



Saturday Enrichment Program
Course Title: The Chemistry in daily life

Course Description

In this class, you will become a young chemist as we will explore chemistry that takes place in our daily lives.

Each week, we will enjoy hands-on activities, which will be a lot of fun! These hands-on activities and in-depth class discussions will further your understanding of chemistry in our lives. You will work in small and big teams collaboratively.

You will find out how plants produce their food and oxygen, what really happens during when you are breathing. You will test the quality of your drinking water on your own. You will learn a lot about salt and why it is important for our body. You will find out about the chemistry of soaps and what really happens so that it cleans, and more.

In the end, you will be working collaboratively with the whole team in preparing “yummy mixtures and juice cocktails with specific formulas of chemical equations.”

At the end of the course, you will get a chance to perform the last activity with your parents! Family members are welcome to attend the final day of class when you, the young chemists, will be finding out the ph level of your tap water!

Essential Questions

Key topics to be covered:

What is the chemistry behind daily life phenomena?

How much of this chemistry we can understand and be more informed about our daily lives?

How can we make use of the daily life chemistry if we can at all?

In this class, we will find out the answers to these questions.

Outcomes:

Students will have an understanding of:

- the importance of knowing the chemistry behind the daily life phenomena
- even the usual ordinary things have phenomenal chemical equations

- the advantageous of knowing chemistry, which is a possibility of improving our daily lives because of this knowledge

Students will learn about:

- the photosynthesis, the aerobic and anaerobic reactions and their importance for the human lives
- the acid, base, pH level and the salt
- the importance of mixing chemistry in our daily lives

Students will be able to:

- collaborate in creating a fun, exciting and engaging learning experience

Instruction Strategies

Each week, students will be learning a new topic that will build upon and strengthen their existing knowledge base. This will be achieved by creating a disciplined and fun learning environment.

Student Assessment

At the end of each class, students maybe be asked to write a short (1-2 sentences) summary of what they learned that day. Parents will receive weekly email updates about the class and are encouraged to communicate with the instructor, Derya (deryab@uw.edu), about their young scholars.

Resources and Materials

- 3-ring binder
- Pen, pencil, eraser, ruler
- Colored pencils, crayons, or markers

Tentative Course Schedule

Date	Topic(s)	In-Class Activities
April 11	Photosynthesis	Why plants are too important in our lives?
April 18	Aerobic Cellular Respiration	What really happens when we are breathing?
April 25	Anaerobic Respiration	Do you like bread, yoghurt, and cheese? Would you like to learn their chemistry facts?
May 2	Combustion and Rust	What type of reactions are they, and how are they related to our daily lives?
May 9	Mixing chemicals I	How do you like your vinegar in a salad or in a volcano?
May 16 (May 23 rd there is no class)	Acid-Base Reactions and Salt	How do soaps clean? What happens when you combine lemon juice with baking soda? Let's find out!
May 30	Mixing Chemicals II-equations	Let's make some yummy healthy mixtures and juice cocktails!
June 6	What does Ph level Indicate?	Let's find out the Ph level of your drinking water!