

## Lesson Plan

### Let's play together

<b>School:</b> IC "Libero Andreotti"	<b>Teacher:</b> Stefano Cesari
<b>Title :</b> Badminton	<b>Time :</b> 8 hours
<b>Subject :</b> P.E; Social Studies	
<b>Aim:</b> Using computational thinking to develop the ability of: <ul style="list-style-type: none"> <li>- Space organization</li> <li>- General coordination skills (motor control, adaptation and transformation)</li> <li>- Special coordination skills (reaction, manual eye coordination, motor anticipation, spatio-temporal differentiation)</li> </ul>	
<b>Key CS elements:</b> decomposition, pattern recognition, abstraction, practicing	
<b>Age group :</b> 6 <sup>th</sup> graders, 11 year olds	
<b>Learning situations:</b> gym, classroom, White Board,	<b>Activity type :</b> group work and pair work, cooperative learning, frontal lesson
<b>Resources :</b> Gym space (basketball court surface and volleyball court perimeter lines ) Badminton rackets (at least half the number of pupils) shuttlecock (1 for each pupil) 2 KIT badminton (with locking platform)	
<b>Learning development:</b>	
<b>1.DECOMPOSITION</b> (breaking a problem down into a smaller part)	
<b>COACHING</b>	
<b>What are the rules of the sport?:</b> in singles, there are two players competing against each other. In doubles, two pairs of players form teams and compete against each other, resulting in a game of four players. All singles and doubles matches are the best-of-three games. The first side to 21 points wins a game. A point is scored on every serve and awarded to whichever side wins the rally. The winning side gets the next serve. If the score is 20-20, a side must win by two clear points to win the game. If it reaches 29-29, the first to get their 30th point wins. In badminton, players are required to change ends under specific conditions. They should change ends at the conclusion	

of the first game. If a third game is required, they should also change ends at the end of the second game. In the third game, the change of ends occurs when one side reaches a score of 11 points.

A point is won if the birdie (shuttlecock) hits the ground in the opponent's half of the court, including the lines. A point can therefore be conceded if a shot goes outside the court boundaries, if the birdie hits the net or passes through/under it, or if a player strikes the birdie twice with their racket. Players must wait for the birdie to cross the net before playing a shot, and while you can follow through over it, touching the net with your body or racket results in a point being conceded.

**How to serve in badminton?:**The birdie must be hit below waist height, with players serving diagonally into their opponent's service box. Both players must remain stationary until the serve is made. As per badminton singles rules, the server starts from the right service court, and will serve from that side every time they have an even amount of points. A player serves from the left every time they have an odd amount of points. Each player will retain serve for as long as they keep winning points. In badminton doubles, the server will start on the right-hand side and keep serving, while alternating sides with their team-mate, so long as they keep winning points. If the receiving side takes the point, they assume serve. Going forward, the player who did not initially serve for each team will only assume the service once their side has won a point as the receiving side.

**My team:** two classrooms of 11 year- old students of a middle school. They are beginners.

## **TRAINING**

**What is the equipment?:** The badminton racquet or racket, which is the official term adopted by the Badminton World Federation (BWF), is a simple to handle, light piece of equipment which forms the basis of the sport. The birdie, also referred to as the shuttlecock, is badminton's unique 'ball'; The cone-shaped projectile is formed using feathers or a synthetic material which are attached to a cork or rubber base. The birdie's shape means it will always fly cork-first once struck, and remain so until hit again. Comfortable trainers, shorts and t-shirts.

## **COMPETITION:**

Single matches among the students of the two classes.

## 2. **ABSTRACTION** (focusing on the important part of a problem)

**COACHING:** Four lessons for each class and one lesson of evaluation.

**TRAINING:** Space organization

General coordination skills (motor control, adaptation and transformation)

Special coordination skills ( reaction, manual eye coordination, motor anticipation, spatio-temporal differentiation)

### **COMPETITION:**

Target of the year:

- each student will play the sport knowing the rules
- propose the same activity to other classes of the school
- propose the same activity in outdoor spaces

## 3. **PATTERN RECOGNITION** (looking for similarity and trend within a problem)

**COACHING:** develop good technique and movement patterns in the students.

**TRAINING:** improve students' ability to adaptate the game with available spaces; exercise the students to carry out the activity in maximum safety.

**COMPETITION:** improve students' ability to know their oppositions; reflect on the best tactics to use against them; try to understand which ones are the most successful or unsuccessful.

## 4. **ALGORITHM DESIGN** (create a step by step sequence of instruction to solve the problem)

**COACHING:** single class lessons in the gym with the explanation of the rules of the game, 120 min (90 min)

**TRAINING:** 3 phases of duration 30 min

- 1)General heating
- 2)Individual and pair exercises with various launch types (drop, clear in place and moving)
- 3)Game phase (short matches in pairs with modified rules for competitions in team batting services, launch competitions « drop» team)

**COMPETITION:** individual consecutive launch test «drop» (max 10 launches)

Individual service stop test (10 bars)

Observation in the game phases (knowledge of the regulation and participation)

Proper use of instruments

#### **Assessment:**

The assessment of learning can take place through:

- observation of the students in the game phases (knowledge of the rules and participation)
- proper use of instruments
- students sharing collaboration (*Cooperative learning and Peer-Tutoring*).

**Expected results:** students will be able to recognize the different phases of the game, apply its rules correctly and especially socialize and collaborate in respecting each other.

#### **Notes:**

Through the 4 phases of computational thinking my students have understood the different phases of the games( Decomposition and Pattern Recognition) but have also practiced them (Abstraction) in order to take up the rules(Algorithm Design). A different approach of teaching that,over time, helps students with improving their learning strategies.

