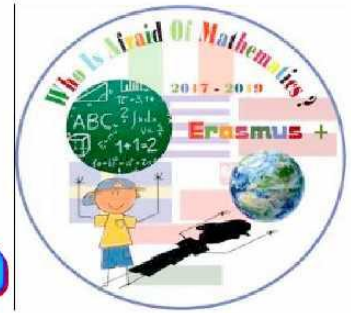


LESSON PLAN

Who is Afraid of Mathematics?



Category: MATHS in NATURE and GEOGRAPHY

Title of the activity **“ANIMALS’ RECORDS in GRAPHS”**

Year Group: Grade 4 (9/10years old)

Teacher: Maria Rosaria Leone

Learning Objectives:

- to classify animals according to their characteristics, their habitat and the climate zone where they live
- to analyze statistical data about animals
- to develop the concept of coordinates in grids and graphs
- to understand and create graphs choosing the most suitable format according to the kind of data
- to approach the meaning of “percentage”
- to collaborate in group activities
- to develop critical thinking skill in order to avoid stereotypes

Success Criteria:

- CLIL methodology
- Problem Solving strategies
- Cross-curricular approach (Maths, Science, Geography)
- to encourage children using their creativity in analyzing information and problem-solving

Resources:

Books – Web research – copybooks – worksheets – pencils – felt pens – big sheets of squared paper - IWB

Differentiation:

Pupils can participate to the different tasks by giving their personal contribution in the group activities.

Lesson Description:

- In class children investigate Animals' world by using English language in the context of a CLIL approach
- In plenary sessions they learn different ways to classify animals according to animals' characteristics and identify different criteria to do it
- In plenary and in groups, pupils discover that some aspects of animals life are expressed in numbers, measures, mathematical figures: body's length, weight, their speed in movement, duration of sleeping time in cold season, quantity of food per meal, size of eggs, numbers of babies in each birth, etc....
- At home pupils investigate about these aspects by searching data in books and websites
- In class, according to the pieces of information children have found, they choose animals belonging to different species and living in different habitats in the world and make work-groups
- Group-activity: children create graphs in big posters

Introduction:

- Children are introduced to the concept of "Statistics" by visioning and comparing different types of graphs in books, websites, newspapers
- They analyse graphs that shows mathematical data linked to familiar topics for children (ex: Smartphone and Tablet production and selling, food selling, etc...)
- Children discuss about the different format of graphs and how the information data are displayed (bars, lines, pies, etc..)

Main Lesson:

Pupils are divided in groups of four; each group is in charge of one of the animals' records chosen previously. During the activity they analyze the data and discuss about what type of graph would be the most convenient, they calculate scales and how to organize it on the x-axis and on ordinate axis according to the size of the squared paper where the graphs will be displayed. Furthermore, children decide how to show the key, a very important part of a graph.

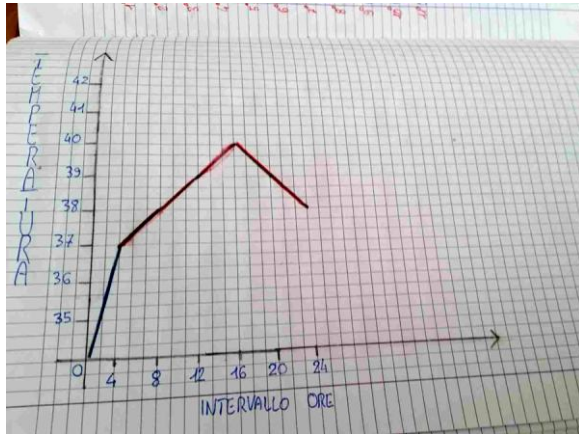
Plenary:

At the end of the activities children share their ideas and reflections about strategies used in preparing graphs and about how they have managed difficulties related to some aspects:

- choice of graph type (bar graph/ line graph/)
- management of the axis and the scales
- pictures to integrate in graphs

The activity has suggested to compare information about climate zones in books with animals habitats.

PHOTOS



BODY

10 BIGGEST ANIMALS (SEE BODY)

RANK	ANIMAL	LENGTH (m)	WEIGHT (Kg)
1	CAIPANO	6,4	1'000
2	MANTARREYA	8	1 t
3	BALENOTTERA AZZURRA	25	180 t
4	MAIALE BIG PIG	2m/2,3m	275 Kg
5	ELEFANTE AFRICANO	6,5	12 t
6	SQUALO BALENA	9,7	21 t
7	CALAMARO GIGANTE	14	495 Kg
8	CAPODOGLIO	12	52 t
9	ANACONDA	6	250 Kg
10	SQUALO BIANCO	7	3'000 Kg

