

DIDACTIC UNIT

Title:	"NOISE POLLUTION, NOISE AND HEALTH".
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Technical requirements:	Classroom with PDI and PC for individual work
CATALOGUE	
Stage:	Primary
Course:	5º
Area:	Nature Sciences and Art Education.
Block:	CCNN. Block 2. The human being and health EA. Music education. Block 1. Listening
Theme:	The hearing system. Function and health. Acoustic aggressions

PROGRAMMING	
Purpose	<ul style="list-style-type: none"> - To know the anatomical and functional elements of the auditory apparatus. - Analyse, understand and acquire related vocabulary. - To deepen the knowledge of certain vital functions of the body. - Adopt healthy habits related to the hearing system and recognise the need to play an active role in reducing hearing loss. noise pollution in the environment. - Acquire behavioural patterns that allow them to develop autonomously in different spheres of action (family, school and social).

COMPETENCIES	Competences	Related tasks
	Linguistic communication	Interpret information and express concepts, reasoning and opinions orally and/or in writing.
	Mathematical competence and basic competences in science and technology	Carry out research projects with information from different sources, following the phases of: identification of the objective, planning and elaboration of the project.
	Digital competence	Effective and safe use of ICT resources for access to knowledge.
	Learning to learn	Consciously develop their own learning and apply what they have learnt in classroom activities and in everyday aspects adapted to their level.
	Social and civic competences	Relate certain behaviours and practices to the proper functioning of the body. Establish patterns of social interaction based on respect for others.
	Cultural awareness and expressions	Understand and critically evaluate certain actions and/or manifestations present in society.

CONTENTS

1. The ear: anatomy and physiology. Functioning of the auditory apparatus.
2. Interrelation between the ear and the rest of the organs involved in the relational function.
3. The health of the hearing system. Pollution and acoustic aggressions.
4. Basic vocabulary: auditory pavilion, sound, noise, external auditory canal, eardrum, ossicles, snail, auditory nerve, sound intensity, noise pollution, sense of balance...
Vocabulary extension: hearing, decibel, acoustic aggression, Eustachian tube, hair cells, hypoacusis, soundscapes...

ASSESSMENT CRITERIA AND LEARNING STANDARDS

Evaluation criteria	Learning standards
1. Know how the human body works: cells, tissues, organs, apparatus and systems: their location, shape, structure, functions and care.	1.1. Identifies and describes the main characteristics of the vital functions of the human being.
2. Identify and locate the main organs involved in carrying out the vital functions of the human body, establishing some fundamental relationships between them and certain health habits.	2.1. Identifies, names and describes the main parts and functioning of the auditory apparatus. 2.2. It establishes fundamental relationships between the ear and the rest of the organs involved in the relational function.
3. Relate certain lifestyle practices to the proper functioning of the body, adopting healthy lifestyles, knowing the health implications of their way of life.	3.1. Identifies and values healthy habits to prevent aggressions and/or illnesses and maintains a responsible behaviour with respect to the auditory apparatus.
4. Use active listening to soundscapes that exemplify situations of acoustic aggression.	4.1. Identifies and describes, using precise vocabulary, the acoustic aggressions present in his/her environment, seeking reasoned solutions.
5. Understand information and acquire vocabulary to express knowledge, experiences and opinions orally and in writing.	5.1. Analyses, understands and organises information. 5.2. Expresses knowledge and opinions orally and in writing using vocabulary and lexis from the unit.

<p>LEARNING PROCESS</p> <p>METHODOLOGY</p>	<ul style="list-style-type: none"> - Reflection, using an image, ICT resource or informative text as motivational elements, on the effects of noise and noise pollution on health. - Development of content and key competences with the help of texts, images, animations and ICT resources that allow students to construct and share knowledge. - Carrying out tasks and activities to organise, consolidate and extend the contents and competences that take into account the diversity of the students. - Carrying out specific projects related to the subject that favour interaction and collaboration between students. - Evaluation, co-evaluation and self-evaluation activities.
<p>TIMING</p>	<p>This unit will be developed in the first term over 6 sessions, included in the timetables of the Nature Sciences and Art Education areas, carrying out a joint and complementary task from both areas for a fortnight.</p>
<p>ACTIVITIES AND TASKS</p>	<div style="border: 1px solid black; height: 150px; width: 100%;"></div> <p>Suggested student activities and tasks Activity</p> <p>1. Brainstorming.</p> <p>The teacher presents the subject with audiovisual support (reading, video, mural, poster, ICT resources, etc.) and the students carry out a conceptual, directed and joint tour of the contents worked on in previous years, relating them to everyday situations and experiences.</p> <p>End the activity by drawing up a joint list of basic tips for taking care of the hearing system.</p> <p>Systematise with the teacher's help in a scheme or conceptual network the contents that will be developed throughout the unit.</p> <p>Activity 2. The hearing system: What does it look like, how does it work, what is hearing system hygiene, how does hearing loss affect people, how does it affect people's hearing, how does it affect people's hearing, how does it affect people's hearing?</p> <p>The student will search for and select information that provides answers to these and other questions posed by the teacher.</p>

Activity 3. Noise pollution and hearing health

Record in the notebook the most frequent sources of noise pollution and their consequences for health.

Activity 4. "Did you know?"

The last Wednesday of April every year is celebrated worldwide as "INTERNATIONAL DAY AGAINST NOISE".

Students will be asked to look up information about this event and draw up a list of recommendations for the day.

We will select the best proposals which, once illustrated with images or drawings, will be used to create a mural for the centre.

Activity 5. Discovering the properties of sounds.

Through the different auditions presented in class, identify the source of sound and differentiate its properties: pitch, intensity, duration and timbre.

Activity 6. We investigate environments or soundscapes.

Students (in small groups) should research one of the soundscapes or soundscapes from a list proposed by the teacher in order to find and select the information that will allow them to produce a simple "Research Report" with sections such as:

- Identification and localisation of the soundscape or soundscape. Most frequent sound sources.
- Evidence of noise pollution.
- Consequences of noise pollution for human health and in particular for the hearing system.
- Ways to reduce noise to create a more welcoming and healthier sound environment.

Activity 7 (optional extension). Technologies and hearing impairment.

Collect information on the different types of technological aids that facilitate the daily life of hearing impaired people:

- a) Hearing aids: through sound amplification,
- b) Visual aids: warnings by light or visual stimulus,
- c) Vibrating aids: warnings by vibration.

Activity 8. Vocabulary.

Collection of words or expressions that make up the basic and extension vocabulary of the unit. Giving the vocabulary contextualised meaning.

Activity 9. Evaluation. Specific tasks or tests.

EVALUATION

Moments	Procedures	Instruments
Initial assessment	Reminder of content and/or prior knowledge.	Activity 1 to determine the starting level of students.
Continuous and formative evaluation	Direct observation, review and monitoring of daily work to make a qualitative (observations and notes) and quantitative (grades) assessment of individual and group progress.	Activities 2, 3, 4 and 5 of elaboration, analysis and organisation of information. Other graphic or textual documents: notebooks, vocabulary sheets (8)...
Self-assessment and co-assessment	Design of tests/tasks for the learner to assess their own and/or others' achievements and reflect on their difficulties and strengths in the learning process.	Specific tasks or tests. Team Research Report (6).
Final evaluation	Elaboration of criteria for observing the level of achievement of contents and competences.	Indicators of achievement of the level of acquisition of the learning standards. Content and competence assessment tests

MATERIALS AND RESOURCES

<p>The ear: elements: http://www.pulevasalud.com/ps/Zips/4200/oido.swf How the ear works: http://elblogdelaeducacionmusical.blogspot.com.es/2010/08/the-human-ear-structure-y.html http://www.youtube.com/watch?v=1SKONN4iso8 Interrelation of the auditory apparatus with other senses: http://www.colegiovirgendeeuropa.com/PDFs/apuntes%20maria%20jesus/3ESO/terceraev/Organos%20de%20los%20sentidos.pdf Activities related to hearing: http://colegioprincesasofia.es/index.php/actividades-tic/primary/second/second/77 Hearing-related applications: http://web.educastur.princast.es/cp/asturias/documentos/Recursos%20E.%20Primarial.htm</p>	Activities 1 and 2
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<p>"Noise pollution. Identification of acoustic aggressions and active contribution to their reduction and to personal and collective wellbeing".</p> <p>http://www.portalesmedicos.com/revista-medica/contaminacion-acustica/</p> <p>Noise pollution http://queaprendemoshoy.com/debemos-tomar-medidas-to-reduce-noise-pollution/</p> <p>Acoustic attacks</p> <p>https://www.youtube.com/watch?v=rXhTOuo0Cwo</p> <p>Healthy habits for hearing care:</p> <p>http://www.viviendoelsonido.com/pages/index/como-take-care-of-your-ears</p> <p>http://www.gaes.es/conoce-tu-oido/consejos-para-cuidar-your-ears</p> <p>http://www.multipacustica.com/la-audicion/consejos-para-take-care-of-your-ears/</p>	Activities 3, 4 and 6
Auditions and information from different sources	Activities 5 and 7
Library of the centre. Digital encyclopaedias: http://espasa.planetasaber.com/default.asp?1338132249# http://www.escolar.com/	Activities 6 and 8

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