



September 2020

Newsletter

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Upcoming Events

Early Career Teachers Conference

Monday 28 September 2020

Program Available. See page 5.

STEM Conference

Friday 27 November 2020

Call for Workshops now open. See page 6.

Member Resources

Available online in the Member Resources area:

https://www.sasta.asn.au/members_area/member_resources

SASTA Journal

Citizen Science -
Edition 1, 2020

Teaching Science Journal

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Newsletter copy deadlines 2020

(Advertising deadlines one week earlier)

Edition	Deadline
November	9 October

Advertising

Advertising rates & booking form available online at www.sasta.asn.au

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Adhering to the following guidelines would be appreciated:

- Save as a Microsoft Word document
- Tables to be set up as text with one tab between columns and a return at the end of each row.
- For spelling please use the Macquarie Dictionary and where several alternatives are listed, use the first. The exception to this is when you are citing, referencing or quoting directly from a source which uses alternative spelling.
- Photographs should be high quality untouched digital photographs.

From the President



Australian Curriculum Review

Last month I was pleased to attend a Zoom meeting, on behalf of SASTA, to hear a summary of the process being used in the current Australian Curriculum

Review. The session, coordinated by EducatorsSA and led by ACARA CEO, David de Carvalho and Janet Davy, Director of Curriculum, was attended by over 80 people from various professional teacher associations.

Starting point: David said that extensive research by ACARA had shown that the Australian Curriculum is consistent with some of the best curricula internationally and is well-regarded by teachers across the country; but that it needs refining, updating and 'decluttering' to better support teachers. He said that ACARA welcomes the opportunity to ensure the national curriculum continues to meet the needs of students and teachers across the country, now and into the future.

Goal: The review will look to declutter the curriculum by improving the relationship of both the general capabilities and the cross-curriculum priorities to the content of the learning areas.

Extent of review: The focus of the review will be on content refinement within the existing structure and dimensions of the Australian Curriculum. The eight learning areas, seven general capabilities and three cross-curriculum priorities remain, as do the structural elements of content descriptions, achievement standards and content elaborations.

Summary: In short, ACARA will:

- refine and reduce the amount of content across all eight learning areas
- improve the quality of content descriptions and achievement standards
- ensure content elaborations are fit for purpose
- improve the digital presentation of the Australian Curriculum.

Consultation: David assured us that the review will involve extensive consultation with the profession

and engagement with key stakeholders; content changes will be made by subject matter experts and those with expertise in early years, primary and secondary education including teachers, school leaders, curriculum officers and academics.

The formal mechanism for consultation and feedback throughout the review process is through two new types of reference groups, established for each of the eight learning areas and for Primary (F-6).

a. **A teacher reference group**, made up of practising primary and secondary teachers nominated by state/territory education authorities and the non-government sectors, to provide practitioner feedback on content changes.

b. **A curriculum reference group**, made up of learning area curriculum officers/specialists from state/territory education authorities and the non-government sectors, to provide jurisdictional advice and feedback throughout the review process.

The **primary (F-6) teacher reference group** is made up of practising teachers with early years, primary and multi-age class experience nominated by state/territory education authorities and the non-government sectors. Their task is to review F-6 curriculum content for manageability, consistency and clarity across the learning areas. In addition, a **primary (F-6) curriculum reference group**, made up of primary curriculum officers/specialists from state/territory education authorities and the non-government sectors, will provide jurisdictional advice and feedback throughout the review process.

Janet assured us that subject matter teacher professional associations, teacher unions, academics, principal and parent groups and other key stakeholder groups will be extensively engaged and consulted throughout the review process in a range of ways appropriate to each learning area.

An example of this is the Australian Science Teachers Association (ASTA) Curriculum Review Working Group, recently formed by ASTA and including South Australian educator, Marianne Nicholas, as Convenor of the F-6 group, which has representatives from other Science Teacher Associations around Australia.

The initial feedback provided by this group to ACARA was fairly general. All states had similar comments; the elaborations had become more of a checklist for teachers rather than examples of content delivery and the work samples needed updating to be better aligned to the achievement standards and a clearer demonstration of the General Capabilities. There was general agreement that some teachers did not understand the integrated nature of the curriculum.

Significant dates from the ACARA timeline include:

From July 2020

Teacher and curriculum specialist reference groups established. Review in progress across all learning areas

End April – June 2021

10-week public comment window to seek feedback on proposed content changes to F–10 Australian Curriculum in English, Science, Humanities and Social Sciences, The Arts, Health and Physical Education, and Languages (Chinese, Japanese, Italian, French). (Maths and Technologies feedback January to March).

September 2021

Recommended revisions to F–10 Australian Curriculum in all other learning areas ready for endorsement by Education Council.

September – December 2021

Refresh existing work samples and other resources to align with revised curriculum. Prepare teacher and parent communication materials. Complete review by the end of 2021.

Start 2022

Revised Foundation to Year 10 Australian Curriculum will be released on a redesigned Australian Curriculum website by the start of 2022.

How to get involved:

Email specific questions to:
engagement@acara.edu.au

For more information check the website: <https://www.acara.edu.au/curriculum/curriculum-review/>

Keep updated! Subscribe to the monthly ACARA Update newsletter on the website.

Jane Wright



Virtual Open Day

Sadly we weren't able to hold our Open Day this year but we're excited to bring you a 'Virtual Open Day' instead!

The Oliphant Science Awards website includes lists of prize-winning and highly commended entries for each category along with photos, videos and reports for each entry.

This is such a great opportunity to celebrate the enormous effort students put into their projects and provide inspiration for future entries!

Congratulations to this year's winners!

Visit the website to view the Virtual Open Day

<https://bit.ly/OSAVirtualOpenDay>

Keep an eye out on the OSA website and Facebook page for a new Oliphant Science Awards video too!

Presentation Ceremony

All winners will be notified through their coordinators and invited to the presentation ceremony to be held Friday 13 November*.

** Please note: students whose projects were awarded either a Highly Commended (R-6) or an Encouragement Award (7-12) do not attend the Presentation Ceremony.*



Program Available

The Early Career Teachers Conference is aimed at teachers in their first five years of teaching science/STEM or those who are new to a specialist science or STEM role. However, you don't have to be an early career teacher; **all teachers** will find new ideas and approaches to engage and motivate them in the varied conference program.

Teachers will be able to select to attend 5 different **hands-on workshops** delivered by inspiring and expert teachers across the day. They will receive exclusive access to a **suite of resources**. There will also be the opportunity to **network with colleagues** over morning tea and lunch (supplied) and chat with the presenters at the concluding **happy hour**, while social distancing, of course!

The program includes specialised hands-on workshops for both primary and secondary teachers.

A sample of the sessions include:

Primary Years: Keeping it Hot - Anthea Ponte, Hawthorndene Primay School

This workshop will give participants the opportunity to engage in a STEM challenge designed to highlight the growing issue of disposable coffee cup waste. The challenge involves designing and making a portable coffee cup that can be used instead of disposable cups. Students investigate the concept of heat transfer and the properties of materials through their application to this real world issue. Templates and rubrics that support this STEM challenge will be available for participants in digital format. Curriculum links will be identified and available for participants.

Secondary: Promoting interest and unpacking science as a human endeavour (SHE) - Joanna Princi, Blackwood High School

How can one material extracted from seaweed be used in an increasing number of areas, such as in ice cream, cosmetics, shower bombs, fabric dyes, wound dressings and drug delivery systems? How can we use real-world contexts to help students link concepts and see that building on a connected body of knowledge, collaboration and creativity can lead to countless new opportunities and discoveries? In this workshop, participants will explore various strategies that can be used to help unpack SHE key concepts in middle school and SACE. I will share the hooks I have used to spark student interest, as well as task sheets, enabling prompts and other resources I have developed and delivered to students in middle school and students studying SACE.

All Years: Inspiring a passion for STEM through the power of film - Jennifer Chalmers, The Royal Institution of Australia

SCINEMA is the largest science film festival in the Southern Hemisphere and the largest single event of National Science Week. In 2019, 1388 screenings were held to an overall audience of more than 100,000. In this workshop, you will learn effective ways to engage students in STEM using SCINEMA films and educational resources which are all mapped to the Australian National Curriculum. The use of these films in classrooms will raise awareness of STEM careers and disciplines and the impact of scientific understanding on society, which is proven to increase motivation for STEM learning.

To register online and view the full program visit:
www.sasta.asn.au/professional_learning



Call for workshops

How does STEM help us battle threats to our world?

Many of the problems we face in our world today will not be solved by today's adults, but by the students in our classrooms. Whether it is inventing a better way to distribute clean water, repopulate endangered species, or travelling and colonising Mars; our students will be the ones leading the way.

The 2020 STEM conference will bring together classroom teachers, leaders in education and businesses who are interested in sharing and exploring teaching methods, tools, resources, and related activities for implementing STEM education into our schools and communities.

The workshop presentations aim to cover a range of the content and pedagogies of the Australian Curriculum: Mathematics, Science, Design & Technology, and ICT.

You may wish to consider choosing from the categories below when determining the focus of your presentation:

Literacy and Science/Maths

- integrating science/maths with literacy to enhance learning in both areas
- identifying a range of strategies designed to deliberately incorporate literacy learning opportunities into science/maths contexts.

Unpacking the curriculum

- highlighting the essential components of the science/maths curriculum e.g. SHE, General Capabilities, to allow teachers to develop effective and engaging lessons and teaching programs

- best practice teaching of specific science or maths concepts
- STEM education

Inquiry-based learning

- developing creative strategies to integrate inquiry and critical and creative thinking into the teaching of science and maths
- building student capacity to construct their own learning.

Looking for ideas of topics that link directly to the theme of the conference? Here are some that might get you started!

- Bushfires - science research, threat reductions, Indigenous input
- Allocation of resources and sustainability
- Water Security
- Threats to Biodiversity
- The psychology of pandemics and effect on health
- Use of data and modelling - Pandemic data and analysis
- Surviving financially
- Assessing fake news e.g. Is 5G dangerous?
- Industry retooling and refocusing efforts during Covid19.
- PIRSA maths and the value of fruit fly problems and controls

Workshop proposals must be submitted before 25 September.

For more information, go to
www.sasta.asn.au/professional_learning

National Science Week

Find out what happened in schools around the state for National Science Week in 2020 in our latest blog series.

2020 Science Week @ Woodville High School

This year's theme was an opportunity to expose the students to the damage we are inflicting on the environment through poor management and bad decisions. With thanks to the Science Team, we were able to host a number of activities and events that were not only engaging and relevant, they were educational and showcased the global, collaborative nature of science.

Robotic Engineering at Pulteney Grammar School

Year 10 students at Pulteney Grammar School were given the opportunity to undertake some Robotic Engineering classes. The platform for experimentation was the Lego Minstorm EV3 kits as these are easy to use, construct and program, which gave more time for the engineering design process.

Northfield Primary School Science Expo 2020

Entering our 4th year of Science Expo we had to be creative and spent 2 weeks sharing science inquiry questions. Our year 6/7 students were assigned a class and they became the teachers for a lesson. They created a presentation including information, an experiment and a STEM activity for the class to complete.

Cabra Dominican College's National Science Week

At Cabra Dominican College, we began the week with a staff morning tea with ocean themed cupcakes, and periodic table biscuits spelling out our school motto, Cabra Veritas! All science staff also received a hand-made, ocean themed beeswax wrap to use instead of plastic. Science is linked with all subject areas and this was highlighted in a poster display.

Always Question, Always Wonder: Science Week 2020

Gleeson College embraced the theme, 'Deep Blue: innovations for the future of our oceans' by hosting several exciting events. Our aim was to foster a passion for this meaningful topic by engaging students through external presentations and activities led by our experienced science teachers.

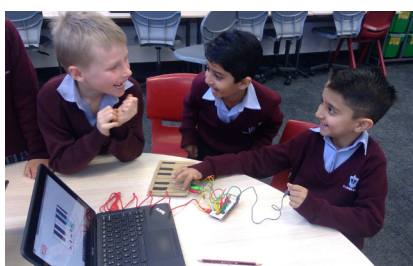
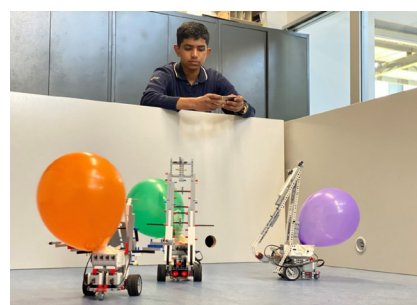
Mount Gambier High School - National Science Week

This year's theme provided students with an opportunity to celebrate the pivotal part oceans play in life on the planet, to consider how we can help the ocean now more than ever and what some of the specialised professions are that work to protect and maintain our oceans.

Science Week at St Martin's

At St Martin's students were involved in a whole variety of lessons and experiments for Science Week. Each year level had a different theme.

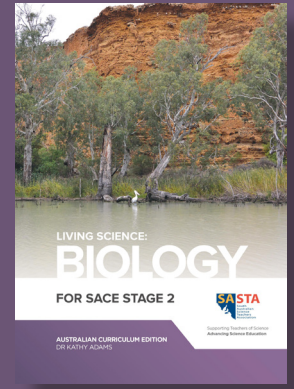
View the full articles in our National Science Week blog series online: www.sasta.asn.au/blog/2020/09



RESEARCH PROJECT WORKBOOK & GUIDE FOR SACE STAGE 2

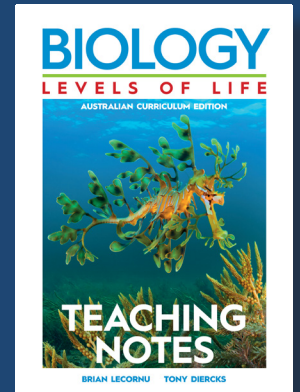
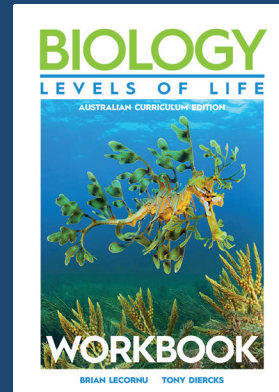
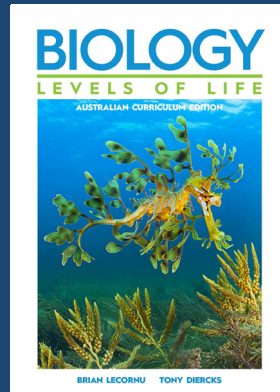
Textbooks

Living Science: Biology



Biology: Levels of Life

SACE Stage 2



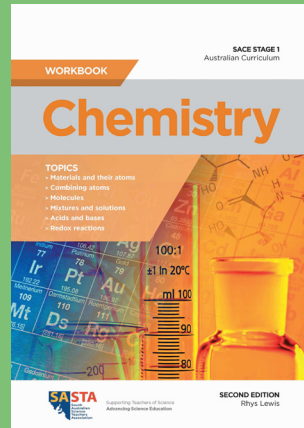
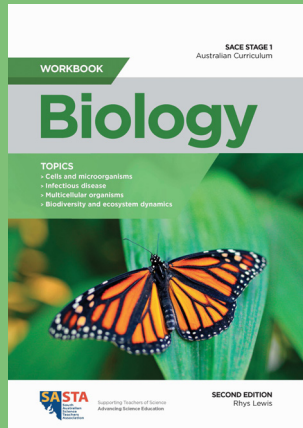
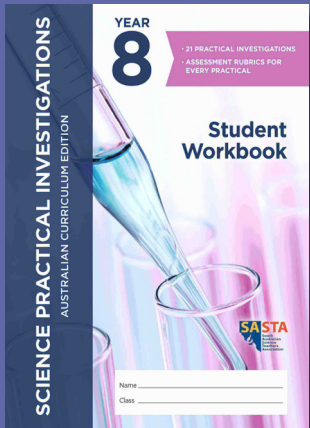
RESEARCH PROJECT WORKBOOK & GUIDE



Year 8 & 9

Student workbooks

SACE Stage 1



SACE Stage 2

