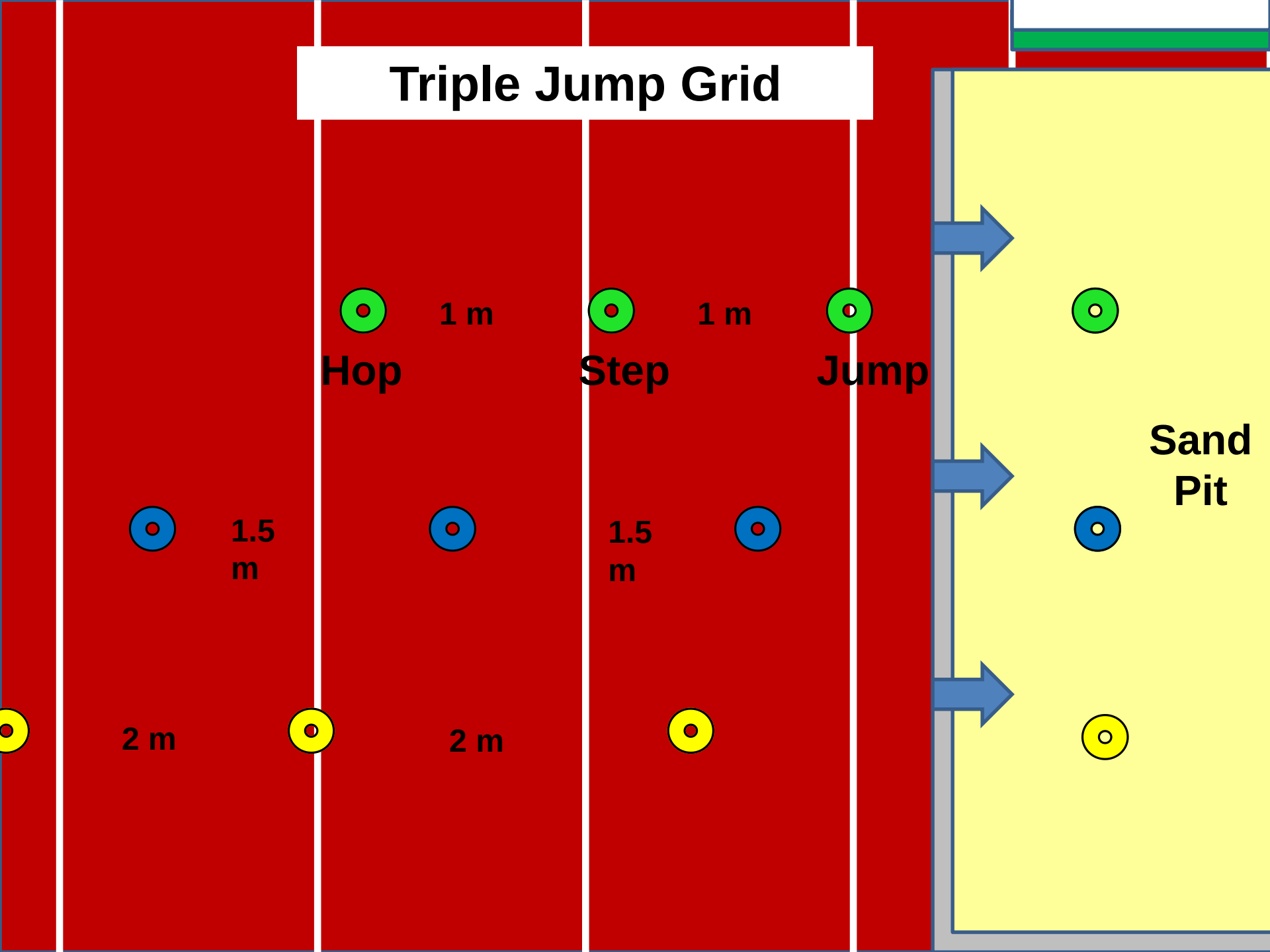
SAFETY TIPS

1. Athletes should never throw while others are in front of them and should shout "FORE" if a throw is likely to hit anyone. 2. Holes should be spaced well apart. 3. Only use appropriate push technique.

Shot Put Throws Grid



Throws Line Grid



Triple Jump Grid