

## **Best Practice 1**

**Title of the practice: Providing opportunity for all students for making the connection between the unseen microscopic world and the observable macroscopic world through chemistry .**

### **The context that required the initiation of the practice**

- It is essential for both Arts and Science students to explore new ideas in both chemistry and allied fields of science and technology.
- Students will be able to explain why chemistry is an integral activity for addressing social, economic, and environmental problems.
- It is realised that the students should function as a member of an interdisciplinary problem solving team to emerge as a responsible citizen.

### **Objectives of the practice**

- The student will understand the interdisciplinary nature of chemistry and to integrate knowledge of mathematics, physics and other disciplines to a wide variety of problems.
- The student will develop the ability to effectively communicate scientific information in written and oral formats.
- The student will learn professionalism, including the ability to work in teams and apply basic ethical principles.
- Developed formal (abstract) thinking skills as well as concrete thinking skills.

### **The Practice**

The practice is carried out in three phases:

#### **Pre-lab Work**

Trough questions students will be prompted to review and recall previously learned ideas that is pertinent to the lab experience and through instructions students will learn to plan their actions about their lab procedure.

#### **Laboratory Work**

Simple specific demonstrations related to day to day chemical concepts were done and the students are asked to perform and experience the same in the presence of in charge staff. Samples of demonstrations are given below,

## **Breakdown of Chlorophyll by Cooking Green Vegetables**

When broccoli, spinach or any other kind of green vegetable is being cooked, it will slowly turn a bright green and then start to fade into a less appetizing brownish green. This is because the vegetable's cells are breaking down and releasing acid that in turn denatures the chlorophyll that is responsible for the plant's bright green color. Students can determine how long it takes for the chlorophyll in a particular vegetable to be broken down by cooking it for different lengths of time and grading the resulting colors

## **Softening Hard Water**

As our college is located in the coastal area , tap water is full of minerals that make it difficult to remove soap from dishes or skin because the soap does not dissolve in the water very well. People who live in these areas often use a water softener to make cleaning dishes or taking a shower more efficient. Students can compare the two types of water by making hard water from distilled water, which does not contain any minerals. To do this, take two bottles of distilled water filled halfway and add Epsom salts to one. The use of Epsom salts, or magnesium sulfate, serves to "harden" the water of one bottle through the addition magnesium. Then add soap to each bottle. Shake both bottles to see which one has more suds. It should be the bottle containing the hard water because less soap has dissolved into the water.

## **Post-lab Work**

Students will communicate their findings in written and oral formats

## **Impact of the practice**

The best practice of learning basics of Chemistry,

- Makes life's little mysteries a little less... mysterious.
- helps to read and understand product labels.
- helps to make informed decisions. (Will a product work as advertised or is it a scam?)

- can help to keep one safe! Students will come to know which household chemicals are dangerous to keep together or mix and which can be used safely.
- Helps students to understand current events, including news about petroleum, product recalls, pollution, the environment and technological advances.
- Opens up career options.. Chemistry applies to the food industry, retail sales, transportation, art, homemaking... any type of work..
- is fun! There are lots of interesting chemistry projects one can do using common everyday materials.

### **Resources required**

Chemistry Staff , Laboratory , Chemicals, Glassware, LPG, Reference materials.

## **Best Practice 2**

**Title of the practice: Building English Vocabulary through Language games for Under graduate students**

### **The Context that require the initiation of the practice**

The Institution which was established in 1967 to cater to the needs of the women students hailing from socially and economically backward students aims at empowering them through education. Most of the students are from rural areas and their language proficiency is not at par with candidates who compete with them in interviews and competitive exams when they complete their degree courses. All the students, irrespective of the major are in need of better communicative skills to make best use of their knowledge gained during the course of their learning. So, Department of English decided to increase their communicative skills by improving their vocabulary.

### **Objectives of the practice**

1. To improve vocabulary skills through LSRW
2. To develop dictionary skills
3. Creating awareness of the heterogeneous of English language
4. Use of language games to sustain their interest while learning

### **The practice**

All the first year students are given an entry level proficiency test of dictation, writing synonyms and antonyms for simple/difficult word to judge their entry level of vocabulary skills. Based on the screening test , the students are identified as advanced learners and slow learners.

### **Strategies used for development of vocabulary skills**

Students are encouraged to read simple story books(for slow learners) and classics for advanced learners

Students are asked to use dictionary to find meaning for unknown words

Simple vocabulary building games are used in the class.

#### **Hangman (2+ students)**

Hangman is a classic word game for two players. One player thinks of a word and writes down dashes to represent the number of letters. The other guesses letters of the alphabet. Correct letters are inserted into the word; incorrect letters result in another segment of the “hangman” being drawn.

#### **Crosswords (Individual)**

A crossword is a grid of white and black squares, where each white square is one letter of a word. The words intersect. Most of the games have straight forward clues. Some crosswords are “cryptic”: Crosswords are useful to learn new words and definitions,

### **Word searches (Individual)**

A word search has a grid (often 10×10 or more) filled with letters, and a number of words written alongside or beneath the grid. The student completing the word search needs to find those words within the grid.

Most word searches are easy enough for children, though the students struggle with backward and diagonal words. They’re a good way to get used to letter patterns and to improve spelling – and because word searches rely on matching letters, even children who can’t read well will be able to complete simple ones.

### **Consequences (2+ players, ideally 4+)**

This is a fun game with a group of students. Each player writes down one line of a story and folds the paper over before passing it around the table to the next player.

After a few turns, the players open out the papers and read out the results. This can be great for sparking ideas, or as a way to encourage reluctant writers to have a go.

### **Bulls and Cows (2 players)**

This game, which can also be called “Mastermind” or “Jotto” involves one player thinking up a secret word of a set number of letters. The second player guesses a word; the first player tells them how many letters match in the right position (bulls) and how many letters are correct but in the wrong position (cows).

It helps to develop spelling as well as logical thinking about which letters can or can’t be the correct ones after a few guesses.

### **Obstacles faced**

As it is not part of their syllabus, the students are reluctant to participate if the difficulty level of the games is more challenging.

It is more challenging for the teachers to organize word games in large classrooms.

### **Impact of the practice**

- The students are given exit level test by the end of their fourth semester.
- Analysis of the entry /exit tests shows that there is a remarkable development in their communicative skills
- The students are able to express their ideas and knowledge more precisely and confidently.
- They have developed interest in word games and reading books and it is observed that the students play word games and read books without being insisted by the teachers.

Resources required

Newspapers/

Journals/Magazines

Net resources

Simple Story books

Classics