N.B. Le parti sviluppate con il CLIL sono quelle in grassetto (contenuti N. 1 e 6).

CLIL planning for a unit of work using the 4Cs

Topic: THE IMPORTANCE OF AIR

Content

- 1. What is air (Earth's atmosphere) GEOGRAPHY & SCIENCE
- 2. Gases properties (mass, volume and shape; compressibility; particles in a gas; hint to the relation between sounds and air) SCIENCE in Italiano
- Gases around us (combustion needs air, spray bottles...) SCIENCE &TECHNOLOGY in Italiano
- 4. Air resistance and the force of friction SCIENCE in Italiano
- 5. Fluids pressure SCIENCE in Italiano
- 6. Pollution and Carbon Dioxide effects SCIENCE & CIVICAL EDUCATION
- 7. Air and energy (wind turbines) SCIENCE & TECHNOLOGY in Italiano
- Air and breathing SCIENCE & TECHNOLOGY in Italiano
- 9. Air and plants (photosynthesis, wind dispersal of seeds) SCIENCE
- 10. Animal flight SCIENCE in Italiano
- 11. Aerodynamics hints TECHNOLOGY in Italiano

Aims

- 1. Find out what is the atmosphere and its composition;
- 2. explore the properties of the different states of matter:
 - a. explore gas properties in terms of the particle model;
 - b. find out that a sound needs a medium to travel (hints);
- 3. explore some uses of gases for human needs (hints);
- 4. identify the effects of air resistance and friction, that act between moving surfaces;
- 5. explore the fluid pressure:
 - a. find out that it increases with increase of height as weight of air/water above:
 - explore that pressure is a ratio of force over an area, acting normal to any surface;
 - c. explore some effects:
- explore the production of carbon dioxide by human activity and the impact on climate:
- 7. explore some uses of the wind for human needs (hints about wind turbines);
- explore human breathing:
 - a. find out about and describe the basic need of air for animals, including humans, to survive;
 - explore the mechanism of breathing to move air in and out of the lungs, using a pressure model;
- 9. explore the air requirement of plants for life and growth (breathing, food production, seed dispersal and reproduction);
- 10. find out the animals that can fly (not only birds fly, real and false flying animals);
- 11. explore the dynamics of bodies moving relative to gases, especially the interaction of moving objects with the atmosphere (hints).

Year/class-group: 9 years old – 4th class primary school

Communication

- Mostly the social language (BICS) and only some words (keywords) of disciplinary language (CALP).
- Introduce the specific language using a video ore a song (activities on keywords).
- Some grammar structures are required (i.e. Saxon genitive, comparatives, superlatives, adjectives & nouns, simple tense of some verbs).
- Communication activities are based mainly on group work (think/pair/square, placemat, quiz questions).

Cognition

- memorizing the keywords (LOTS)
- identifying important information (LOTS)
- sharing information found (LOTS)
- recognizing the air properties in experiments (HOTS)
- being able to read/make a diagram/graph (LOTS&HOTS)
- understanding the nature of some physical/chemical/biological processes (LOTS& HOTS)
- being able to read/create a classification (LOTS&HOTS)
- being able to illustrate the main concepts with drawings and/or completing a mind maps prepared by the teacher (LOTS & HOTS)
- being able to make comparisons (HOTS)
- analysing the relation between human life products and natural resources (HOTS)
- evaluating causes and effects of human activities on climate (HOTS)

Culture

- 1. Aurora Borealis and Australis.
- 6. Pollution all over the World.
- Wind turbines around the world.
- 7. Weather around the world: Bora wind in Trieste, Tornado in America and Europe...
- 10. Biodiversity in different countries (animals that can fly and different plant air roots). Introduction to cultural aspects with images and videos.

<u>Learning outcomes</u> :	
 Create a glossary poster about the Earth's atmosphere. Role playing with the song words for the music show of our school. 	
6. Create posters and mind maps about pollution, greenhouse effect and global warming.	

Sample CLIL planning template for a lesson using the 3As

Analyse content for the language of learning

- 1.
- ✓ KWL air/atmosphere/flight
- ✓ Song: the Layers of the atmosphere (two games: write all the words you recognize (TPS and PLACEMAT), find out all the words you hear among those on the cards)¹
- ✓ Check the words on the song text
- ✓ Sing and learn the song
- Drawings on the exercise book both to understand and learn the vocabulary
- 6.
- ✓ Videos: "Air pollution", "The greenhouse effect", "Global warming"
- ✓ Read and match (Read and match each note, they have taken from the video, to a picture) with the think/pair/square method (game)

Add to content language for learning

- 1.
- ✓ Game: matching exercise to create sentences with the keywords and the grammatical structures they already know (competition in small groups)
- ✓ Drawing exercise to learn the new grammatical structures (superlative and Genitive Saxon)
- 6.
- ✓ Drawing exercise to learn the new grammatical structures (comparatives)
- ✓ Game: matching game picture and sentence from the video (in small groups using flashcards from the video and sentences written on a poster)

Apply to content language through learning

- 1.
- Create a glossary poster in small groups and share the final product with all the classmates
- ✓ Role playing with the song words for the music show of our school
- 6.
- ✓ Classification of the pictures in: causes, effects and preventive measures
- Create some posters in small groups and share the final product with all the classmates
- ✓ Create mind maps with the keywords

¹ Rules: A. Give them some words from the song. Few minutes to lay out the cards and decide what they think the song is about; B. Tell them that only some of these words are in the song and that they'll listen to the song to find out which; C. It's not a team work but a competition; D. At the end Check their cards: 1 point for each correct word, -1 for each wrong one; D. Play the song once; E. Hand out the lyrics and ask students to find their words; F. Each group announces the student with the highest number of points for the class to clap; the text will be used for other activities; G. Each group adds the points of the first game with the points gained with the placemat game. The winner is the group with the highest number of points.