

## 2013/2014 (Yr 8 and Yr 9) LEARNING GOALS

### ENGLISH:

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Our goals in English are to ensure XX and YY further their skills to become confident communicators, imaginative thinkers and informed citizens. We want them to engage imaginatively and critically with a wide range of literature and media. We will carefully select challenging works of literature from various times, cultures, and genres, and encourage XX and YY to reflect on their readings through writing and discussion.

#### **Fiction:**

They will critically analyse at least two works. Some possibilities include Wind in the Willows (Kenneth Graham), The Lion, the Witch and the Wardrobe (CS Lewis), Blue Back (Tim Winton), King of Shadows (Susan Cooper) and Thunderfish (Simon Higgins).

#### **Poetry:**

We will continue to read and study a wide range of types of poems. Possibilities include Take a Chance - An Anthology of Poetry Performance, Oxford Treasury of Classic Poems, The Highwayman.

#### **Film:**

We will study at least two works. Possibilities include the Lion, the Witch and the Wardrobe, Storm Boy, Galaxy Quest, A Midsummer Night's Dream, Finding Nemo.

- **Nonfiction** at least two works (Last Chance to See, Boy – Tales of Childhood,
- **Drama** at least two works (Shakespeare – Midsummer Night's Dream)  
[http://www.boardofstudies.nsw.edu.au/syllabus\\_sc/pdf\\_doc/fiction\\_film\\_text\\_support.pdf](http://www.boardofstudies.nsw.edu.au/syllabus_sc/pdf_doc/fiction_film_text_support.pdf)

#### **Creative and Persuasive Writing –**

Narrative writing – short stories – Nanowrimo Junior/Brave Writer/creative writing exercises

Essay writing/Academic writing –Michael Clay Thompson, Excel Yrs 7-10 Essay Writing Step-By-Step

#### **Linguistic Competency/Oral Communication:**

[Read Me Resources](#) –“This is Me” and “Graphics 4 Me”

Grammar – the Magic Lens (Michael Clay Thomson)

## MATHEMATICS

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The aim for XX and YY in the next couple of years of Mathematics is to progress to Stage 6 content and possibly tertiary studies. Additionally, rather than just focus on mathematical content/knowledge, I want to improve their ability to think effectively and solve problems in a variety of situations. I want to encourage them to:

- think creatively,
- be flexible in the use of new ideas and approaches,
- be fluent in the creation of an array of ideas,
- elaborate on similar ideas and
- be original in thinking of new approaches or new ways of seeing problems.

In essence, I want to broaden their mathematical toolbox and encourage the application of thinking skills as natural part of learning mathematics. I want them to value the solution pathway as much, if not more than that of the answer.

To achieve these aims I try to find resources that:

- contain a high level of sophistication of ideas
- provide opportunities for extensions that challenge them
- use higher order thinking skills
- materials that have less emphasis on basic skills once mastery level has been demonstrated
- provide opportunities for student exploration based on interest

Outcomes to be covered in the next couple of years include:

- **Number** – index laws, scientific notation, significant figures (rounding), converting rates, surds and indices, simple and compound interest, depreciation, discounts, simple probability, relative frequency, theoretical probabilities, compound events.
- **Patterns and Algebra** – index laws, algebraic fractions, negative and fractional indices, solving quadratic equations, simultaneous equations, binomial products, factorising quadratic equations, solves and graphs inequalities, rearranging equations, draws and interprets parabolas, hyperbolas, cubics, exponentials and circles, standard form of a linear equation, draws, interprets and analyses graphs of physical phenomena, functions and logarithms
- **Data** – collects statistical data, analyses data, groups data, frequency and cumulative frequency tables and graphs, interquartile range and standard deviation
- **Measurement** – Pythagoras' theorem, areas and perimeter of composite figures, surface area of rectangular and triangular prisms and volume of right prisms and cylinders, cones and spheres, surface area and volume of composite solids, mixed units of time, applies trigonometric relationships, sine rule, cosine rule and area rule in problem solving, congruent and similar triangles, angle sum of interior and exterior angles for any convex polygon, construct arguments to prove geometrical results, circle theorems.

**Possible Resources** – Maths Quest 9.5.3 and 10.5.3 textbooks, Khan Academy, Maths Online, Great Courses DVDs, Life of Fred Geometry, Trigonometry, Algebra books, Open University (Introductory Mathematics), Vi Hart videos.

## SCIENCE

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We want to put an emphasis on concepts, on real problems and on its integration with other disciplines. VanTassel-Baska recommends five key emphases in the science curriculum for profoundly gifted learners:

### 1. Developing a high-level knowledge-base in physical, biological and geological science

XX is working at Stage 6 level for Physics, Chemistry and Biology. He is keen to continue working through the OTEN booklets, combined with other sources of information (Khan Academy, Great Courses DVDs, Minute Physics videos etc).

He also works on the science we do with YY. We will continue with Year 8 and 9 science, looking at:

- Classification of plants and animals
- Plant structure and function
- Human body systems
- Forces and machines
- The solar system and wider space
- Chemical reactions
- Light
- Reproduction
- Nervous and hormonal systems

### 2. Developing an understanding of scientific concepts, especially the concepts of scale, models, change, systems, reductionism and evolution

Here we want to gain an understanding of working scientifically – the history of science (biographies of famous scientists), the nature and practice of science (and look at what is bad science), the applications and uses of science and technology in today's world, current issues in science.

### 3. Engaging in investigations of real problems

The kids will get further practice in planning and conducting investigations, using fair tests and controlling variables. They will be given opportunities to communicate information and understanding using a variety of formats.

### 4. Developing the scientific habits of mind of curiosity, scepticism, and objectivity.

There will be opportunities to develop scientific thinking and problem-solving techniques (many of which overlap with maths). They will see that learning about science is a lifelong process – and they will develop the skills to think critically and assess “science” in the media.

**Possible resources** – Science Focus 2 and 3; OTEN Preliminary Physics, Chemistry and Biology, Khan Academy, internet and library resources, lapbooks, Top Documentary Films, ABC iView documentaries,

## Human Society and Its Environment (HSIE)

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### Geography:

Much of our work in geography comes from the natural learning that happens in our household all the time – discussions about news and current affairs, trips to different parts of Australia and overseas, visits to museums and learning centres. However, there are a few topics which we shall endeavour to ensure are covered:

- World Heritage sites
- Geographical processes (atmospheric, biotic, geomorphic, hydrologic)
- Indigenous interactions with the environment
- Environmental influence on a community
- Globalisation and the role of technology
- Global inequalities
- Project on global geographic issues
- Access to geographical technology (digital maps, email, internet skills) and fieldwork (compasses, clinometers, weather instruments)
- Practice and exposure to graphs, statistics, data collection methods.

**Possible resources** – field trips, ABC iView documentaries, Top Documentary Films, paper maps (topographical, tourist etc), Google Maps and Google Earth, Discovering Democracy Website, Assessment Resource Centre (ARC) website, Curriculum Support website, Mapping the World by Heart, Scootle

### History

The children have an enjoyment of history and learning about past societies. We want them to continue to develop their understanding of the role of history and give them the skills to undertake historical inquiry and communicate their understanding.

Topics that might be covered include:

- Assessing sources of data for reliability and validity
- Understanding differing perspectives of history
- Projects on ancient, medieval and early modern societies from both European and non-European perspectives (possibly Greece and the Vikings)
- Understanding of the impact of colonization and its impact on Aboriginal peoples
- Develop research and essay skills by studying a modern world history event/group/person

**Possible Resources** – ARC Website, Curriculum Support Website, ABC iView documentaries, Top Documentary Films, Great Courses DVDs, Scootle

## Creative Arts

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### Drama:

Unfortunately, the drama group for the children's age group was cancelled, not leaving a lot of opportunity for drama, however they will continue to:

- make drama to explore imagined and created situations
- perform from scripted drama
- attend live theatrical events to appreciate the meaning and function of drama

### Music:

While YY enjoys her piano lessons and develops a lot of skills in performing and composing music, XX's difficulty with motor skills make his less enthusiastic than his sister. Nevertheless, he enjoys listening to a wide range of music, particularly instrumental music.

We will also endeavour to:

- communicate our ideas about music
- listen to a range of composers, styles, instruments, as well as a range of music that reflects the diversity of Australian culture.
- develop an understanding of the concepts of music (beat, metre, tempo, rhythm, pitch, melody, harmony, dynamics, expressive techniques, tone colour, texture, structure)

### Dance

Our aim for dance will appreciate dance as an artform through a combination of:

- exercises/performance
- composition
- appreciation – via TV/DVD and live performance

We would like the children to appreciate dance as it relates to lifelong learning.

### Visual Art

We wish the children to develop and enjoy practical skills and conceptual ideas in the visual arts and to come to value the different beliefs of artists to express meaning and significance. To this end, they will be involved in:

- making artworks that convey a range of ideas using a range of different materials and techniques
- to develop skills in interpreting artworks by understanding different viewpoints and attempting to construct meaning
- experience art by different artists, in different times in history, using different artistic styles

## Physical Development, Health and Physical Education

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Our goal for XX and YY in PDHPE is to emphasize lifelong health and physical activity and provide avenues for them to explore aspects of sport if they show interest and promise. Generally much of the curriculum is covered by healthy living, family discussions, meal planning and preparation, physical activities for the whole family.

In the home education environment especially, issues such as self esteem, relationships, conflicts and communication all form part of our everyday life and adolescence are dealt with on a "as-needs" basis, sensitively and appropriately. There is also cross-over with science (reproduction, disease, healthy eating).

XX still experiences difficulty with many gross-motor skills and so our goals for him are to ensure that he has the skills he will need to participate in healthy physical activity and safety. YY does not suffer the same difficulties and so is able to more actively participate in physical activity.

We will continue to focus on:

- opportunities for family physical activity (hiking, walking, running, kayaking, bike riding)
- aquatics skills and safety (weekly practice sessions in warmer months)
- opportunities for practical ball games (handball, catching/throwing, juggling)
- discussions about safety (road safety, drinking, drugs)
- first aid procedures
- awareness of media messages
- stress and time management

## Technology

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Our aim in Mandatory Technology is to expose the children to the range of technology available and to encourage their design and problem solving skills.

Some ideas for future projects include:

- model construction/building design and construction (veggie patch, chook shed, models)
- helping with interior design and layout/styling
- Assisting with the landscape design of the garden
- multi-media design and experiment (video/digital photos/signage)
- study of information systems and programming; simple games designs
- website construction; blogging, powerpoint for presentations
- craft projects such as bags, hats, masks, belts
- assisting with food menus, cooking, planning and preparing shared meals
- jewellery making

## Living Skills/Social Activities

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- Menu planning
- Shopping
- Budgeting
- Banking (real life and online)
- Paying bills
- Laundry (washing, sorting, ironing)
- Cleaning (vacuuming, dusting, mopping, bathrooms)
- Gardening
- Visiting friends/having friends visit
- Planning for social gatherings (invitations, menus, activities)
- Homeschool group meetups
- Library visits
- Chess club