



PROJECT “BILLIARDS AND SCHOOL”

FIBiS (Italian federation of billiards) proposal is to popularize and spread, among Italian high schools, the sport of Italian Billiards with courses and seminars, **involving students as well as teachers** [Dir/2003/90 MIUR (Italian Department of Education)].

General aim, Context, Project’s philosophy, Didactics, Beneficiaries, Content, Surveys, Update, Resources.

General aim and context.

The aim of this project is to offer to the high schools an educational method which uses broadly the sport of billiards and the “problem solving” dynamics.

The sport of billiards gives the students the chance to know the useful, funny and interesting side of the scientific subjects: they will implement what they study every day.

Talking about the sport of billiards is talking about issues and non-standard situations; it is easy to make a link between playing billiards and problem solving.

Formulas and standard schemes are not as important as using a method that leads to a conscious and efficient approach to a problem and gives the possibility to analyze eventual mistakes.

Game Philosophy: how to discover a new idea of physics and mathematics, by finding new inspirations and motivation.

Language is one of the aspects that make learning and comprehension of scientific subjects difficult: an abstract and arid language that does not allow ambiguities and sounds far from the common one. The game, scientifically set, applies essential elements of mathematics and physics using the so-called “extra-mathematic language”. By doing this, the game of billiards is more attractive.

When the student solves a complex problem of billiards’ geometry, he becomes the inventor and founder of the solution; he is no longer in a passive position and that positively influences his mental focus, his ability to learn and his motivation.

Didactics, gaming and problem solving. Two learning methods: formal and informal.

Nowadays, it is common to separate what the students learn in school from what they learn outside: the first kind of learning is considered formal, the second informal.

Science museums, game exhibitions, math festivals and many other activities are contemplated as informal learning; the game of billiards, developed following scientific principles, perfectly suits in this group.

Formal learning may seem rigid and obsolete, but it is actually fundamental for a clear knowledge that will be the base for further achievements. On the other hand informal learning, that may seem dispersive, incomplete and random, is able to raise passion and curiosity in the student, making him proud of the active position he assumes in his education.

On one side fantasy and creative ideas, on the other side logics and rules: both of them are essential. The sport of billiards becomes a great catalyst of implemented intuition and deduction.

Beneficiaries.

The targets of the project are high school's students and teachers (in particular math, physics and gym teachers). The students are provided with a course lasting 20-30 weeks; the course's aim is the formation of one or more teams that will be able to join the Giochi Sportivi Studenteschi (Italian most important sport event for students).

At the same time teachers will be provided with a course to achieve the title of Istruttori Federali Scolastici (teacher of billiards in schools). (Dir. 2003/90 MIUR).

Content, surveys, update, resources.

1) **Introduction** of the sport of billiards in high schools as a didactical instrument for geometry, physics and mathematics studies applied to the game rules and to the shot's development.

2) **Collaboration** between billiards' federal instructor (IFPS), scientific subject's teachers and gym teachers for the drafting of the teaching plan.

3) **Sport activity**, for the students, with the aim of creating a team for the GSS competition. FIBiS and school supervisors will eventually plan over-time activities (i.e. tournaments etc.) following modalities collegially established. There is the possibility for students to achieve school credits. All the activity is under the close watch of FIBiS and Coni (Italian Sport Authority).

4) **Training activity for the teachers** in order to make them reach the title of Istruttori Federali Scolastici.

5) Every time it is required, FIBiS provincial committee will provide an operator with the perfect knowledge of the **FIBiS regulations** in order to explain the federal rules and their implications (i.e. membership, sport justice, operating methods of the local and national tournaments, athletes' surveillance etc.)

6) The project's supervisors (federal instructors and school teachers) will **analyze and explain** scientifically to the students the geometry behind the shots, the dynamic and mechanic shot's physics and the natural properties of the game tools.

In particular:

- The five postulates of Euclidean geometry.

- Dynamic physics: equations of motion, elastic and inelastic collisions, angles of incidence and reflection, spheres' inertial bounce after effects etc...

7) **Membership**: FIBiS will provide to the students the free junior-card which will grant the access in every billiards sport center. FIBiS local supervisors will provide all the instructive and technical material. Provincial FIBiS committee will be on charge of all the information and related documentation about the activity.

8) **Structure**: for the project the school will need to be equipped with one or more billiards tables, it is possible to stipulate **conventions** with the closer billiards sport center indicated by FIBiS.

9) **Activities**: the project may be structured as a curricular or extracurricular sport activity (it depends on the type of high school).

10) **Surveys**: during the first year the survey will be made by federal instructors and teachers as well. During the following years the survey will be made by Istruttori Federali Scolastici (see # 4) only.

11) **Update**: updating courses for Istruttori Federali Scolastici are provided every 5 years as written in the Istruttori Federali guideline.

12) **Financial resources and instrumental**: the FIBiS provides a refund to the Federal Instructors and Instructors Student implementing the module of the project as planned. The basis for reimbursement is parameterized to the single two-hour class that will be paid € 15.00, with a minimum of 20 lessons to be implemented for each course (total 40 hours).

The lesson is divided in 30 minutes of pure theory and the remaining part will consist in operative and practical learning.

The various school realities must acquire the necessary equipment (billiard tables and accessories) and on the place to carry out the activity or have an agreement with a structure CSB (Circle sporting billiards) station or structure CONI equipped with pool table.

Books used for the courses:

“ Corso Base di Biliardo Internazionale per la scuola secondaria di secondo grado” a cura di M. Lanza

“ Manuale Tecnico e didattico del biliardo sportivo” di F. Fermi A. Schiavi

“ Pool , il biliardo americano, teoria e pratica “ di Gianni Campagnolo