

## **Title: USE OF GAMES TO MICROBIOLOGY LEARNING FOR HIGH SCHOOL**

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### **Summary:**

Pedagogical resources are important teaching tools in order to make easier the learning, it is also an instrument that involves the participation of the students. The study focused on building an educational game for high school students based on the study skills required in National High School Exam (Enem) for the specific area of microbiology. For that, the Content and Skills Curriculum Proposal of the State of São Paulo, with focus in microbiology, was revised, and the Reference Matrices and Knowledge Objects of Biology requested in Enem. All questions about the sciences of nature and technologies were reviewed, from 2009 to 2014. Each year researched had an average of 11 questions about sciences of nature and technologies were related to microbiology. Microbiology most frequently content were: Public health (12 questions), environmental microbiology (11 questions) and biotechnology (11 questions). On the analysis of the questions in the area of science and technology, the candidate's needs to master the skill of interpreting graphs and figures has been assessed, once 59 questions contained figures, 22 contained diagrams and 19 were employed charts. Based on that, the game was built considering the requirements of Enem and Curriculum Proposal of the State of São Paulo, using the most frequent content of Microbiology of the last six years and different visual features (maps, graphs, charts, images and layouts). The game has questions cards with 5 alternative answers and can be printed on large format paper or can also be used in multimedia projector. It can be used by students in preparation for Enem, and for teacher that can apply it when the subject is the same in class. The game propitiates teamwork. The pedagogical ludic material proved to be versatile because it serves the needs of high school microbiology content, can be provided in print or digital versions, the number of participants depends on the educator's organization and the utility is not restricted to a single purpose, since it can be used by the student for preparation of Enem or the teacher as a complementary activity contents applied in class.

**Key-words:** Educational game, high school, microbiology teaching.