Unit title	Key concept	Related concepts	Global context	Statement inquiry	Objectives	Assessment tasks	ATL skills	Content
Unit 1 ***Evolution of atomic structure and periodic table*** September-October-November	Systems	**Evidence** **Model** **Patterns**	**Scientific and technical innovation**	Scientists discern patterns and use them to construct systems with rules and conventions that help to explain how the world works.ttern of change	A i,ii,iii C i,ii,iii,iv,v D i,ii,iii,iv	**C**- practical work on physical and chemical properties of matter; *determination of melting point of unknown compound Investigating chemical properties of metals and non-metals* **D**- essay on radioisotopes **A**- End-of-unit or chapter tests	***Research***; information literacy ***Thinking***: critical thinking, creative thinking, transfer ***Self-management;*** reflection, organization ***Communication***: ***Social***; collaboration	Students will become aware of the historical development of atomic theory and discovery of different matter Students will reflect on how did discovery of different atomic models and different matter impact our life Students will investigate properties of different matter
Unit 2 ***How much, how many? (Calculations in chemistry)*** December – January-February-March	Relationships	Patterns and transfer	Identities and relationship	Mathematical relationships are one of the fundamental parts of chemistry	A i,ii,iii B i,ii,iii,iv C i,ii,iii,iv,v D i,ii,iii,iv	**C**- practical work on determination of molar mass of CO_2 **B**- design of an investigation of determination of percentage of water in hydrated salt **D**- written piece of work on Contact process **A**- End-of-unit or chapter tests	***Thinking***: critical thinking, creative thinking, transfer ***Self-management;*** reflection, organization ***Communication***: ***Research***; information literacy ***Social***; collaboration	Students will become aware of connection of calculations in chemistry and very important industrial processes. Students will reflect on how discovery of relationship between compounds in balanced reactions impact our life Students will plan how to investigate different factors that will affect the reaction yield.

Unit 3 **<u>May the force be with you (Bonding)</u>** April- May-June	Relationship	Interactions Nature Models	Globalization and sustainability	Scientist use bonding models to explain the nature of interactions between different types of particles	A i,ii,iii B i,ii,iii,iv C i,ii,iii,iv,v D i,ii,iii,iv	**B**- design an investigation on solubility of different compounds in water **C**-practical work on conductivity of different solutions **D**- written piece of work on physical and chemical properties of water **A**- End-of-unit or chapter tests **CAS**-investigating quality of tap water	***Thinking***: critical thinking, creative thinking, transfer ***Research***; information literacy, media literacy ***Self-management;*** reflection, organization ***Communication***: ***Social***; collaboration	Students will become aware of the different physical and chemical properties of compounds related with the presence of different type of bonding Students will reflect on how some of specific type of bonding impact our life Students will plan how to investigate properties of water
Interdisciplinary unit- **Tap water in Croatia- Water quality**	System	Evidence, management and intervention	Globalization and sustainability	Evidence can be found of the links in interconnected system of the environment and human management and intervention on drinking water quality.	IDU criteria A B C	Water samples analysis Location analysis Written piece of work	***Thinking***: critical thinking, creative thinking, transfer ***Research***; information literacy, media literacy ***Self-management;*** reflection, organization ***Communication***: ***Social***; collaboration	Students will produce a written piece of work, in which they will present data collected from investigation of quality of tap water samples taken from different areas of Croatia and results of research of soil/rock composition of the areas. They will link the results obtained from experimental determination of quality of water samples with the composition of soil/rocks to conclude how the one environment influences the other..

MYP 5 Course overview 2022/2023

CHEMISTRY

Unit title	Key concept	Related concepts	Global context	Statement inquiry	Objectives	Assessment tasks	ATL skills	Content
Unit 1 ***Fast and furious (chemical kinetics and equilibrium)*** September-October-November 2015	Change	Consequences	personal and cultural expression	What are consequences of changing factors affecting the rate and equilibrium on our life	A i,ii,iii B i,ii,iii,iv C i,ii,iii,iv,v	**C**- practical work on measuring the value of reaction rate **B**- investigation of the factors that affect the rate of an reaction or the position of equilibrium **A**- End-of-unit or chapter tests	***Thinking***: critical thinking, creative thinking, transfer ***Self-management;*** reflection, organization ***Communication***: ***Research***; information literacy ***Social***; collaboration	Students will become aware of the importance and strengths and limitations of industrial production of ammonia and sulphuric acid Students will reflect on different factors that influence on the chemical kinetics and equilibrium Students will plan how to investigate different factors that influence on reaction rate and equilibrium
Unit 2 ***Neutralize me! (Acids and bases)*** December – January –February 2016	Systems	Environment	Globalization and sustainability	Human interactions with nature have significant consequences on the environments which can be seen in everyday life .	A i,ii,iii B i,ii,iii,iv C i,ii,iii,iv,v D i,ii,iii,iv	**D**- Written piece of work on Acid decomposition **B**- design an investigation on acidity of different solutions **C**- practical work on obtaining the pH curve **A**- End-of-unit or chapter tests **CAS**-investigating the level of acidity of rain water	***Thinking***: critical thinking, creative thinking, transfer ***Self-management;*** reflection, organization ***Communication***: ***Research***; information literacy ***Social***; collaboration	Students will become aware of the danger of acidic and basic compounds to environment Students will reflect on the factors that can influence on the production of acid rain and different ways to prevent acid decomposition Students will plan how to investigate the level of acidity of Zagreb's rain and compare it with the results of other capitals

Unit 3 ***<u>Energize me (Electrochemistry)</u>*** February-March-April	Change	Transformation	Scientific and technical innovation	How chemical energy is converted into electrical energy?	A i,ii,iii C i,ii,iii,iv,v D i,ii,iii,iv	**C**- Practical work on galvanic cells **D**- written piece of work on Batteries **A**- End-of-unit or chapter tests **CAS**-battery recycle	***Thinking***: critical thinking, creative thinking, transfer ***Self-management;*** reflection, organization ***Communication***: ***Research***; information literacy ***Social***; collaboration	Students will become aware of the composition of different types of batteries Students will reflect on the danger of some of the materials present in the batteries and the importance of proper batteries storage. Students will plan how to investigate properties of batteries
Unit 4 **<u>Organic chemistry</u>** April-May-June	Global interactions	Environment	Globalization and sustainability	**Organic compounds have different functions and uses which has significant consequence on environment**?	A i,ii,iii B i,ii,iii,iv D i,ii,iii,iv	**D**- Essay on Fossil fuel **B**- design of an investigation of physical and chemical properties of organic matter **A**- End-of-unit or chapter tests	***Thinking***: critical thinking, creative thinking, transfer ***Self-management;*** reflection, organization ***Communication***: ***Research***; information literacy	Students will become aware of the danger of some of the products of organic matter combustion Students will reflect on how organic compounds and products of their combustion impact our life. Students will plan how to investigate physical and chemical properties of organic matter

DIFFERENTIATION

For students with:

Dyslexia and dysgraphia –

- Bigger font in Sarif/Calibi/Times New Roman as well as , bigger space between rows
- Dividing text in smaller sections
- More time for reading
- Tolerating writing mistakes
- Space for answers should be on the same page
- longer time for finishing a task if needed
- Working in a pair
- more practice, allowing more time for group work

ADHD

- Bigger font and space between rows
- Shorter paragraphs
- Avoid tables
- Fewer questions on tests
- Frequent checking if a student is concentrated on the work
- create separate questions
- Questions and enough space for answers should be on the same page
- Work in pairs or small teams
- Creating summary sheets if needed
- Encourage students to participate in class discussions
- Regularly make notes about progress in e-dnevnik
- Allowing the student to leave the classroom for a short time during the lesson if needed

Hearing disability

- Face the student during a lesson as often as possible
- Using presentation/written material
- Check understanding of the content
- Check the notes in student's notebook

- Pay attention that the student is not disturbed by a variety of sounds
- Work in pairs and small groups