

Chapter 56

Eight Tips for the Theme “Data and Forecasts”

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ABSTRACT

Paul was a common octopus living in a public aquarium in Germany. It became internationally known during the World Cup in 2010 when it was used to “predict” the results of football games. Paul correctly predicted all the outcomes. What animal was better than an octopus, with its eight tentacles-tips, in lending itself to introduce non-deterministic phenomena? In the chapter, teachers who want to develop the theme “data and forecasts” find eight ideas. These ideas are supported by the use of artifacts, digital tools, and web resources.

INTRODUCTION

Paul was a common octopus living (January 2008, October 2010) in a public aquarium at the marine life center in Oberhausen, Germany. Paul experienced some international notoriety during the 2010 World Cup when it was used to “predict” the results of football matches in which the German national football team was involved and the final (that was not played by Germany). Paul’s predictions were all correct.

The octopus belongs to Octopodidae family and has eight tentacles, therefore we imagine that each of these gives us an indication as to which are the best strategies to analyze resources and obstacles of teaching probability and statistics.

Mathematical artifacts shown in the figures are the basis of a project that could be called educational gaming. The collection of materials found, purchased, and constructed is the result of many years of research work (Drivet, 2013). They are taken from <https://sites.google.com/site/oggettimatematici/home> site. Currently there are 210 objects and, of these, 40 relate to the mentioned subject (Figure 1).

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