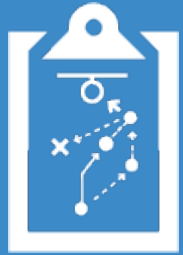


# “SERIOUS SPORTS – GBL FRAMEWORK FOR SPORTS AND COACHING”



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Slides by: Darragh Coakley & Roisin Garvey,

CIT, Cork, IE

Ljubljana 24/4/2014



# GROWTH OF DIGITAL GAMES

# DIGITAL GAMES AND GAMERS



- Not typically painted in a positive light
- Image of Dank Internet Cafes & Unhealthy Lifestyle:
  - Junk food
  - Lack of sunlight
  - Etc.



# DIGITAL GAMES AND GAMERS



Games Nowadays used for a myriad of purposes



# SPARX



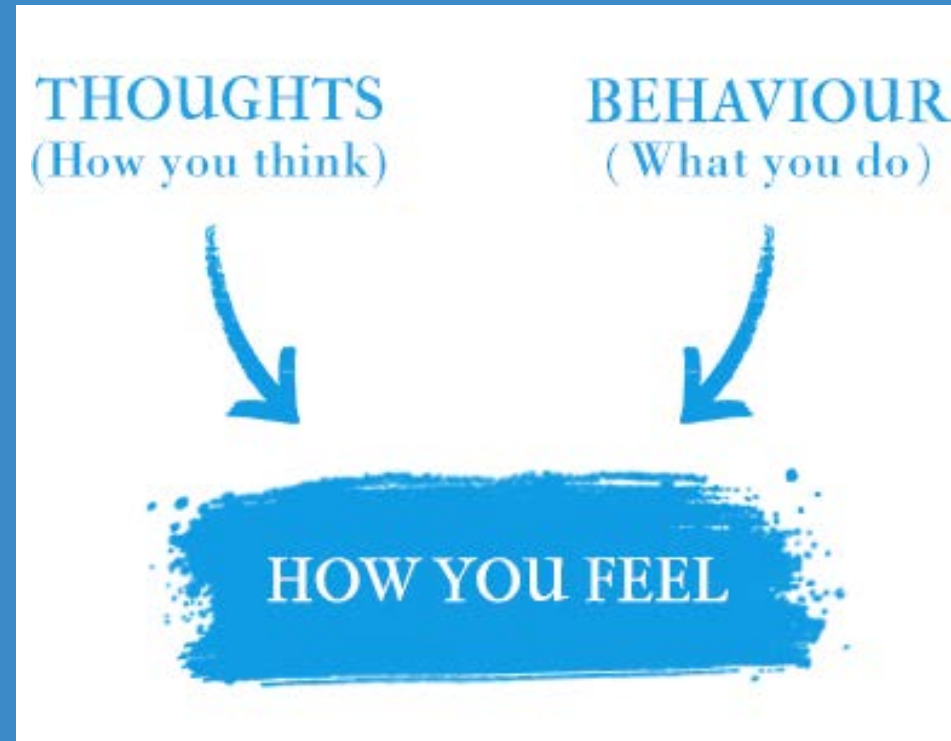
- [www.sparx.org.nz](http://www.sparx.org.nz)
- Fantasy Game
- Player must talk to characters, solve problems
- Designed to treat mild - moderate depression



# SPARX



- Use of **Cognitive Behavioural Therapy**
- Links between:
  - How people **think**
  - What they **do**
  - How they **feel**.





*“It turns out according to a clinical trial published in the British Medical Journal Sparx is at least as effective as “traditional” therapies in treating depression. Again this is for mild to moderate cases of depression not severe cases”*



“The effectiveness of SPARX, a computerised self help intervention for adolescents seeking help for depression: randomised controlled non-inferiority trial”

# BUILDING COGNITIVE ABILITIES



# NEURORACER



- NeuroRacer
- Developed by University of California, San Francisco
- Develops:
  - Short-term memory
  - Long-term focus



# NEURORACER

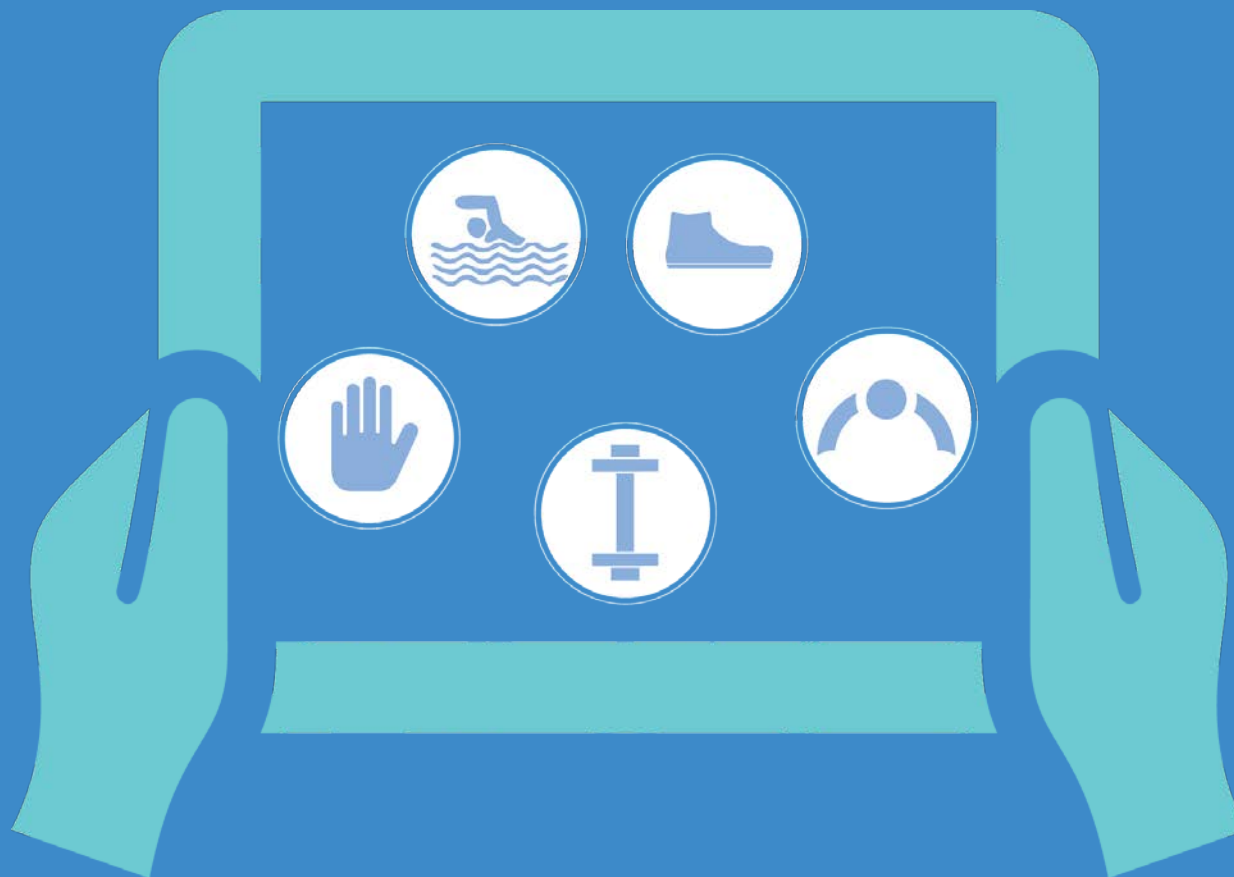


Involves:

- Driving
- Identifying specific road signs that pop up on the screen
- While ignoring other signs deemed irrelevant



# BUILDING PHYSICAL ABILITIES



*"Exergame play increases caloric expenditure, heart rate, and coordination. Psychosocial and cognitive impacts of exergame play may include increased self-esteem, social interaction, motivation, attention, and visual–spatial skill"*



*"Exergames for Physical Education Courses: Physical, Social, and Cognitive Benefits - (Staiano & Calvert, 2011)"*

# EXERGAMES



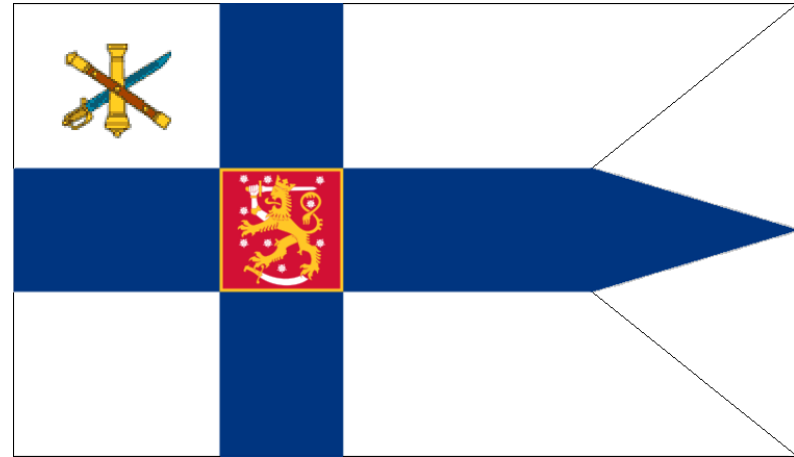
- [www.weecanfightobesity.org](http://www.weecanfightobesity.org)
- Alabama State Department of Education
- *“To empower students and educators ...through the use of technology based interactive game activities”*



# EXERGAMES



- Finnish defence forces
- Installed wiis and exergames in barracks across Finland
- To help compliment physical conditioning





# EXERGAMES

- Ageing Research and Development in Ireland (CARDI)
- Use of Wii to:
  - Improve balance and gait for elderly people
  - Minimize the risk of falls in the future
- Wii used as an "extra arm of therapy"



# LEARNING THROUGH GAMES

# GAME BASED LEARNING



- Games provide instant feedback to the user,
- 100% continuous/formative assessment 100% of the time.
- Games build (Shaffer's "Epistemic Games"):
  - Situated understandings
  - Effective social practices
  - Powerful identities
  - Shared values and ways of thinking

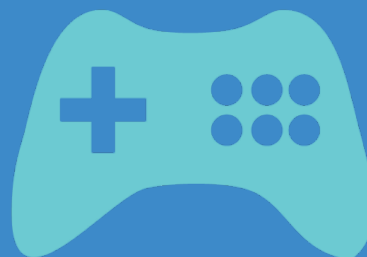


# GAME BASED LEARNING



- Gee suggests games may have as many as 36 learning principles build into them, e.g.
  - **Achievement Principle:** there are intrinsic rewards from the beginning, customised to each learner's level, effort, and growing mastery
  - **Practice Principle:** Learners get lots and lots of practice in a context where the practice is not boring
  - **"Psychosocial Moratorium" Principle:** learners can take risks in a space where real-world consequences are lowered
  - **Multimodal Principle:** Meaning and knowledge are built up through various modalities (images, texts, symbols, interactions, abstract design, sound, etc.), not just words

# SPORTS GAMES





- Replicate (or to simulate) real-life situations within the world of sports in a computer or video game
- Focus on fidelity to actual sport in taxonomy, physical movement, equipment, etc

# SPORTS GAMES



- Primarily **cognitive** competencies
- Can also be subdivided into sports knowledge and problem solving (meta-cognitive).
- Can provide information and demonstrate knowledge about:
  - Sports rules
  - Terminology used in the sport
  - Physiology for a given sport
  - Movement and environment
  - Organizations, institutions & individuals



- Focus mainly on a specific sport and its constitutive sportive action and physical activity.
- Reduction of real sports complexity with fictional characters and unrealistic human body movement



# SPORTS GAMES



- Primarily **cognitive & social** competencies
- Less fidelity to real-life, more emphasis on “action gaming”
- Can provide information on:
  - Sports techniques
  - Terminology used in the sport
- Can engage the user in
  - Wider communication
  - Co-operation/ teamwork

# SPORTS GAMES



- Elements of role-playing games - player assumes leadership of a sports club or an athlete
- Real-life fidelity, but from reality-based problems a person in that role has (e.g., economic, resource management, etc).

A circular logo with a red border. Inside the border, the text 'MANAGEMENT GAMES' is written in white, uppercase letters along the top arc, and 'MANAGEMENT - ABSTRACT' is written along the bottom arc. In the center of the circle is a white silhouette of a soccer field, including the goalposts and the center circle.

MANAGEMENT GAMES  
MANAGEMENT - ABSTRACT

# SPORTS GAMES



- Primarily **meta-cognitive**
- Analysis of individual game-play, facilitating thinking and problem-solving and decision making
- Can allow the user to:
  - Engage in problem-solving and decision making in the sport
  - Build hypotheses for the relevant sport
  - Facilitate information-gathering and re-use of information
  - Engage in creativity in their approach to the game

# SPORTS GAMES



- Exercise or motion-orientated games with focus on gross motor skills.
- Rarely claim real-life fidelity in terms of sports movement, but can legitimately claim provision of aerobic/ anaerobic activity



# SPORTS GAMES



- Primarily **motor skill** competencies
- Focus on player's real-life movement - "action gaming"
- Generally, fidelity to real sport irrelevant
- Can involve player in:
  - Gross motor skills
  - Eye-hand/ eye-foot- /eye-leg- coordination
  - Sense of embodied cognition
  - Sense of agency



# SERIOUS SPORTS PROJECT

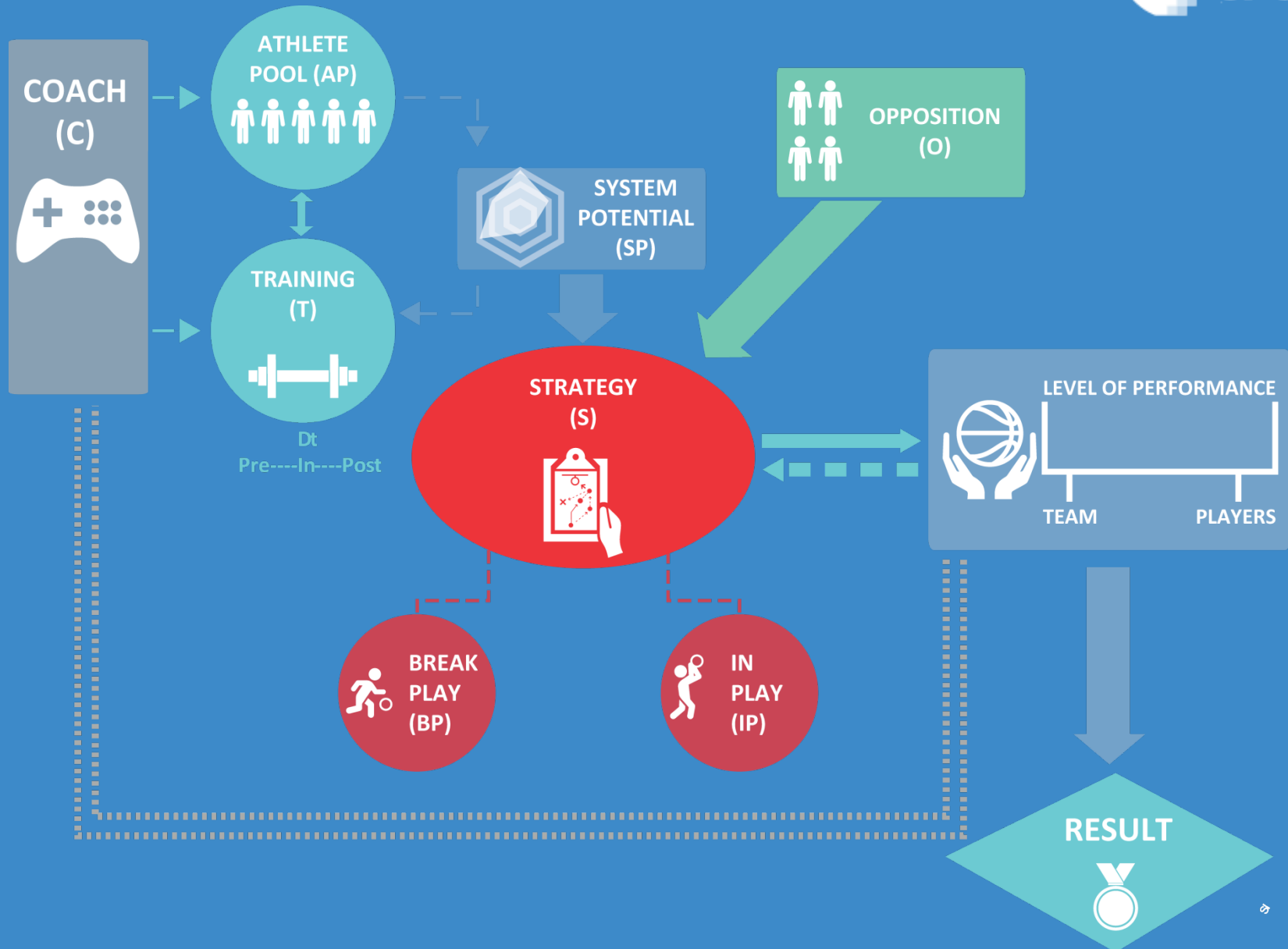


# GAME DEVELOPMENT FRAMEWORK





# COACHING FRAMEWORK



# ONLINE DIGITAL GAME



# Game Designed to Help Train:



# Supports Good Coaching Principles through In-Game Learning



# Create and Develop your own Personal Team and Branding



## EDIT TEAM INFO

Fill in the fields and select colours

BACK

HOME

OPTIONS

AWARDS

HELP

ACCOUNT



TEAM NAME

LEVEL



LOCATION



LOGO

BROWSE

JERSEY

SHORTS

CONTINUE



# Choose **Players** and select the **Positions** where they will play best



## BUILD ROSTER

Drag & Drop players to the court

BACK

HOME

OPTIONS

AWARDS

HELP

ACCOUNT



TEAM INFO



PLAYERS



TACTICS



**EMRE YAVUZ**



★ STAR

★ INJURED

PLAYERS

4

10



YASIN NASUH



HASAN KER



ERC KARAG



SADIK TOZKO



CONTINUE



DRAG & DROP PLAYERS TO POSITION ON COURT

# Train your Team's Physical Ability and Skills with different Training Activities



## ADD TRAINING

Drag training from the left and drop it in the schedule on the right

BACK

HOME

OPTIONS

AWARDS

HELP

ACCOUNT

### TRAINING ACTIVITIES

DEFENDING

QUICK FEET

ONE ON ONE

3 ON 3 DEFENSIVE DRILL

DURATION



PREV WEEK

NEXT WEEK

FINISH

### TRAINING SCHEDULE

SESSION 1

SESSION 2

SESSION 3

SPIDERMAN STRETCH



KNEE BRACE



SUPERMAN STANDING



IRON CROSS



WIDE PULL-UP



# Play Opponent Teams, Watch the Match and Analyze the Information



## PLAY MATCH

Make changes by calling timeouts



### TEAM

6

### OPPONENT

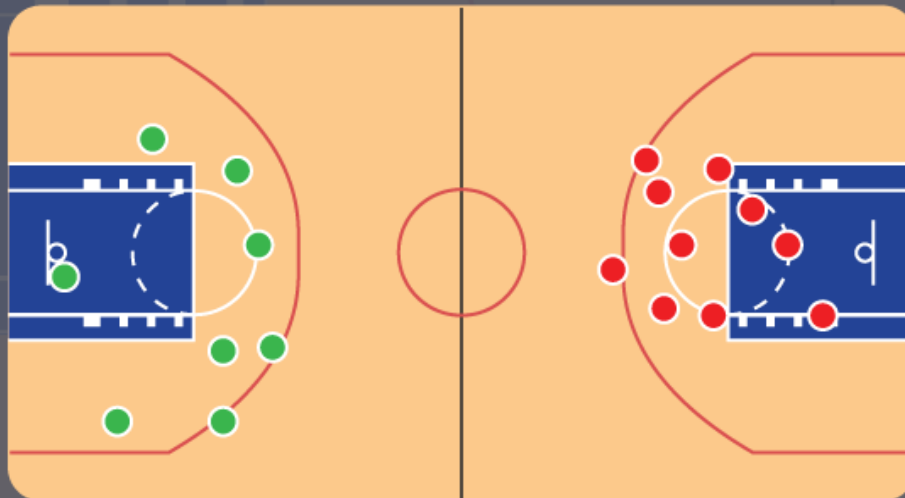
PERIOD

5



ATTACKING

DEFENDING



- 01:16 Elise Rutherford passes to Jim Erte
- 01:22 Liam Norton gets credit for the assist
- 01:28 Jim Erte loses control of the ball
- 01:33 Deirdre Creedon makes a pass
- 02:02 Oğuz Konya shoots a **2 Pointer!**

PAUSE II

1X >

2X >>

4X >>>

TIMEOUT





# Select and Change Tactics, Players, Play Style and Performance



## PLAY MATCH

Make changes by calling timeouts

BACK

HOME

OPTIONS

AWARDS

HELP

ACCOUNT

TEAM

20

OPPONENT

18

PLAY INTENSITY

DEFENSIVE TACTICS

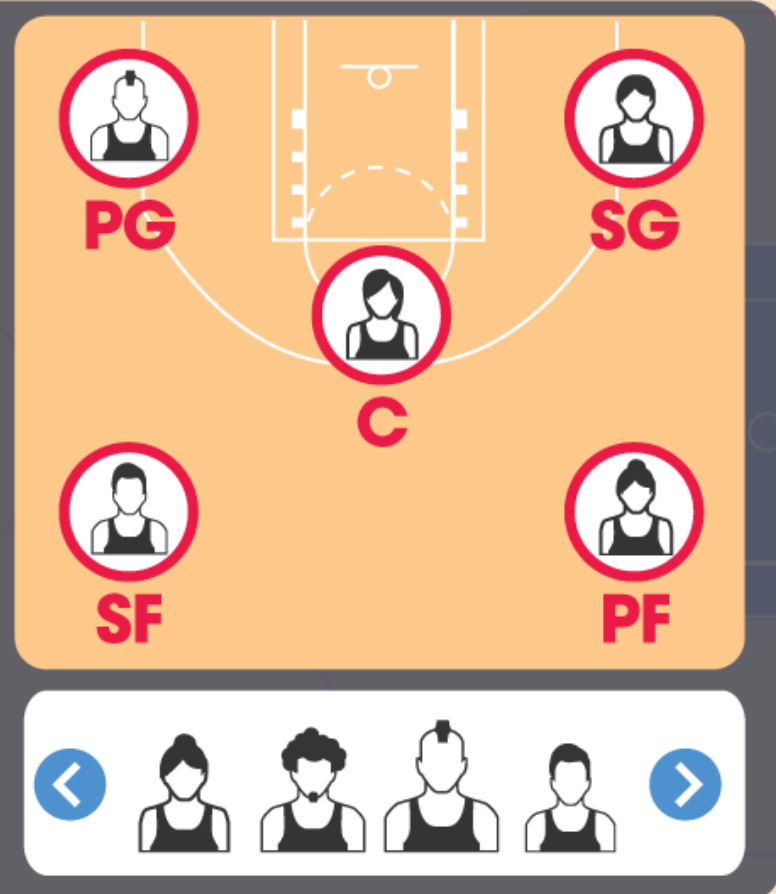
OFFENSIVE TACTICS

SAVE

LOAD

⌚ TIMEOUT: 02:37

FINISH



# Play Opponent Teams to come first in the League...



## LEAGUE TABLE

League Table for your division

 BACK

 HOME

 OPTIONS

 AWARDS

 HELP

 ACCOUNT

	PLAYED	POINTS	WON	LOST	POINTS+	POINTS-
TEAM1	0	0	0	0	0	0
TEAM2	0	0	0	0	0	0
TEAM3	0	0	0	0	0	0
TEAM4	0	0	0	0	0	0
TEAM5	0	0	0	0	0	0
TEAM6	0	0	0	0	0	0
TEAM7	0	0	0	0	0	0

# ...or play a Quick Match with Your Personal Team or an Existing Team



## SELECT AN OPPONENT

Click on the team to select them



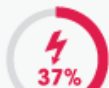
### B-BALLERS



### BASKET KINGS



### SLIVERSTEPPERS



### ALPHA FLAMERS



# Earn Awards for completing significant Game Achievements



## AWARDS

Browse your achievements

⏪  
BACK

🏠  
HOME

⚙️  
OPTIONS

🌟  
AWARDS

❓  
HELP

👤  
ACCOUNT



10 GAMES

Team won 10 games



3 IS A  
CHARM!

Team won 3 games in a row



HAPPENS TO  
EVERYONE

Team lost 1 game

# The Game also provides In-Depth Information on real **Basketball** Training Activities via Video & Animation



# Access Videos explaining Physical and Skill-based Training Activities



## ADD TRAINING

Drag training from the left and drop it in the schedule on the right



## TRAINING ACTIVITIES

DEFENDING

QUICK FEET

ONE ON ONE

3 ON 3 DEFENSIVE DRILL

DURATION



PREV WEEK

NEXT WEEK

FINISH

## TRAINING SCHEDULE

SHOOT WITHIN 7 SECONDS

00:03

# Access an Advice Center for In-Depth Advice on Training/ Tactics



## ADVICE CENTER

Click on an item on the left

BACK

HOME

OPTIONS

AWARDS

HELP

ACCOUNT

GENERAL INFO

HOW TO PLAY

TRAINING

TACTICS

- Spiderman Stretch
- Superman Standing
- Iron Cross (face up)
- Knee Brace
- Sprint Training
- 6-second drill
- Shuttle Runs
- Energy system
- Goblet Squat
- Dumbbell Bench Press

### Spiderman Stretch

Training Activity Time: 3 minutes

Training Activity Warm-Up: Foam Roller (calves, hamstrings, quadriceps, back, IT band, glutes)

Training Activity Cool-down (if necessary): None

Training Activity Description: Warmup activity that stretches the groin, hip, glutes and calves

How to perform Training Activity (in steps):

- 1 - Start the spiderman stretch from an athletic position with feet hip width apart.
- 2 - Go down into a lunge, keeping your back leg straight.
- 3 - Reach towards your instep with your elbow keeping your arm bent.
- 4 - Drop your hips as low as possible keeping your back leg straight (hold for 2 seconds).
- 5 - Then reach across your front leg, straighten out front leg and lift your toe (hold for 2 seconds).
- 6 - Drop down into a lunge with your other foot (hold for 2 seconds).
- 7 - Repeat this 5 times each leg.

Training Activity Tip: The player can stay in the same location or continuously crawl forward. Keep hips square and forward throughout the exercise

Training Activity Advantages:

- 1 - Develops mobility in both hips.
- 2 - Increases flexibility and decreases risk of injury especially in the groin

# Access random Advice and Tips throughout the Game



## SELECT GAME TYPE

Choose what you want to play

 BACK

 HOME

 OPTIONS

 AWARDS

 HELP

 ACCOUNT

EDIT YOUR TEAM



QUICK MATCH



LEAGUE



The Wide Pull-up activity builds strength, muscular endurance and a healthy back, but it can put a lot of stress on the shoulder joints.





# ISSUES AND RESISTANCES

# RESISTANCES



## Common Resistances

Summary of the common reasons for resistance to using games for learning.



Expensive



School Policies



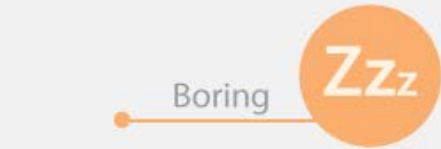
Violent



Addictive



Time Consuming



Boring



No Guidance



Antisocial



No Credibility



Unhealthy

# ISSUES



- Obviously Games are not sufficient in themselves, or certainly should not be taken as a replacement to traditional means.
- You can't replace what athletes do in a game with what they do on a video game
- But technology is ever-improving and the line between real and realistic is growing increasingly blurry.

<http://serious-sports.org/>

