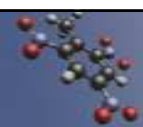


Introduction 2010

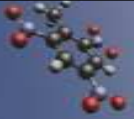
Level 2 and 3 Chemistry

Author: J R Reid



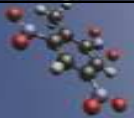
What is Chemistry?

- Chemistry is the study of atoms and how they bond together to make compounds.
- This course is based on a mixture of level 2 and 3 Achievement Standards.
- This year covers:
 - The **types of bonds** atoms can form
 - **Reactions** and how to make them work better
 - **Heat** of reactions
 - **Equilibrium** (when reactions don't fully react)



Why Level 2 and 3?

- Being part of a smaller school we can not always offer separate Level 2 and 3 courses, so we have combined the two levels into one course. Over the two years that the course runs you will have the opportunity to do every Achievement Standard offered in the Level 2 and 3 Chemistry courses.
- It also means that there is less revision to do next year because similar courses have been linked together i.e. Atoms and their Bonds Level 2 and 3 are covered this year.
- Internal assessments will still be separated so that Year 12 students do Level 2 and Year 13 students do Level 3 internal assessments.



Internal Assessment Details - 2010

The table below outlines the internal assessments for this year. The blue section is for Year 12 only and the green for year 13 only. There are issues with internal investigations and distance learning which we will discuss later.

| Standard | Title | Credits |
|-------------|---|---------|
| 2.1 (90305) | Carry out qualitative analysis | 2 |
| 2.2 (90306) | Carry out acid-base quantitative analysis | 3 |
| 2.3 (90763) | Solve quantitative simple problems | 3 |
| 3.1 (90694) | Extended chemical investigations | 4 |
| 3.2 (90695) | Carry out a redox quantitative analysis | 2 |



External Assessment Details - 2010

These are the examinations that we will be preparing for.

| Standard | Title | Credits |
|-------------|--|---------|
| 2.4 (90308) | Describe the nature of structure and bonding in different substances | 4 |
| 2.6 (90310) | Describe principles of chemical reactivity | 4 |
| 3.x (90780) | Describe properties of particles and thermochemical principles | 5 |
| 3.7 (90700) | Describe equilibrium situations | 3 |



External Assessment Details - 2011

The table below outlines the remainder of the Achievement standards that will be carried out **next year**.

| Standard | Title | Credits |
|-------------|--|---------|
| 2.7 (90311) | Describe oxidation and reduction processes | 4 |
| 3.3 (90696) | Describe oxidation and reduction processes | 3 |
| 2.5 (90309) | Organic chemistry | 4 |
| 3.5 (90698) | Organic chemistry | 4 |



What You Will Need

- The assessments involve calculations. You will need a **scientific calculator** that you can become familiar with (in other words don't borrow someone else's all the time)
- You will also need a **hard covered exercise book** or folder.
- Text books include:
 - New Zealand Pathfinder Series Level 2 and 3 Chemistry (or the Year 12 and 13 versions). Ask the Head of Science for these.
 - Beginning Chemistry (level 2) and Continuing Chemistry (level 3). Both manuals are by Anne Wignall and Terry Wales (we'll use half of each manual this year and half next year)
- Blue and red pens, pencil, eraser and a ruler.
- Other materials may need to be supplied throughout the year for practical investigations



Calendar 2010

| Week | Term One (3 Feb - 1Apr) | Term Two (19 Apr- 2 Jul) | Term Three (19 Jul - 24 Sep) | Term Four (11 Oct - Dec) |
|------|---|---|---------------------------------|-----------------------------|
| 1 | <i>Waitangi Day</i> Atomic Structure and Bonding (2.4) | Qualitative / Quantitative Chemistry (Prep for Internals) | | |
| 2 | | | | |
| 3 | | Internal Assessments (2.1, 2.2, 2.3 or 3.1, 3.2) | Thermochemistry (3.6) | <i>LabourDay</i> |
| 4 | UNIT TEST | | | Revision for Exams |
| 5 | Atomic, Ionic and Molecular Properties (Level 3) | Mid Year Exams ??? | | |
| 6 | | | | NCEA Exams |
| 7 | | | Practice Exams ??? | |
| 8 | | <i>Queens Birthday (Monday)</i> | Equilibrium (3.7) | |
| 9 | UNIT TEST <i>Easter</i> | | | |
| 10 | | Reactivity (2.6) | | |
| 11 | | | | |



Things To Remember - A Summary

- **Beware:**
 - Read the authenticity policy carefully before starting internally assessed projects - these issues will also be discussed when internally assessed projects are introduced.
 - Projects must be handed in on the due date unless organised beforehand with your teacher. Late projects will not gain a grade.
 - If you have issues with a mark that has been given talk to your teacher. If you are not satisfied talk to your Dean or NZQA person (Mrs Fraser at Aparima College)
- Carefully read all information given to you throughout the year. You will be given information on appeals, reassessment, authenticity and confirmation of assessments. It is important that you read and respond to each item.