



Universidad Autónoma de Nuevo León
College of Biological Sciences
Biology; Chemistry, Bacteriology and
Parasitology; Food Science; Genomic
Biotechnology



1. Identification data:

Name of the learning unit:	Inorganic chemistry
Guided time (theory and practice):	80 hours
Guided time per week:	4 hours
Total autonomous time:	10 hours
Modality:	Non scholarized
Number and type of academic period:	1° semester
Type of learning unit:	Mandatory
Cycle:	First
Curricular area:	Introductory to the profession initial training (ACFI-IP)
UANL credits:	3
Elaboration date:	16/03/21
Name of the learning unit:	Dra. Ethel Daniela Cabello Ruíz Dra. Martha Patricia Rodríguez Magaña
Guided time (theory and practice):	Does not apply
Guided time per week:	Does not apply

2. Presentation:

The UA of Chemistry is developed in three phases. In the first phase it recognizes the chemical properties of the elements, focuses on the classification of matter and the proper handling of the SI Measurement Units, in addition to focusing on the knowledge of the electronic structure of atoms, which will remind you of the classification of the chemical properties of the elements for classification in the periodic table, with the above you can describe the states of matter.

Once the classification of the periodic table is determined, the second phase starts from contrasting the periodic properties of the elements with which we proceed to distinguish the types of chemical bonds and their characteristics, to later interpret the results obtained from the chemical compounds. In this phase, exercises relevant to the phase will be developed on a compound involved in biological phenomena and through a bibliographic search, corroborate its applications depending on the type of compound and its characteristics.

In the third phase the chemical reaction, its types and the chemical equation are conceptualized and identified, in addition to the fact that the balancing of equations by the methods of testing and redox is applied based on their foundations and their relationship with the law of conservation of mass, to finally apply the stoichiometric and concentration laws of solutions using properly the different units of concentration that support the chemical applications, which will allow the student to infer the reactions of the compounds as well as explain their stoichiometric applications in the processes of mass and energy transfer. Finally, based on a problem raised, they will develop statistical calculations and solutions, arguing with their bibliographic search the answer and sharing in poster mode the involvement of the compound in biological phenomena, promoting in the student a significant learning and therefore, the achievement of the competences raised. This will allow the student to develop the integrative learning product consisting of an orthophoto on the analysis of the importance of chemical elements in the functioning of the human organism and their relationship with their properties.

3. Purpose:

This learning unit (UA) aims for the student to interpret the basic principles that govern the atomic and molecular structure of matter, the periodicity of the elements, the chemical bonds and the stoichiometry of chemical reactions to characterize and classify matter by its physical chemical properties and its relationship with biological systems. It has been designed to provide the student with the necessary tools to understand the methods and procedures of experimental sciences and autonomous learning, to understand chemistry as a science that has an impact on our daily lives, identifying the general characteristics of matter and its physical and chemical properties as well as its transformations, assuming a critical attitude and ethical principles for an adequate professional performance and promoting the rational and sustainable use of the substances.

The UA of Inorganic Chemistry is related in an antecedent way with the knowledge acquired during high-school, particularly with the UA of the disciplinary fields of Experimental Sciences as it is the UA of Chemistry since in it the student acquires the bases of the nomenclature of compounds that will allow him to take the UA of Inorganic Chemistry. This learning unit empowers the student in interdisciplinary performance with learning units such as Organic Chemistry and the Integral Chemistry Laboratory, providing basic knowledge about the state of matter, the types of bonds, which facilitate the understanding of chemical processes in the area of chemical-biological sciences.

It contributes to the development of the general competences of the UANL by getting the student to know the contexts in which the signs are immersed through the information, data, elements of the events and situations of chemistry as a science (2.1.2). The student will be able to contrast the information on the events or findings of current research on chemical compounds in the various fields (10.1.3). In addition, during the preparation of assignments, the student may establish agreements between the different parties that allow an impartial environment (14.1.3).



Universidad Autónoma de Nuevo León
College of Biological Sciences
Biology; Chemistry, Bacteriology and
Parasitology; Food Science; Genomic
Biotechnology



Likewise, it contributes to the development of specific competences of the biology educational program, since the student will be able to investigate the mechanisms involved in the evolution of biodiversity in relation to the environmental risks that affect the populations in their ecosystem and ensure their persistence in a self-sustaining environment. (E2-B).

In the Chemistry Bacteriology and Parasitology program, it provides specific competencies for the design of protocols that use the knowledge of chemistry for the study of chemical biological phenomena (E1-QBP) as well as implement analytical methods to solve biomedical or other problems (E2-QBP) that are affecting the state of health and thus contribute to the diagnosis through the biochemical analysis of the patient's cellular response (E3-QBP) complying with the regulations that apply to this area following the quality standards implemented in the work environment where you are practicing (E4-QBP).

Likewise, the knowledge of the elements, their periodicity, links and stoichiometry contribute to the development of specific competences of the educational program of Bachelor in Food Science, since the student will have the necessary tools to manage the conservation of food through the physicochemical and microbiological analysis, which allow him to guarantee its quality and safety (E1-LCA).

It also contributes to the development of specific competences of the educational program of Bachelor in Genomic Biotechnology, since the student will integrate the knowledge of periodicity of the elements, bonds and stoichiometry of the chemical reactions to design experimental protocols with the aim of studying the biological chemical phenomena for the benefit of society (E1-LBG), together with laying the foundations to develop molecular diagnostics, applying traditional and cutting-edge techniques effectively (E2-LBG). In addition, the student will be able to design strategies for detection, modification and selection of genomes by finding a locus that identifies heritable diseases, in order to develop biotechnological products, processes and services (E3-LBG), as well as design drugs and clinical treatments in health, agricultural, livestock, industrial and environmental sectors tailored to each organism according to mutations identified in its genes, considering bioethics to comply with the values and moral principles that guarantee the well-being of society (E4-LBG).

4. Competencies of the graduation profile:

General competences to which this learning unit contributes:



Universidad Autónoma de Nuevo León
College of Biological Sciences
Biology; Chemistry, Bacteriology and
Parasitology; Food Science; Genomic
Biotechnology



Instrumental competences:

1. Use logical, formal, mathematical, iconic, verbal and non-verbal languages according to their stage of life, to understand, interpret and express ideas, feelings, theories and currents of thought with an ecumenical approach.

Personal and social interaction skills:

10. Intervenes in the face of the challenges of contemporary society locally and globally with a critical attitude and human, academic and professional commitment to contribute to consolidating general well-being and sustainable development.

Integrative competences:

14. Resolves personal and social conflicts according to specific techniques in the academic field and in your profession for proper decision-making.

Specific competences to which the learning unit contributes:

Biology

2. To estimate the ecological impact of ecosystems at the local, regional and national levels through the investigation of the biological mechanisms involved in the evolution of species and populations in relation to the environmental risk factors that affect the dynamic populations within ecosystems in order to ensure that conservation programs lead to their persistence as viable and self-sustaining populations in nature.

Food Science

1. Manage the conservation of food proactively, through the use of physicochemical and microbiological techniques of food analysis with a comprehensive view of its composition and the modifications that these present as a result of the handling and storage conditions to guarantee its quality and safety.

Genomic Biotechnology



Universidad Autónoma de Nuevo León
College of Biological Sciences
Biology; Chemistry, Bacteriology and
Parasitology; Food Science; Genomic
Biotechnology



1. Design experimental protocols related to biological chemistry, using the theoretical, methodological and instrumental knowledge, traditional and cutting-edge, of the exact sciences, biology and chemistry, which are applied in the study of natural phenomena and biodiversity, in a logical, creative and purposeful way, in order to conserve biotic resources and the environment for the benefit of society.
2. Develop molecular diagnostics through the identification of pathogenic organisms, applying traditional and cutting-edge techniques effectively, as well as the use of innovative tools in their detection, which allow the study and treatment of genetic diseases in the health, economic and social fields.
3. Design strategies for the detection, modification and selection of genomes, through the identification of genes, proteins or cellular metabolic components, following the current regulations on biosafety of Genetically Modified Organisms (GMOs) and evaluating their competitive advantage when compared to what is traditionally used, in order to develop biotechnological products, processes and services in the health sectors , agricultural, livestock, industrial and environmental.
4. Design drugs and clinical treatments, through the selection of microorganisms with productive metabolic pathways in the market of prebiotics, probiotics and additives, as well as viral genomes of biotechnological application in the agricultural, livestock, industrial and environmental sectors that allow it to develop products and processes in the prevention of diseases.

Chemistry, Bacteriology and Parasitology

1. Design experimental protocols related to biological chemistry, using the theoretical, methodological and instrumental knowledge, traditional and cutting-edge, of the exact sciences, biology and chemistry, which are applied in the study of natural phenomena and biodiversity, in a logical, creative and purposeful way, in order to conserve biotic resources and the environment for the benefit of society.
2. Implement analytical methodologies in chemical-biological, microbiological and biotechnological laboratories that are applied to biomedical, agricultural, industrial and/or environmental problems, to provide results supported by the validation of the processes used, for the benefit of the health and economy of the community.
3. Contribute to the diagnosis of autoimmune, metabolic and infectious diseases through the biochemical study of the cellular response in living beings, to assist in the treatment that guarantees an optimal state of health.



**Universidad Autónoma de Nuevo León
College of Biological Sciences
Biology; Chemistry, Bacteriology and
Parasitology; Food Science; Genomic
Biotechnology**



4. Develop systems of continuous improvement and quality assurance of chemical-biological, microbiological and biotechnological processes, applying current national and international regulations through compliance with the established requirements, to determine in a rigorous and objective way the properties of the products obtained, for the good of society.



Universidad Autónoma de Nuevo León
College of Biological Sciences
Biology; Chemistry, Bacteriology and
Parasitology; Food Science; Genomic
Biotechnology



5. Phase structure:

Phase 1. Classification of matter based on its chemical properties.

Element of competence: Classify matter from the recognition and differentiation of chemical properties to facilitate the analysis of a sample, separate a component of a sample, properly prepare a solution and predict the types of reaction that will take place when they react to each other.

Evidence	Performance criteria	Learning activities	Content	Resources
1. Written report on the chemical and structural characteristics of elements involved in biological phenomena.	<ul style="list-style-type: none"> It distinguishes the classification of matter from the assigned substance. It argues the classification of the matter of the assigned substance in a clear and objective way. Difference between atom, compound, ion and molecule, forms in which the 	<ul style="list-style-type: none"> The professor introduces the UA presenting the analytical program. Before starting with the content of Phase I, the student individually will answer a diagnostic evaluation consisting of a questionnaire, in order to place us in the basic knowledge and start the Phase. Through a cooperative learning dynamic, the teacher explains the content 	<ul style="list-style-type: none"> Material classification and SI units of measurement General chemistry matter: States of the matter. <p>Properties of each state. Classification: homogeneous and heterogeneous.</p>	<ul style="list-style-type: none"> classroom Computer equipment projector screen PowerPoint presentations Pintaro Internet Notebook periodic table Plataforma NEXUS

	<p>assigned substance is presented.</p> <ul style="list-style-type: none"> • It explains the physical and chemical differences in the ways in which the substance is presented. • It interprets through the different atomic models, the elements, associating their chemical properties. • Use images and text. • It includes at least five references, of which at least three 	<p>referring to Classification of Matter and Units of Measurement SI, as well as Atoms, molecules and Ions.</p> <ul style="list-style-type: none"> • The student individually answers the questionnaire of properties of the elements based on their electronic configuration (Weighted Activity 1.1). • The student presents the 1st formative exam (Ponderable Activity 1.2) 	<ul style="list-style-type: none"> • Elements, compounds and mixtures. • Separation of mixtures. • Atoms, molecules and Ions • Electronic structure of atoms. Bohr model. • Evolution of Atomic Models. • Electronic structure of atoms. Atomic orbitals. • Electronic structure. 	<ul style="list-style-type: none"> • Exercise booklet • Evaluation Instrument: PPA heading • Chang, R. (2016). chemistry.
--	--	--	--	--

	<p>are books or scientific articles in the Harvard style.</p> <ul style="list-style-type: none"> • Cites the books, websites, scientific articles, etc., that you include in the report 		<ul style="list-style-type: none"> • Electronic Configuration 	
--	--	--	--	--

Phase 2. Properties of elements and compounds based on their bindings and IUPAC name

Element of competence: Identify the properties of the elements in the Periodic Table by establishing their relationship with the types of chemical bonds and their IUPAC name to unite the elements into groups with similar properties and to be able to predict their behavior and their most common chemical reactions.

Evidence	Performance criteria	Learning activities	Content	Resources
2. Written report on the chemical and structural characteristics of compounds involved in biological phenomena.	<ul style="list-style-type: none"> • Includes in the report a comparative table 	<ul style="list-style-type: none"> • Before starting with the content of Phase II, the student individually 	<ul style="list-style-type: none"> • Periodic properties of items. • periodic table. • Valence electrons • Formation of metal 	<ul style="list-style-type: none"> • classroom • Computer equipment • projector • screen

	<ul style="list-style-type: none"> • Prepares the report with legible letter, in order and pen, without spelling errors. • Includes in the column at the beginning, in the first row, the title of the material it contains • Compares the materials placed within each column • Includes information from the periodic table • Mentions the properties of the items it mentions • Includes in the document the information 	<p>will answer a diagnostic evaluation consisting of a questionnaire, in order to place us in the mathematical deficiencies and start the Phase.</p> <ul style="list-style-type: none"> • Through a cooperative learning dynamic, the teacher explains the classification of the chemical elements into metals, nonmetals and metalloids, in addition to the most likely oxidation number of the representative elements by their location in the periodic table. 	<p>and nonmetal ions</p> <ul style="list-style-type: none"> • Oxidation numbers • Periodic properties of items. • Metals, Nonmetals and Metalloids. • The chemical bond: Lewis symbols and Ion Bond. Covalent bond. Lewis's structure. • Nomenclature of chemical compounds. Acids: Hydracids and Oxyacids. hydroxides Salts: Halides, Oxysalts, Quaternary (acidic, double, hydrated salts). ○ Oxides: Metallic, Non-metallic, Peroxides and Superoxides. 	<ul style="list-style-type: none"> • PowerPoint presentations • Pintaro • Internet • Notebook • periodic table • Plataforma NEXUS • Exercise booklet • Evaluation Instrument: PPA heading • Ptable. (2020). Ptable www.ptable.com/?lang=es • IUPAC. (2021). IUPAC http://www.iupac.org/ • Brown, T.L., H.E. LeMay, B.E. Burnsten, C.J. Murphy. (2014). Brown chemistry for competency-based courses.
--	---	--	---	--

	<p>requested for the activity</p> <ul style="list-style-type: none"> Identifies the IUPAC names of each element Relates the chemical bond to its corresponding IUPAC name Presents the information consistently Use the names correctly in both types of naming Identifies the periodic properties of the elements that make up the assigned substance. It argues its physical and chemical 	<ul style="list-style-type: none"> The professor explains the chemical bonds, relying on Lewis symbols. Students group apply IUPAC nomenclature of inorganic chemical compounds Individual students solve support exercises in order to reinforce what they have seen in class. The teacher feeds back into the students' exercises. Students participate as a group in brainstorming, about similarities and differences of concepts. 		
--	--	---	--	--

	<p>properties as a compound.</p> <ul style="list-style-type: none"> • It justifies with reliable bibliography. • It includes a personal contribution, accompanied by critical reflections. • It includes at least five references, of which at least three are books or scientific articles in the Harvard style. • Cites the books, websites, scientific articles, etc., that you include in the report 	<ul style="list-style-type: none"> • The student individually answers the questionnaire of type and nomenclature of the available compounds (Weighted Activity 2.1). • The student presents the 2 second formative exam (Ponderable Activity 2.2) 		
--	--	---	--	--

Phase 3. Chemical reactions

Element of competence: To explain the statistical applications that support chemistry in mass and energy transfer processes from the inference of reactions to perform the necessary calculations in the realization of a reaction or process using the right amounts of reagents.

Evidence	Performance criteria	Learning activities	Content	Resources
3. Written report of the stoichiometric and biological applications of compounds.	<ul style="list-style-type: none"> It discriminates the variables and correctly applies the formula according to the approach, detailing step by step. Includes concepts related to reactions in aqueous solution Uses knowledge of the types of chemical reactions Presents the chemical formulas used together with their respective variables 	<ul style="list-style-type: none"> Before starting with the content of Phase III, the student individually will answer a diagnostic evaluation consisting of a questionnaire, in order to place us in the mathematical deficiencies and start the calculations of the Phase. Through a cooperative learning dynamic, the teacher explains the chemical reactions, their rolling, their types and the 	<ul style="list-style-type: none"> Reactions in aqueous solution: precipitation neutralization Oxide-reduction. Reaction and chemical equation. Oxidizing and reducing agent. Balancing equations: score Redox Types of chemical reactions combustion 	<ol style="list-style-type: none"> classroom Computer equipment projector screen PowerPoint presentations Pintaro Internet Notebook periodic table Plataforma NEXUS Exercise booklet Evaluation Instrument: IAP Heading Rodríguez Heredia, Dunia. (2017). Occupational heavy metal poisoning. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1029-30192017001200012&lng=es&tlng=es

	<ul style="list-style-type: none"> • It uses the different units of concentration (molarity, molality and normality) • It includes results with formulas and the development of calculations for each problem. • It delivers a single file in pdf format, including the problems developed and including Cover with complete personal data, name of the Learning Unit and Teacher. 	<p>stoichiometric application of solutions thereof.</p> <ul style="list-style-type: none"> • The student individually answers the questionnaire of stoichiometry and chemical solutions (Weighted Activity 3.1) • The student presents the 3rd formative exam (Ponderable Activity 3.2) 	<p>synthesis decomposition Simple replacement Double substitution neutralization</p> <ul style="list-style-type: none"> • Stochemistry: Mol concept and Avogadro number. • Chemical formulas Mol and molar mass • Avogadro number • Formula weight and molecular weight • Interconversions of masses, moles and number of particles. 	<p>14. Brown, T.L., H.E. LeMay, B.E. Burnsten, C.J. Murphy. (2014). Brown chemistry for competency-based courses.</p>
--	---	---	---	---

	<ul style="list-style-type: none"> • Write in the Format, the development of each exercise by hand with legible lettering and without spelling errors. . • Write the report arguing the answers obtained in letter Arial 12, Justified text, considering grammatical norms, spelling and scientific language • It delivers a single file in pdf format, including the answers broken down by hand, in addition to the 		<ul style="list-style-type: none"> • Stoichiometry: Calculations with formulas and chemical equations. • molecular weight • Percentage composition based on chemical formulas • Empirical Formula and Molecular Formula • Moles and masses in balanced chemical equations • Limiting reagent • Theoretical performance 	
--	--	--	---	--

	<p>report written and including cover page with complete personal data, name of the Learning Unit and Teacher.</p>		<p>Actual performance Percentage yield.</p> <ul style="list-style-type: none"> Concentrations of Solutes in aqueous solutions. <p>Solute and solvent Solubility and factors affecting it Concentration of solutions. True solution. Colloid, suspension</p> <ul style="list-style-type: none"> Concentration units Molarity, molality and Normality 	
--	--	--	--	--

6. Assessment of learning.

	Campo	Weight (%)
1	Weighted activity 1.1 Questionnaire: Properties of the elements based on their electronic configuration	7
	Evidence 1. Written report on the chemical and structural characteristics of elements involved in biological phenomena (IAP).	7
	Weighted activity 1.2. First training exam	10
2	Weighted activity 2.1 Questionnaire: Type and nomenclature of available compounds	6
	Evidence 2. Written report on the chemical and structural characteristics of compounds involved in biological phenomena (PIA).	7
	Weighted activity 2.2. Second training exam	15
3	Weighted activity 3.1 Questionnaire: Stoichiometry and Chemical Solutions	7
	Evidence 3. Written report on the stoichiometric and biological applications of compounds (PIA).	14
	Weighted activity 3.2. Third training exam	15
	Integrative learning product	40*
Total:	100 puntos	100

*It is evaluated progressively during the phases, so its partial value is already added in each phase. This value includes the extra 12 pts of the poster that is made at the end of the UA. So that the 40pts will not be added but the 12pts at the end, to give a total of 100 pts in the evaluation of the UA

7. Learning integrative product (PIA).

Portfolio on the analysis of the importance of chemical elements in the functioning of the human organism and their relationship with their properties. Which will include three reports and a poster where the results and conclusions of the research are presented

8. Literature.

- Brown, T.L., H.E. LeMay, B.E. Burnsten, C.J. Murphy. (2014). Química de Brown para cursos con enfoque por competencias. México: Pearson Educación.
- Chang, R. (2016). Química. México: McGraw-Hill.
- Petrucci, R.H., Herring, F.G., Madura, J.D., Bissonnette C. (2017). Química General. México: Pearson Educación International
- Union of Pure and applied chemistry. (2020). IUPAC. 06/1272020, de IUPAC Sitio web: <https://iupac.org/>
- Ptbale. (2020). Ptable. Recuperado de: <https://ptbale.com/?lang=es#Propiedades>
- Rodríguez Heredia, Dunia. (2017). Intoxicación ocupacional por metales pesados. *MEDISAN*, 21(12), 3372-3385. Recuperado en 22 de abril de 2021, de http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1029-30192017001200012&lng=es&tlng=es.

Anexo 1. Instructional guide for PIA

Integrative Learning Product: Poster presentation of a bibliographical research on the analysis of the importance of chemical elements in the functioning of the human organism and their relationship with their properties.

Instructions:

The Written Report 1 and 2 of Research will consist of a bibliographic search of the chemical elements: calcium, sodium, potassium, iron and magnesium supported and guided by exercises carried out in the Booklet in class time. It must include According to the intervention of the element in the human organism, its classification as pure substance or mixture, specifically indicating its nature. Interpretation using electronic configuration, quantum number value and Bohr's atomic model, their physical and chemical properties reported as elements (Step 1). Relationship of them when presented as a compound, as well as their type of link and IUPAC name (if applicable). Relationship with its function in the human organism (Stage 2). It must contain: Title, Index, Theoretical framework, Response

to the mathematical approach with its respective analysis and Bibliography (Harvard format).

The report is delivered in physical stage 1 and 2 in the following order and format:

1. COVER. Institutional, subject matter and personal data.

2. TITLE. Referring to the study you want to develop.

*Chapter titles. Size 14, center alignment, bold and uppercase

*Subtitles. Size 12, left alignment, uppercase and lowercase, bold

3. TEXT: Size 12, alignment justified, uppercase and lowercase

4. BIBLIOGRAPHY. The quotations will appear in the text, at the end of the statement in parentheses in the following format:

**Citation in text: 1 author: (Author's last name, year). 2 authors: (Surname first author and surname second author, year). More authors: (Surname of the first author et. al, year).*

1. BIBLIOGRAPHY (Harvard style).

□ FIGURE FOOTER: Size 10, Justified alignment, Arabic numeral. Uppercase and lowercase. THE FIGURE SHOULD BE QUOTED IN THE TEXT

TABLE TITLE: SIZE: 10 ALIGNMENTS: Justified Numbering: Arabic. Uppercase and lowercase. The table should be quoted in the text.

The IAP exhibition in Stage 3 will consist of its bibliographical research and its analysis in poster mode at the time and date established by the Academy. It will follow the content format in Written Report 1 and 2 and with measures of 90 x 120 cm. It will be uploaded in PPT or PDF format, along with the qualified evaluation instrument to the NEXUS platform, where for its evaluation the minimum attendance of 80% and delivery of 100% of the reinforcement activities is required.

The exhibition shall include:

*Title: "Analysis of the importance of Chemical Elements in the human organism"

*Index

	<p>*Theoretical framework: According to the intervention of the element in the human organism, its classification as pure substance or mixture, specifically indicating its nature. Interpretation using electronic configuration, quantum number value and Bohr's atomic model, their physical and chemical properties reported as elements. Relationship of them when presented as a compound, as well as their type of link and IUPAC name (if applicable). Relationship with its function in the human organism. Statistical analysis of their intervention in the body (randomly assigned by team), with their respective response to the approach:</p> <ul style="list-style-type: none"> -Bone operation -Electrolytic balance - Anemia. <p>*Bibliography.</p>
Value:	30
Evaluation criteria:	<ol style="list-style-type: none"> 1. CONTENTS: Cover, Index, Introduction, Theoretical framework, Response to the mathematical approach with its respective analysis, Discussion, Conclusion and Bibliography 2. STRUCTURE AND ORDER: It must have sequence and cohesion, considering mainly the criterion of: <ol style="list-style-type: none"> 1. Analysis of the importance of chemical elements in the functioning of the human organism and their relationship with their properties 3. DRAFTING 4. PRESENTATION <ul style="list-style-type: none"> **KNOWLEDGE AND PREPARATION OF THE SUBJECT **ORAL EXPRESSION AND POSTURE
Mode:	Teams