**Science Web Page**

**Science at Wyong Christian Community School**

At Wyong Christian Community School, Science is the key learning area where students develop knowledge, understandings, skills, values and attitudes in Science and the use of Science in Technology, which are essential for all students to succeed in and beyond their schooling. Science is an area of the curriculum that has great influence. All of the Technology which we appreciate in the world today has come about because of an understanding of the Science involved.

An understanding and appreciation of the physical, biological, chemical and technological world and the ability to make responsible and informed decisions in relation to our God given environment is essential for young people to be responsible disciples of the Lord Jesus Christ.

To achieve this, the Science Faculty seeks to pursue the following goals:

- To create an environment where each child's individual gifts are fostered, recognising that each child is a unique creation, loved by God.
  - 1 Timothy 4:4 "For everything God created is good, and nothing is to be rejected ...."

- To create an environment where students are encouraged to love God and to live a life of obedience to Him.
  - 2 John 6 "And this is love: that we walk in obedience to His commands."

- To model Christ to our students in our words and actions.
  - 1 Corinthians 11:1 "Follow my example as I follow the example of Christ."

- To provide an environment where children are nurtured, disciplined with love and accepted as valuable members of our community.
  - Hebrews 12:11 "No discipline seems pleasant at the time, but painful. Later on, however, discipline produces a harvest of righteousness, and peace for those who have been trained by it."

- To teach the required curricula with a Biblical focus thus allowing the students to formulate a Christian world view.
  - Proverbs 3:5 "Trust in the Lord with all your heart and lean not unto your own understanding: in all your ways acknowledge Him and He will make your path straight."

Science and Technology is the study of God's creation and the tools man has devised to support or improve our way of life. It involves systematic investigation and discovery of our surroundings as well as a body of knowledge gained through the research of others. Science and Technology is the interaction of Gods perfect creation and mans best efforts to utilize our God given resources and intelligence.

The study of Science at Wyong Christian Community School is grounded on the following biblical truths:

- God is the creator of all things both visible and invisible and the sustainer of our universe (Genesis 1:1, Isaiah 45:12, Hebrews 1:3)
- People are created beings in the image of God (Genesis 1:27)
- People were given dominion and stewardship of the earth (Genesis 2:19)

With these biblical truths as a foundation, the study of Science and Technology can help us to understand our Creator and fulfill our God given role as stewards in a God pleasing manner.
**WHAT DOES TEACHING SCIENCE (K-10) AND TECHNOLOGY (K-6) INVOLVE AT WCCS?**

At Wyong Christian Community School, teaching Science and Technology aims to develop student’s competence and responsibility in their interactions with Science and Technology, leading to:

- A greater knowledge and understanding of God and a sense of awe and wonder at the greatness and power of our creative God.
- Identification, appreciation and a curiosity about the purpose and order in the universe God has created.
- A responsible and enriched attitude toward the environment and an understanding of our role in the proper management of God’s creation.
- An enriched attitude of care to others and a greater understanding of ‘self’, how each person is fearfully and wonderfully made.
- An enthusiasm for further learning of Science and Technology.

**OBJECTIVES**

**VALUES AND ATTITUDES**

The students will engage in learning experiences which will enable them to develop positive and informed values and attitudes towards:

- God
- Themselves
- Others
- Science and Technology

**KNOWLEDGE AND UNDERSTANDING**

The students will develop their knowledge and understanding of:

- God, His sustaining power and creativity
- God’s created living things, the five kingdoms including plants and animals
- Physical Phenomena
- The Earth and its surroundings
- Built Environments
- Products and Services

**SKILLS**

The students will be able to:

- plan and conduct investigations of natural phenomena and made environments by conducting tests, collecting and recording information and observing.
- process data and evaluate findings
- use scientific techniques
- assess, select and use a range of practical skills
- assess, select and use a range of technologies
Why Teach Science (K-10) and Technology (K-6) at WCCS?

Our students are growing in a world that in general does not recognise God in his creation. As such, the area of Science is often used to support humanistic beliefs such as spontaneous generation and evolution. Because of this non-biblical worldview it is important to provide our students with an understanding that Science cannot prove or disprove the existence of God but is often used to reinforce both of these beliefs.

In order for students to adequately prepared for a Christian life they must be able to:

- Understand that God is the Creator and sustainer of the universe and has given man the responsibility to care for the world.
- Understand that Science and Technology explores and utilizes the laws established by God.
- Analyse and critique the growth of scientific and technological knowledge from a biblical perspective.
- Respond in a Christ-like manner to the change in scientific and technological activity by deciding which advancements are beneficial to their lives.

How do we teach Science (K-10) and Technology (K-6) at WCCS?

The field of Science is one in which understanding of God’s creation and its workings are gained through investigation and observation of our natural world. As such it is important whenever possible to provide the student with the opportunity to conduct first hand investigations in addition to learning about the research of others. To do this the following strategies are used:

- Observations of the world around us
- Investigations of people, animals, plants, areas and environments
- Practical experiments
- Individual and group research projects

These strategies endeavour to provide students with knowledge of the topic being studied as well as an understanding of the scientific process including the following:

- The scientific method – Aim, hypothesis, method, result/observation, conclusion, discussion.
- Fair tests
- Variables
- Control groups
- Scientific Theory and Law

The ability to be able to follow the scientific process and understand and apply a variety of analytical and creative techniques to solve the problems of our world is essential.

As Science at WCCS is taught from a biblical perspective students are encouraged to question scientific theory and recognise the discrepancies to the word of God.

At Wyong Christian Community School, Science is taught from grades K-6 as Science and Technology. This is Early Stage 1 through to Stage 3.

Stages 4 and 5 are taught during Years 7 to 10. Biology, Physics, Chemistry, Earth Science and units on Space are all incorporated into the programs of work, along with life skills outcomes and content.
**What About Science at a Higher School Certificate Level?**

At Stage 6, which is Year 11 and 12, students have the opportunity to fully explore their God given ability in Science with a number of students completing Higher School Certificate Courses in Biology, Physics and or Chemistry.

These subjects are studied in the light of the scripture so that a sound ethical basis and correct perspective of the importance of God’s divine intervention is given. Students are expected to achieve at the highest academic level which they are capable of attaining.

**As required by the Board of Studies each Science covers prescribed units.**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Preliminary</th>
<th>Higher School Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biology</strong></td>
<td>• A Local Ecosystem</td>
<td>• The Search for Better Health</td>
</tr>
<tr>
<td></td>
<td>• Patterns in Nature</td>
<td>• Maintaining a Balance</td>
</tr>
<tr>
<td></td>
<td>• Life on Earth</td>
<td>• Blueprint of Life</td>
</tr>
<tr>
<td></td>
<td>• Evolution and Australian Biota</td>
<td>• One Elective Topic</td>
</tr>
<tr>
<td><strong>Chemistry</strong></td>
<td>• The Chemical Earth</td>
<td>• Chemical Monitoring and Management</td>
</tr>
<tr>
<td></td>
<td>• Metals</td>
<td>• Production of Materials</td>
</tr>
<tr>
<td></td>
<td>• Water</td>
<td>• The Acidic Environment</td>
</tr>
<tr>
<td></td>
<td>• Energy</td>
<td>• One Elective Topic</td>
</tr>
<tr>
<td><strong>Physics</strong></td>
<td>• Moving About</td>
<td>• Space</td>
</tr>
<tr>
<td></td>
<td>• The World Communicates</td>
<td>• Motors and Generators</td>
</tr>
<tr>
<td></td>
<td>• Electrical Energy in the Home</td>
<td>• From Ideas to Implementation</td>
</tr>
<tr>
<td></td>
<td>• The Cosmic Engine</td>
<td>• One Elective Topic</td>
</tr>
</tbody>
</table>