

AF15/501 FM

14th April 2016

TO: CR MEZINEC
CR LOVETT
CR RICHARDSON
CR JULIE REIS (DISTRICT COUNCIL OF GRANT)
DAVID MEZINEC
SARAH PELLE
ALEXANDRA NICHOLSON
CHIEF EXECUTIVE OFFICER
MANAGER COMMUNITY SERVICES AND DEVELOPMENT
LIBRARY MANAGER
COMMUNITY DEVELOPMENT OFFICER

COPY: MAYOR
MEMBERS
TEAM LEADER EXECUTIVE SUPPORT

NOTICE is given that the Mount Gambier Lifelong Learning Sub-Committee will meet in the following Meeting Room on the day, date and time as follows:

LIFELONG LEARNING SUB-COMMITTEE
(Committee Room - Level 4)

Friday, 15th April, 2016 at 1.00 p.m.

An agenda for the meeting is attached.

Members of the Sub-Committee, please note the date/time of the above meeting.

Other Members not on the Sub-Committee are encouraged to attend the above meeting as your thoughts and contributions will be appreciated.

Lunch will be provided at this meeting.



Barbara CERNOVSKIS
MANAGER - COMMUNITY SERVICES AND DEVELOPMENT

LIFELONG LEARNING SUB-COMMITTEE

Meeting to be held in the Committee Room, Level Four of Civic Centre, 10 Watson Terrace,
Mount Gambier, on Friday 15th July, 2016 at 1.00 p.m.

AGENDA

PRESENT: Cr Meziniec (Presiding Member)
Cr Lovett
Cr Richardson
David Meziniec
Sarah Pellen
Alexandra Nicholson

APOLOGIES: Cr Julie Reis (District Council of Grant)

COUNCIL OFFICERS: Manager Community Services & Development, Barbara Cernovskis
Library Manager, Vicki Hutchinson
Community Development Officer, Alison Brash

COUNCIL OFFICER
APOLOGIES: Chief Executive Officer, Mark McShane

NOT IN ATTENDANCE:

COUNCIL MEMBERS
AS OBSERVERS:

OTHER EMPLOYEES IN
ATTENDANCE:

OTHERS IN
ATTENDANCE:

WE ACKNOWLEDGE THE BOANDIK PEOPLES AS THE TRADITIONAL CUSTODIANS OF THE LAND WHERE WE MEET TODAY. WE RESPECT THEIR SPIRITUAL RELATIONSHIP WITH THE LAND AND RECOGNISE THE DEEP FEELINGS OF ATTACHMENT OUR INDIGENOUS PEOPLES HAVE WITH THIS LAND.

MINUTES: moved that the minutes of the Mount Gambier Lifelong Learning Sub-Committee held on 20th May, 2016 be received.

seconded

1. KEY FOCUS AREA – Wellbeing and Resilience

Goal: Building Communities
Strategic Objective: Encourage the empowerment of the community to lead and self manage their respective desires and aspirations.

Goal: Community Well-Being
Strategic Objective: Increase the local awareness and understanding of the range of health issues and needs of the community.

The Manager Community Services and Development reported:

Lifelong Learning Sub-Committee Agenda, Friday, 15th July, 2016 cont'd...

- (a) The proposal for the Limestone Coast Region of Wellbeing platform has been finalised with the Wellbeing & Resilience Centre at South Australian Health and Medical Research Institute and submitted to the Department of Premier and Cabinet;
- (b) The proposal will be presented for consideration in the 2016/17 budget as a regional prototype;
- (c) A meeting with the Regional Leadership group and the Director Wellbeing & Resilience, Gabrielle Kelly is currently being negotiated to discuss next steps;
- (d) An updated Regional Wellbeing & Resilience work plan has been attached (attachment 1) for discussion at the meeting.

moved it be recommended:

- (a) The progress report on the Regional Wellbeing & Resilience Collaboration provided by the Manager Community Services & Development be received.

seconded

2. KEY FOCUS AREA – Wellbeing and Resilience

Goal: Building Communities

Strategic Objective: Encourage the empowerment of the community to lead and self manage their respective desires and aspirations.

Goal: Community Well-Being

Strategic Objective: Increase the local awareness and understanding of the range of health issues and needs of the community.

The Manager Community Services and Development reported:

- (a) Training schedule for the implementation of the Wellbeing Workforce/Positive Organisation project is being finalised. Start date for the surveys and program to commence has been amended to August 2016 to allow for final approval from the Ethics board;
- (b) An updated Wellbeing Workforce/Positive Organisation project work plan has been attached (attachment 1) for discussion at the meeting

moved it be recommended:

- (a) The progress report on a Wellbeing Workforce/Positive Organisation project provided by the Manager Community Services & Development report be received;

seconded

3. KEY FOCUS AREA – South East Strategy and Action Plan 2015 – 2018

Goal: Building Communities

Strategic Objective: Encourage the empowerment of the community to lead and self manage their respective desires and aspirations.

Goal: Community Well-Being

Lifelong Learning Sub-Committee Agenda, Friday, 15th July, 2016 cont'd...

Strategic Objective: Increase the local awareness and understanding of the range of health issues and needs of the community.

The Manager Community Services and Development tabled:

- (a) The STEM South East Strategy and Action Plan 2015 – 2018 (attachment 2) for discussion.

moved it be recommended:

- (a) as determined at the meeting.

seconded

MOTIONS WITH NOTICE - Nil

MOTIONS WITHOUT NOTICE

The meeting closed at _____ p.m.

BJC/MJT

LIFELONG LEARNING SUB-COMMITTEE

Minutes of Meeting held in the Committee Room, Level Four of Civic Centre, 10 Watson Terrace,
Mount Gambier on 20th May, 2016 at 1.00 p.m.

PRESENT: Cr Meziniec (Presiding Member)
Cr Lovett
Cr Richardson (arrived 1.20 p.m.)
David Meziniec
Sarah Pellen
Alexandra Nicholson

APOLOGIES: Cr Julie Reis (District Council of Grant)

COUNCIL OFFICERS: Chief Executive Officer, Mark McShane
Manager Community Services & Development, Barbara Cernovskis
Library Manager, Vicki Hutchinson
Community Development Officer, Alison Brash
Manager Governance and Property, Michael McCarthy
Administration Officer, Belinda Cahill

NOT IN ATTENDANCE: Nil

COUNCIL MEMBERS
AS OBSERVERS: Nil

OTHER EMPLOYEES IN
ATTENDANCE: Nil

OTHERS IN
ATTENDANCE: Nil

WE ACKNOWLEDGE THE BOANDIK PEOPLES AS THE TRADITIONAL CUSTODIANS OF THE LAND WHERE WE MEET TODAY. WE RESPECT THEIR SPIRITUAL RELATIONSHIP WITH THE LAND AND RECOGNISE THE DEEP FEELINGS OF ATTACHMENT OUR INDIGENOUS PEOPLES HAVE WITH THIS LAND.

MINUTES: Sarah Pellen moved that the minutes of the Mount Gambier Lifelong Learning Sub-Committee held on 18th March, 2016 be received.

Cr Lovett seconded

Carried

1. KEY FOCUS AREA – Wellbeing and Resilience

Goal: Building Communities
Strategic Objective: Encourage the empowerment of the community to lead and self manage their respective desires and aspirations.

Goal: Community Well-Being
Strategic Objective: Increase the local awareness and understanding of the range of health issues and needs of the community.

Lifelong Learning Sub-Committee Minutes, 20th May, 2016 cont'd...

The Manager Community Services and Development reported:

- (a) The proposal for the Limestone Coast Region of Wellbeing platform has been finalised with the Wellbeing & Resilience Centre at South Australian Health and Medical Research Institute and submitted to the Department of Premier and Cabinet (attachment 1)
- (b) A meeting with the Regional Leadership group and the Director Wellbeing & Resilience, Gabrielle Kelly be held to discuss next steps.
- (c) An updated Regional Wellbeing & Resilience work plan has been attached (attachment 3) for discussion at the meeting.

Cr Meziniec moved it be recommended:

- (a) The progress report on the Regional Wellbeing & Resilience Collaboration provided by the Manager Community Services & Development be received.**

Alexandra Nicholson seconded

Carried

2. KEY FOCUS AREA – Wellbeing and Resilience

Goal: Building Communities

Strategic Objective: Encourage the empowerment of the community to lead and self manage their respective desires and aspirations.

Goal: Community Well-Being

Strategic Objective: Increase the local awareness and understanding of the range of health issues and needs of the community.

The Manager Community Services and Development reported:

- (a) Refined Wellbeing Workforce/Positive Organisation project have been negotiated with the Wellbeing & Resilience Centre at South Australian Health and Medical Research Institute and included in the Wellbeing Workforce/Positive Organisation project work plan using the Lead, Build, Measure, Embed model.
- (b) Training schedule has been identified for the implementation of the Wellbeing Workforce/Positive Organisation project. Expect surveys to commence early July 2016 and the program in mid to late July 2016.
- (c) An updated Wellbeing Workforce/Positive Organisation project work plan has been attached (attachment 3) for discussion at the meeting

Cr Meziniec moved it be recommended:

- (a) The progress report on a Wellbeing Workforce/Positive Organisation project provided by the Manager Community Services & Development report be received;**

Sarah Pellen seconded

Carried

3. **KEY FOCUS AREA – Wellbeing and Resilience integration with STEM**

Goal: *Building Communities*

Strategic Objective: *Encourage the empowerment of the community to lead and self manage their respective desires and aspirations.*

Goal: *Community Well-Being*

Strategic Objective: *Increase the local awareness and understanding of the range of health issues and needs of the community.*

The Manager Community Services and Development reported:

- (a) To explain the integration of the Wellbeing and Resilience Program with the STEM, South East Strategy and Action Plan 2015 – 2018 (attachment 2) the following extract from the strategy is presented to provide context:
- i. The regional STEM initiative brings together science and research agencies, education providers, industry and business and community organisations at a regional level and provides a platform for a coordinated approach to advance student learning in science, technology, engineering and mathematics (STEM) and to building community awareness of STEM skills. The strategy is supported by the *Inspiring Australia Regional Science Hub* and is focused on progressing a sustainable whole of community approach to maximise the potential benefits that Science and Innovation can bring to our region.
 - ii. Our State needs a bold approach to ensure our children and young people are at the highest level of achievement and capability by Australian and world standards. Our evidence is that most of our children and young people do well in their learning but too few experience higher levels of achievement or demonstrate the capacity to be powerful in their learning. Powerful learning is not a subject to be studied but is something children and students do every day in their learning. It is not based on notions of personal power or power over others. Rather it refers to learners who have the curiosity, creativity and confidence to:
 - Actively participate in their learning.
 - Make decisions based on sound evidence.
 - Skilfully solve problems and deal proactively with new situations.
 - Communicate effectively in a variety of forms.
 - Collaborate with others.
 - iii. Powerful learners also have what Professor Carol Dweck terms a 'growth mindset' – the belief that they are capable of learning and achieving with effort. Strong numeracy and literacy development enables aspiring powerful learners to achieve these qualities.
- (b) It is important to understand that STEM is about developing resilience and perseverance skills in both our students and our educators to enable them to be creative and innovative thinkers.
- (c) The PERMA+ model taught in the Wellbeing & Resilience training becomes the critical integration point that dovetails with the STEM, South East Strategy and Action Plan 2015 – 2018 and supports Councils strategic focus - that learning in all its forms is a lifelong activity and is a core source of individual, social and community strength.

Cr Mezinec moved it be recommended:

Lifelong Learning Sub-Committee Minutes, 20th May, 2016 cont'd...

- (a) the report on the integration of the Wellbeing and Resilience Program with the STEM, South East Strategy and Action Plan 2015 – 2018 provided by the Manager Community Services & Development report be received;
- (b) the implementation of the STEM, South East Strategy and Action Plan 2015 - 2018 remain a Key Focus area for the Lifelong Learning Sub-Committee.

Alexandra Nicholson seconded

Carried

MOTIONS WITH NOTICE - Nil

MOTIONS WITHOUT NOTICE - Nil

The meeting closed at 1.59 p.m.

MJT

CONFIRMED THIS DAY OF 2016.

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PRESIDING MEMBER

Lifelong Learning Wellbeing & Resilience Work Plan

Collaborative Limestone Coast Regional Wellbeing & Resilience model

Task	Action	Progress Notes
Wellbeing & Resilience Forum	Host at City Hall <ul style="list-style-type: none"> • 4th September 2015 • 21st January 2016 	4 th September 2015 – complete 21 st January 2016 – complete
Collaborative Limestone Coast Regional Wellbeing & Resilience Prototype for SA	Develop a proposal by early February and provide with a letter to the Premier seeking SA Government support The Premier's department will then work across government to seek support and funding (likely from multiple sources) This is a priority project for the Premier Develop the proposal with SAHMRI Propose a number of scalable options and costs Proposal to include: co-sponsors, what our coalition building process has been and mode of delivery A strong proposal needs to be regional and multi-organisational It is advisable to be prompt rather than 'perfect' with a proposal to ensure it is with the Premiers department by early February 2016	Ann Aldersey has been engaged to assist with the development of the submission SAHMRI will be the project lead for the Limestone Coast Region of Wellbeing Project and LCLGA is the lead Regional Partner Letters of support from all collaborators have been forwarded to LCLGA Joint LCLGA & WRC SAHMRI letter submitted to Department of Premier and Cabinet (copy attached) Draft Proposal submitted to WRC SAHMRI for costs to be developed Proposal submitted to Department of Premier & Cabinet
SAHMRI Techworks Wellbeing & Resilience Training	Deliver in Mount Gambier Mayoral Reception be held for Brigadier General (Ret) Rhonda Cornum on Wednesday, 17 th February 2016 Invitations be extended to District Council of Grant Elected Members	Secured 15-19 February 2016 Confirmed Brigadier General (Ret) Rhonda Cornum 15-19 February 2016 in the Limestone Coast Completed

Scope a Wellbeing Workforce/Positive Organisation project to lead, measure, build and embed wellbeing and resilience inside the City of Mount Gambier workforce as a significant commitment to building a region of wellbeing inside the State of Wellbeing.

Task	Action	Progress Notes
Staff Training	Manager Community Services & Development and Library Manager undertake training Manager Regulatory Services and Planning Officer training undertaken	Completed in November 2015 Completed February 2016
Lifelong Learning sub committee awareness training	City of Mount Gambier Regional Health Plan	Completed
Elected Member awareness training	Workshop to be held January/February 2016 Invitation be extended to District Council of Grant Elected Members	Scheduled for 24 th February 2016
Develop Wellbeing Workforce/Positive Organisation project	Ensure gender balance with internal Techworks trained staff to achieve sustainable program delivery Liaise with SAHMRI to: <ul style="list-style-type: none"> • identify baseline data • identify measures • identify costs Develop lead, measure, build and embed program for Wellbeing & Resilience	Additional training completed Refined workplace project with WRC SAHMRI using Lead, Measure, Build, Embed model to include the following: Lead Project plan, communications strategy and plan to ensure project successfully launched; documents owned and monitored by the council Review and input to KPIs, governance structure and finalising program methodology SAHMRI staff time for up to 3 visits to Mount Gambier over

		<p>the program Project Lead and Research team time in managing SAHMRI deliverables on time and budget across the below phases</p> <p>Measure Three survey rounds in (baseline and repeat in year 1) and an additional round in year 2 includes: Finalisation of survey questions and individual report scripts Pilot test of survey Deployment of online survey via unique survey links to all staff Third party data management and hosting, ensuring confidentiality of data Helpdesk support for online survey users and response tracking Data integrity check/cleansing Delivery of individual reports/ PERMA scores and commentary Aggregate reporting to City of Mount Gambier Submission of ethics application for data collection for research purposes Evaluation: Including running focus groups/interviews with staff to add qualitative findings in addition to the quantitative survey measurement results.</p> <p>Build Review and provide input/guidance for training roll out strategy which will be led by City of Mount Gambier.</p> <p>Embed Review and provide input/guidance for how to Embed new knowledge into business as usual.</p>
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	Develop the training schedule Implement the program	Brief the Human Resources Manager Plan to implement training from August - November
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SOUTH EAST STEM STRATEGY CONSULTATIVE GROUP

ORGANISATION	CONTACT PERSON	POSITION	ROLE & SUPPORT	LINKS TO ORGANISATION PRIORITIES
Department for Education and Child Development	Adam Box	Education Director	<ul style="list-style-type: none"> Working with Business Partnership Manager to drive and lead vision for region Linking work to ECD partnership priorities Working with partnership results plus executive to link strategies 	DECD clearly articulate that through Building a High Performing System that we must Build a High Quality Workforce. Extensive research including recent overseas travel demonstrates that teaching quality and leadership capability are the greatest determinants in improving student engagement, achievement and wellbeing.
Department for Education and Child Development	Emma Handford	Business Partnership Manager	<ul style="list-style-type: none"> Development of concept Bringing together key stakeholders Supporting schools to develop strategic partnerships with industry to allow students access to real world applications, problem based and inquiry based learning focused on STEM Aligning DECD, local, state and national priorities 	<p>A key priority of the DECD Strategic Plan 2014 – 2017 is Higher Standards of Learning Achievement with a vision of having a strong public education system, characterised by high achievement, growth, challenge, engagement and equity. Key actions include:</p> <ul style="list-style-type: none"> Implementation of effective programs to develop student’s capabilities and support pathways planning for young peoples’ successful transition from school to further education, training and/or employment Developing and implementing a teaching quality strategy and a school leadership development strategy
UniSA Connect	Deb Turly	Manager UniSA Connect Programs	<ul style="list-style-type: none"> Strengthening of programs and commencement of work in STEM with UniSA programs for secondary school students 	UniSA Connect focuses on inspiring science, technology, engineering and mathematics (STEM) study and career awareness with secondary school students. The suite of UniSA Connect experiential programs aims to promote further
Mount Gambier City Council	Barbara Cernovskis	Manager Community Services and Development	<ul style="list-style-type: none"> Building local capacity Brokerage of venues for events Supporting and hosting a STEM community event Development of “makers” space in library 	The City of Mount Gambier continues to adopt Learning as a key theme and strategy and in the review of the Councils current Strategic Plan, Learning remains one of our key strategic goals beyond 2015. Our fundamental focus is that learning in all its forms is a lifelong activity and is a core source of individual, social and community strength
Primary Industries and Regions SA	Peta Crewe	Regional Coordinator Limestone Coast, Regions SA	<ul style="list-style-type: none"> Connection with industry as future employers of students (in regional areas) with STEM skills 	<p>To assist primary industries and regions to grow, innovate and maximise their economic growth potential.</p> <p>Students, schools and their communities are taking an active, responsible and effective role in sustainable natural resource management, and more widely as responsible global citizens.</p>
Natural Resources South East	Natasha Dawson	Environmental Education Officer	<ul style="list-style-type: none"> Connection with science and research agencies with STEM skills and careers Professional Development for teachers Delivery of STEM education opportunities for schools 	Students, schools and their communities are taking an active, responsible and effective role in sustainable natural resource
	Vanessa Freebairn	Environmental Education Office		
Naracoorte and Lucindale Council	Sally Klose		<ul style="list-style-type: none"> Building local capacity Supporting and hosting a STEM community event Links to Science at the Naracoorte Caves 	To increase community participation with the science going on at the caves and expand beyond this to show people the full range of scientific endeavours in the region and its relevance to their daily lives

BACKGROUND

Science, Technology, Engineering and Mathematics disciplines are fundamental to shaping the future of Australia. They provide enabling skills and knowledge that increasingly underpin many professions and trades and the skills of a technologically based workforce. It has been estimated that at least 75% of the fastest growing occupations will require STEM based skills and knowledge in the future (AI Group).

EDUCATIONAL RATIONALE

STEM is a priority for South Australian, National and Global education. STEM touches every aspect of our lives, from our smartphones to the technologies that enable us to explore the world around us. It also drives innovation and our fast changing global economy. **STEM skills** are essential in creating and turning new ideas and inventions into lucrative, internationally competitive Australian products, services and exports. **STEM studies** also develop generic skills such as **problem solving, critical thinking and creativity** which are used in a wide range of occupations and every day actions.

A **coordinated STEM Education** approach is essential for our community to continue to develop and thrive. The aligned effort will ensure our young people are prepared for living in a STEM world and are able to maximise the opportunities to thrive and be successful in a knowledge based economy. STEM Education also plays a significant role in increasing awareness and knowledge of how STEM skills are applied and work in real life settings at the community, parent, school leader and teacher levels and builds community knowledge of future life and employment opportunities locally. Furthermore, The Australian Industry Group "*Progressing STEM Skills in Australia*" March 2015 report states that STEM needs to be a continued focus in the schooling sector for the following reasons:

- A range of strategies are required to raise the participation of school students and industry in STEM related programs and activities
- The expansion of school based STEM activity needs to occur in a co-ordinated manner in conjunction with increased industry participation
- Schools need to be provided with co-ordinated assistance to enable STEM elements to be taught in an integrated manner utilising practical teaching pedagogies and programs.
- There needs to be an extension of support in relation to the recruitment, pre-service training and in-service professional development to raise the qualifications of the STEM teaching profession to enable them to more effectively deliver STEM curriculum and programs

DRIVING FACTORS FOR DEVELOPMENT OF A REGIONAL STEM STRATEGY

- STEM skills are essential for the future economic and social well being for our community
- Participation in STEM skills at secondary school and university are unacceptably low
- Industry needs to become engaged in the promotion of STEM skills at all levels of education and training
- Teachers need to be supported to prepare students for living in a STEM world
- Current school and industry STEM initiatives are characterised by un-coordinated and non systematic activity
- There is a need to develop more engaging school curriculum and pedagogy to attract students to STEM.

SOUTH EAST STEM STRATEGY AND ACTION PLAN

The regional STEM initiative brings together science and research agencies, education providers, industry and business and community organisations at a regional level and provides a platform for a coordinated approach to advance student learning in science, technology, engineering and mathematics (STEM) and to building community awareness of STEM skills. The strategy is supported by the *Inspiring Australia Regional Science Hub* and is focused on progressing a sustainable whole of community approach to maximise the potential benefits that Science and Innovation can bring to our region. Underpinning considerations when developing this strategy include:

- Strengthening education industry STEM partnerships. The priority is to provide inquiry based learning opportunities and the development of problem solving and higher order thinking skills through these partnerships

- Utilising the rigour of the Australian Curriculum and the Teaching for Effective Learning Framework in Science, Technology and Mathematics in an approach that reflects real life and work based contexts.
- STEM careers and pathways are considered integral components of the approach with students having opportunities to explore and increase their knowledge of future opportunities.
- Influencing practice for teachers from birth to 18 years of age. It is anticipated that this will have an engagement impact on students from Kindergarten through to Year 12 and beyond school in Science, Technology, Engineering and Mathematics (STEM). *STEM effective pedagogical practice whilst lifting student achievement and engagement is a major focus on the Blue Lake Partnership Plan (appendix 1) and Action Record (appendix 2) and the South East Coast and Vines Partnership Plan (appendix 3).*

VISION STATEMENT

Students have the skills and knowledge necessary to thrive in a STEM world through a **focused effort of teaching and learning of science, technology, engineering and mathematics (STEM)** disciplines which are **connected to real world application** and support our students to be creative, connected and powerful learners.

OBJECTIVES OF THE SOUTH EAST STEM STRATEGY AND ACTION PLAN:

- Promoting a positive image of science and mathematics and STEM
- Increasing public knowledge and awareness of science (scientific literacy, scientific method)
- Supporting increased student engagement
- Supporting increased student participation in school based mathematics and science, tertiary level STEM disciplines and the STEM workforce
- Addressing under representation of minority groups
- Establishing mechanisms for coordination across STEM organisations
- Supporting increased achievement in school based mathematics and science

OVERARCHING EDUCATIONAL OUTCOMES OF THE SOUTH EAST STEM STRATEGY AND ACTION PLAN:

- Learners with strong literacy and numeracy skills acquire, create, connect and communicate meaning in a wide variety of contexts.
- Learners develop the following competencies to be active and successful participants in an increasingly globalized and knowledge based society:
 - Critical thinking and problem solving
 - Creativity and innovation
 - Social responsibility and cultural, global and environmental awareness
 - Communication
 - Digital literacy
 - Life long learning, self direction and personal management
 - Collaboration and leadership

UNDERPINNING EDUCATIONAL PRINCIPLES DRIVING THE SOUTH EAST STEM STRATEGY AND ACTION PLAN:

- Learner centred
- Shared responsibility and accountability for results
- Engaged communities
- Inclusive, equitable access
- A responsive, flexible approach
- Sustainable and efficient use of resources

SOUTH EAST STEM STRATEGY AND ACTION PLAN KEY STRATEGIES:

Strategy 1: Nurturing Successful Learners:

Develop and implement a cross sectoral strategy for improving STEM educational outcomes for all students in early childhood, primary and secondary school settings, especially in the core areas of the Australian Curriculum: science inquiry skills: science understandings: science as a human endeavour: mathematics content and mathematics proficiency

Strategy 2: Equipping expert teachers:

Develop short and long term strategies to grow the expertise of teachers in STEM education of early childhood, primary and secondary school students including:

- Support for teachers through professional learning opportunities focused on STEM
- Development of supportive partnerships with external STEM education providers
- Provision of real world examples and experiences of science and innovation at work
- Building expert learning communities to ensure continued growth in teacher capabilities and sharing models of effective practice
- Development of curriculum resources with a focus on innovation, inquiry, creativity and problem solving

Strategy 3: Strengthening Education and Industry Partnerships:

Develop and implement strategies to strengthen partnership between schools, higher education and Industry which connect learning with real world contexts and provide opportunities for students to develop problem solving and inquiry skills. This includes:

- Stronger engagement of relevant STEM organisations in student learning
- Optimising Industry support for STEM education and dissemination of information about STEM education initiatives
- Establishing an Industry STEM Education Consultative group to generate higher levels of industry engagement in STEM education, increased collaboration between industry and education service providers in the delivery of STEM education initiatives, and create higher awareness of the range of initiatives being implemented.
- Identification of ways in which curriculum resources can be contextualised and pedagogy changed to make STEM subjects, such as mathematics and physics more relevant and attractive to a wider range of students

Strategy 4: Building Community Capacity

Building awareness of STEM disciplines and STEM related occupations among young people including:

- Awareness campaigns to enrich public understanding of career options in STEM and the nature of STEM work, and to alert young people to the range of possible future STEM lives and identities
- Strategies designed to involve families in mathematics and science learning and in building positive attitudes to STEM related careers
- Expansion of opportunities for families and the general public to engage positively with science and mathematics through events, exhibitions and other approaches
- Enrichment program whereby students are engaged in science or mathematics projects that link to members of the local community
- Enhanced career education for students, parents, teachers, career guidance officers and school leaders to enhance awareness and understanding of the importance of STEM education and the opportunities available through STEM based careers.

SOUTH EAST STEM STRATEGY AND ACTION PLAN

Inspiring Australia Regional Science Hub (National)

- Raising awareness among young people of opportunities in science & research
- Providing activities during National Science Week

Department for Education & Child Development (State)

- Results Plus Strategy
- Raising achievement
- Site improvement
- External School Review Framework

Collaboration and Leadership (Local)

Bringing together key stakeholders to focus on STEM education in our region with a multifaceted approach that supports:

- Student Learning
- Teacher Pedagogy
- Business & Industry Needs
- Government Initiatives & Policy
- Increased Public Awareness

2016 REGIONAL STEM SUMMIT

Professional Learning Communities (fostering STEM skills through strategic partnerships with industry)

Industry Partners

Developing a coordinated and systematic approach to Education Industry STEM partnerships which provide real world and current inquiry based and problem based learning opportunities for integrated with curriculum

Utilising Industry partners to support teachers and students to gain awareness and knowledge of the STEM careers and pathways available both locally and nationally.

Effective Teaching

Strengthening STEM teaching at all year levels through strategic partnerships that support class room practices including inquiry based and problem based learning opportunities

Utilising the rigour of the Australian Curriculum and the Teaching for Effective Learning Framework

Integrating effective, research based teaching strategies that use curiosity and inquiry as guiding principles

Providing teachers with the opportunity to develop their knowledge of STEM and adapt the related curriculum with the assistance of industry partners

Inspired Learners

Engaging students in real world problems which encourage them to use the skills critical for 21st century success such as teamwork, communication, creativity, innovation, problem solving and critical thinking

Exposing students to an array of STEM related jobs through interaction with STEM professionals so that students understand how science and math concepts apply in the work environment

Provision of real world learning contexts which students the application of STEM dispositions.

SOUTH EAST STEM STRATEGY IMPLEMENTATION PLAN 2015 - 2018

Focus Area	STRATEGY	ACTIONS Activities required to progress the key implementation strategies	HOW People, budget, equipment, IT, learning space.	WHO Individuals or teams responsible for implementation	WHEN Date, week, month for completion.	ACHIEVEMENT MILESTONES Practice measures or lead indicators that describe success
Nurturing Successful Learners	<p>Develop and implement a cross sectoral strategy for improving STEM Educational Outcomes for all students in early childhood, primary and secondary school settings, especially in the core areas of the Australian Curriculum:</p> <ul style="list-style-type: none"> • Science Inquiry Skills • Science Understandings • Science as a human endeavour • Mathematics Content • Mathematics Proficiency 	<p>Develop a common understanding of the importance of STEM.</p> <p>Coordinate STEM opportunities which increase student knowledge of STEM and future career opportunities</p> <p>Increase the number of students accessing STEM by providing challenging and engaging curriculum opportunities linked to real world application and pathways</p>	<p>STEM Summit</p> <p>STEM Consultative Members become the conduit between Schools and STEM experiences for a consistent approach for all students.</p> <p>Students have influence in developing their own tasks and learning in a co construction environment between schools, students and partners.</p>	<p>STEM Consultative Group</p> <p>STEM Hub (UNISA Staff)</p> <p>TfEL Team Adelaide</p> <p>Business Partnership Manager</p> <p>Education Director</p>	<p>May 27th 2016</p> <p>Ongoing</p> <p>Students task design 2017</p>	<p>Increased number of students undertaking SACE Science & Maths with an increased number of female students.</p> <p>Increased Retention rates</p> <p>Clearly defined pathway structures to support SACE completion</p>
Equipping Expert Teachers	<p>Develop short and long term strategies to grow the expertise of teachers in STEM education of early childhood, primary and secondary school students including:</p> <ul style="list-style-type: none"> • Support for teachers through professional learning opportunities focused on STEM • Development of supportive partnerships with external STEM education providers • Provision of real world examples and experiences of science and innovation at work • Building expert learning communities to ensure continued growth in teacher capabilities and sharing models of effective practice • Development of curriculum resources with a focus on innovation, inquiry, creativity and problem solving 	<p>Advance STEM pedagogy through an inquiry based learning approach.</p> <p>Influence teachers STEM practice with a focus on quality task design & moderation through PLN's</p> <p>Through Partnership Action Records staff will have increased opportunities to deprivatise practice and work across</p> <p>Leaders support teachers to plan together to develop engaging, meaningful and rigorous STEM learning programs</p> <p>Long and short term vision and actions are regularly reviewed in line with local data, DECD strategic directions and the evolution of state and national STEM policy directions</p>	<p>Continue the Results+ strategy of deprivatising STEM practice across the South East</p> <p>"Site Improvement Journey"</p> <p>TfEL Training Days.</p> <p>"Intellectual Challenge for Powerful Learners"</p> <p>Sharing practice across Sites.</p> <p>Establishment of STEM PLN's to interrogate curriculum design and assessment of the Australian Curriculum and SACE</p> <p>Utilisation of TfEL and Australian Curriculum to deepen STEM learning experiences in partnership with Industry</p>	<p>Results+ Team – Ongoing</p> <p>Blue Lake Executive</p> <p>SECAV Executive</p> <p>UNISA</p> <p>TfEL Team Adelaide - Term 3 2015</p> <p>Business Partnership Manager</p> <p>Partnership Executive</p> <p>Education Director</p>	<p>Ongoing</p>	<p>Established PLN's that combine early, primary & secondary areas that span across partnerships both rural & metro with a focus on development of inquiry based and problem based learning</p>

Strengthening Education and Industry Partnerships

Develop and implement strategies to strengthen partnerships between schools, higher education and industry which connect learning with real world contexts and provide opportunities for students to develop problem solving and inquiry skills. This includes:

- Stronger engagement of relevant STEM organisations in student learning
- Optimising Industry support for STEM education and dissemination of information about STEM education initiatives
- Establishing an Industry STEM Education Consultative group to generate higher levels of industry engagement in STEM education, increase collaboration between industry and education service providers in the delivery of STEM education initiatives, and create higher awareness of the range of initiatives being implemented
- Identification of ways in which curriculum can be contextualised and pedagogy changed to make STEM subjects, such as mathematics and physics more relevant and attractive to a wider range of students.

Harnessing Industry partners to support authentic learning through the provision of problem and inquiry based practice.

Creating Learning content that is based on current topics/issues that require student problem based involvement

STEM Summit showcasing of the best practice examples between education and Industry that supports effective learning.

UniSA Connect. Establishment of a STEM Hub with the incorporation of the AARNET

Utilisation of PIRSA to grow links with local STEM industries that will support education and provide localised inquiry based learning opportunities

Utilisation of NRMSE expertise in STEM education

Connections to local science learning eg Naracoorte Caves, Volcanos, Picannine Ponds etc.

Business Partnership Manager.

On line sustainable platform.

UniSA

PIRSA

NRMSE

City Mount Gambier

Naracoorte & Lucindale Council

Local Industry (to be identified)

Ongoing
STEM
Community
Event 2016

Building Community capacity to understand and implement STEM based participation which supports real world relevant learning preparing the South East future workforce.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Building Community Capacity</p>	<p>Building an awareness of STEM disciplines and STEM related occupations among young people including:</p> <ul style="list-style-type: none"> • Awareness campaigns to enrich public understanding of career options in STEM and the nature of STEM work, and to alert young people to the range of possible future STEM lives and identities • Strategies designed to involve families in mathematics and science learning and in building positive attitudes to STEM related careers • Expansion of opportunities for families and the general public to engage positively with science and mathematics through events, exhibitions and other approaches • Enrichment program whereby students are engaged in science of mathematics projects that link to members of the local community • Enhanced career education for students, parents, teachers, career guidance officers and school leaders to enhance awareness and understanding of the importance of STEM education and the opportunities available through STEM based careers. 	<p>Providing students and educators with an increased opportunity to participate in STEM initiatives. That will enable connected and powerful learners that have a disposition to drive their own learning and to approach the future confidentially.</p>	<p>Mount Gambier City Council STEM Community Event to engage families in STEM related activities.</p> <p>Mount Gambier City Library Makers Space. Providing the avenues and area for STEM related learning for community members</p> <p>Future Innovators Series event at the Main Corner</p> <p>Other opportunities to be identified and documented as an ongoing process</p> <p>Naracoorte & Lucindale Council Community Event to engage community in STEM related activities.</p>	<p>Partnership Executive</p> <p>Education Director</p> <p>Business Partnership Manager</p> <p>City Mount Gambier</p> <p>Naracoorte & Lucindale Council</p> <p>PIRSA</p> <p>NRM</p> <p>UniSA</p>	<p>Ongoing</p>	<p>STEM education is clearly understood and valued across Bluelake and South East Coast and Vines Partnerships with a collaborative effort to share resources to support improvement agendas.</p>
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