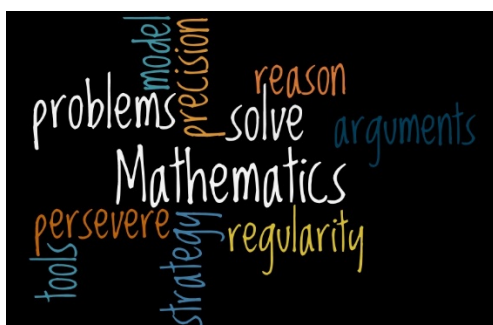




PRIMARY  
MATHEMATICS  
ASSOCIATION

# **Creating Powerful learners of mathematics and numeracy** **PMA POWERFUL LEARNERS MATHEMATICS & NUMERACY CHALLENGE** **BIRTH TO PRESCHOOL INFORMATION BOOKLET 2021**

*Young children are being and becoming confident and capable mathematicians from the time they are born – we want to CELEBRATE and ACKNOWLEDGE this with you!*



## **KEY STEPS TO GETTING STARTED WITH THE CHALLENGE**

Enrol your site using the registration form (page 14)

Read, share, explore the information booklet

Start your investigation!

## WHAT'S THE CHALLENGE ABOUT?

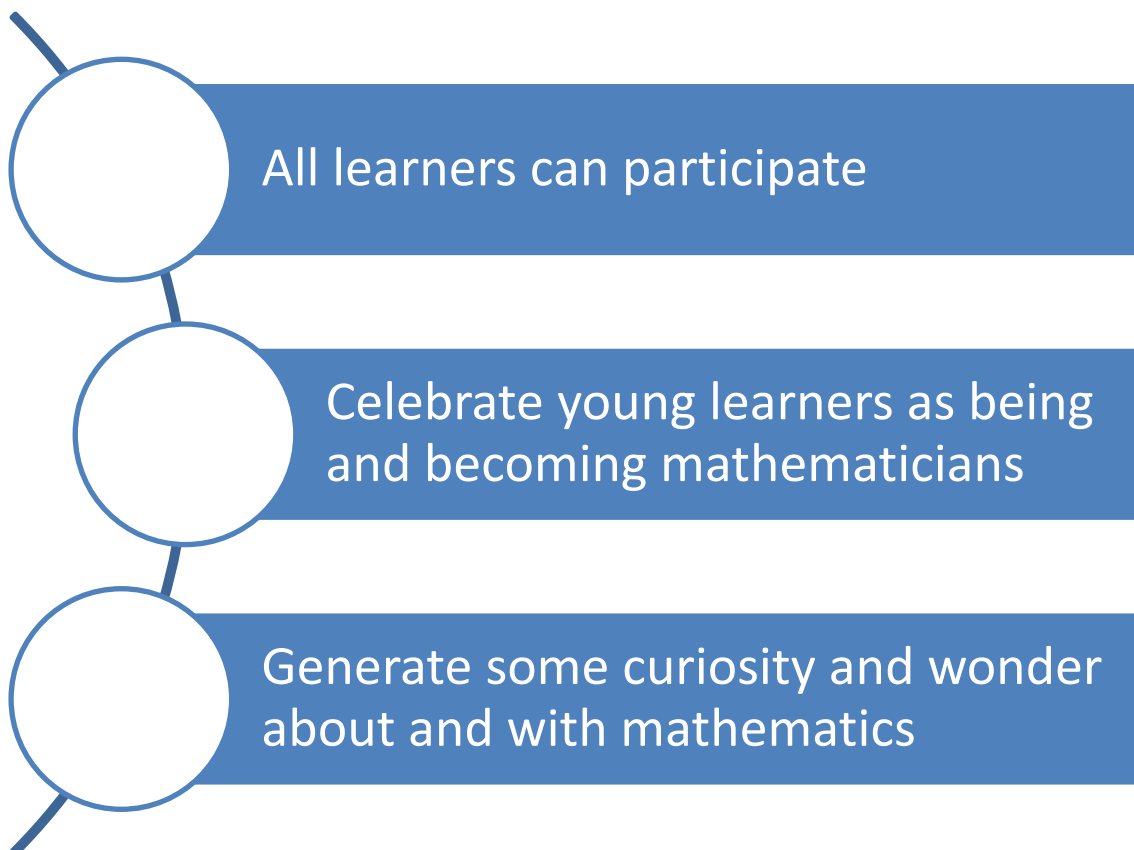
**This Challenge is offered to you through a partnership between Department of Education, CESA and PMA.**

**In 2021 the Department again has a target of at least one entry from every site - this booklet is designed to help you get started in meeting this target!**

*The Challenge is now in its twenty seventh year and continues to go from strength to strength. In 2020, we were again very pleased to see so many successful entries and to hear the amazing feedback about the positive impact the Challenge had on the dispositions and learning of the children and educators who became involved.*

*The aims of the PMA Powerful Learners Mathematics and Numeracy Challenge are:*

- *To promote mathematics in school and preschool communities around South Australia*
- *To further develop students appreciation of the scope of mathematics and their creative and critical thinking skills*
- *To promote the goals and challenges of the State Numeracy initiatives*



### **ACCESS ADDITIONAL RESOURCES TO SUPPORT YOUR INVOLVEMENT**

- **SAMPLE ENTRY DISPLAY**
  - **SAMPLE ENTRY DIGITAL COLLECTION**
  - **CHALLENGE MENTOR (ONLINE/FACE TO FACE)**
- Email [primarymaths@bigpond.com](mailto:primarymaths@bigpond.com) for more info

## 2021 STRATEGIC PARTNERSHIPS

*In 2021, we are pleased to announce that the Department for Education and CESA are again key partners in the Challenge. AISSA are also keen supporters of this Challenge and always look forward to celebrating with their sites at the Presentation Evening.*

*Our partners have provided support which allows each site in your system to participate- **so all you need is your energy, enthusiasm and commitment!***

*We are also very pleased to have a range of other Corporate Partners who are providing prizes for Educators and Learners. We thank the following companies for their support and ask you to thank them with your patronage.*



---

**ENTRIES CLOSE END OF WEEK**  
**ONE IN TERM FOUR,**  
**Thursday 14<sup>th</sup> OCTOBER, 4pm**

This information booklet is designed to assist children, students and teachers in preparing entries. Permission is granted to copy this document as required.

## INFORMATION ABOUT THE CHALLENGE:

### *GETTING YOUR LEARNERS INVOLVED!*

Choose a  
category

Choose a  
focus

*Over the last few years, we have continued to be delighted at the quality of entries from our Preschool and Birth to 3 learners. This has been an amazing opportunity to promote the good work currently happening in early years settings that is continuing to enhance the development of early mathematical language and conceptual understandings.*

*With the increased emphasis on numeracy in preschools provided by the Indicators of Numeracy, this provides a great opportunity to explore, share and collaborate on new mathematical provocations with your learners.*

*Start anytime you like* ➡ **CHALLENGE EVIDENCE DUE**  
**Thursday 14<sup>th</sup> October, 5pm (Week 1, Term 4)**



# CHOOSE A CATEGORY

Individual  
Small Groups  
Session Groups  
Family learning stories

# CHOOSE A FOCUS

Documenting the mathematical learning of your children as they explore, play and investigate:

- A mathematical play provocation
- Capturing the numeracy play happening throughout your environment
- A specific inquiry / project through a mathematics lens
- A picture book provocation that explores mathematics or numeracy





## CELEBRATING YOUR SUCCESS!

Thanks to the generosity of our Challenge Partners, PMA is pleased each year to be able to offer a range of forms of acknowledgements to those learners, educators and sites who take part in this Challenge.

This includes Certificates of Participation and Achievement to share with your community as you promote the importance of your young learners thinking and acting as mathematicians.

Highly Commended and State awardees are also invited to attend the formal presentation in early November to accept their awards from the Minister

P.M.A. reserves the right not to award in any category on the advice of the judging panel.



## FOR EDUCATORS – GET INVOLVED YOURSELF!

*In 2021, there are three sections in the Educator Challenge entry.*

*You can choose one of two communication mediums. You can produce a short video or write an article (between 1000-1500 words) – whichever format allows you to reflect on your learning and teaching practice most effectively!*

*You could choose to think and reflect on:*

- **how you initiated and then supported your learners' involvement in the Mathematics Challenge.** You may wish to include information about the provocations you used as part of your design of the learning, the highlights of your intentional actions as an educator, how you used learners as resources for and with each other, your personal reflections on how you grew as an educator of mathematics through this process and future directions for both you and the children  
OR
- **how you have been exploring and implementing the Indicators of Numeracy**  
This could include information about how you have used the Early Years Learning and Teaching cycle with mathematics or numeracy or any other comments you have about your efforts to design learning which provokes children to be curious and to explore and develop their mathematical thinking  
OR
- **how you have been using research to inform your practice.** We would be looking for you to tell us your story about what research you have considered (remember critical educators always seek out contrasting research to validate and compare views) and how this has informed your actions at your setting. We would then love to know what has changed for your learners and what your future plans are!

In all three areas, **Judges will be looking for evidence of you as a reflective practitioner**

**Will you be one of the educators recognised for their efforts in 2021?**



(please attach an Educator Entry form to your entry, page 15)

# WANT TO KNOW MORE?

*In 2021 there are a number of ways in which early years settings could choose to be involved - As a site OR As an individual child, small group, session group, or child and family*

## OPTION ONE: AS A SITE / SESSION GROUP

- 1) You could document/share your floor book (or similar) and how this has contributed to the ongoing thinking and learning about mathematics and numeracy at your site.
- 2) You could document the provocations and subsequent learning conversations/ learning evidence and/or learning stories that resulted from your intentional actions  
This could focus on one of the Indicators of Numeracy in particular, or one of the Learning Processes or be an inquiry/provocation that crossed over many of these (artificial) boundaries
- 3) You could document what intentional actions you have taken to **provoke numeracy** learning at your place and share through your documentation what you did, how children engaged and some examples of their thinking and actions
- 4) You could document what intentional actions you have taken to **provoke mathematics** learning with families and share through your documentation what you did, how children and families engaged and some examples of their thinking and actions
- 5) You could use one of the "literature for EY" mathematics resources (list available from PMA at [primarymaths@bigpond.com](mailto:primarymaths@bigpond.com) ) as a provocation for a group of children to explore and document their mathematical thinking journey - what did they wonder about, what did they notice, what were their theories? What did they explore and prove?
- 6) You could focus in on one child and document your evidence of them being and becoming a confident and capable mathematician and how you are intentionally provoking them to extend and develop their mathematical and numerate thinking

## OPTION TWO: AS A SMALL GROUP OF CHILDREN, AN INDIVIDUAL CHILD OR A CHILD AND THEIR FAMILY

You could encourage a group of children/individual/ or individual and their family who are fascinated and exploring some mathematics to document their theories, their explorations and what they learnt to be shared

For example : Paige was fascinated by the Crows and wanted to think like a mathematician about them, Emily and her family were fascinated with all the rain and wanted to wonder at home about how much rain there was and where it was all going....

The possibilities are only limited by the imagination and engagement of the children!



## FOR THESE TWO SECTIONS: Documenting the learning to share in the Challenge

Depending on which of the lens you choose to look through, your "Challenge Evidence" will look different. All we ask is that you help the children tell the "story" of their mathematical thinking and learning in the most powerful way you can.

In the school years, children are encouraged to make all the decisions about how their mathematical thinking and learning are documented within their Challenge evidence.

We acknowledge that with children from 0-4 years this is not always appropriate or possible however it is the voice of the child we would hope to see. For example it could include

- examples of dialogue/mathematical conversations between children or between a child and adult.
- Scribed/videoed conversations by children that capture their thoughts as they move through the stages of wondering, noticing, exploring, theorising and proving or generalising.
- Photographs with children's' comments added describing what they were doing, thinking, trialing, etc.
- **Children making the decisions about what should be included and how it is organised. This one is particularly important if you are doing the second option.**

*The Challenge Evidence can be presented in any communication medium that works for you and the child – text, video, audio or any combination.*

*Learners and Educators are able to work on documenting their Challenge evidence anytime between now and the end of week one in Term Four (Thursday 14<sup>th</sup> October, 5pm) Alternatively they may like to present information about learning they have completed anytime since the beginning of this year.*

### EXPLORING AND SHARING YOUR CHALLENGE EVIDENCE

At the end of week one in term four a statewide panel comprised of representatives from a range of education groups gather to explore and share your stories of mathematical learning. They then explore ways for these to be used to promote and advocate for the role that Early Years educators play in providing a strong foundation for children in mathematics and numeracy. They also select a range of participants to be acknowledged as part of our Celebration Evening in early November

*NB: All evidence may be kept (or copied) by PMA for promotional purposes and then returned to sites at a negotiated time.*

#### **Packaging**

**So that we can ensure that the panel can see ALL aspects of your learning please include details of the number of separate components that make up your collection (as requested on the bottom of the Entry form) and we ask that each component must be clearly labelled.**

## Important Dates

### COLLECTION POINTS

#### **Term 4 Week 1, THURSDAY 14<sup>th</sup> October 5pm**

1. c/- c/- Principal, Greg Parker, St Pius X School, Windsor Grove
2. c/- Principal, Thomas Harvey at Riverdale PS
- 3.c/- Assistant Principal, Tara Augustin at Flagstaff Hill PS
4. c/- Deputy Principal, Deb Postema, Cowandilla PS
4. c/- PMA Office at PO Box 635, Salisbury, 5108

16<sup>th</sup> October      State Panel day

18<sup>th</sup> October      Notification by email to Participants

Friday November 19<sup>th</sup> , 6pm: Presentation of State Awards by the Minister

### Further Information

More information on the PMA Mathematics Challenge is available by contacting:

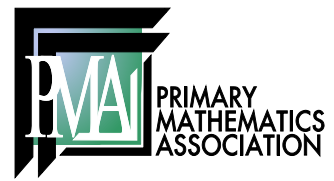
PMA's Clerical Officer - Deb Prout

Phone: (08) 8182 3288

Fax: (08) 8182 3299

Email: [primarymaths@bigpond.com](mailto:primarymaths@bigpond.com)

Website : <https://www.primarymathematicssa.com/>



**PMA POWERFUL LEARNERS:  
MATHEMATICS & NUMERACY  
CHALLENGE**

**PRESCHOOL / CHILDREN'S  
CENTRE REGISTRATION  
FORM**

**2021**

Celebrate our early years learners as they be and become mathematicians!

THE DEPARTMENT AND CESA HAS FUNDED EVERY SITE TO PARTICIPATE

**ENTRIES ARE DUE IN ON THURSDAY 14<sup>th</sup> OCT 5pm, Week 1, Term 4**

I wish to register for children/adults from this site to participate in the 2020 PMA ***Powerful Learners: Mathematics & Numeracy Challenge***.

We think we will be lodging entries in the following sections:

- Learners entry
- Educator entry

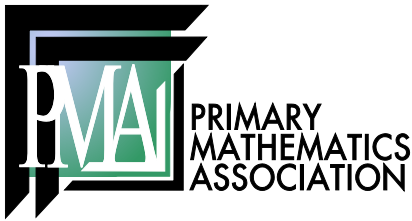
Site: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Mobile No : \_\_\_\_\_

---

**Primary Mathematics Association, P.O. Box 635, Salisbury, SA 5108**  
 EMAIL ON [primarymaths@bigpond.com](mailto:primarymaths@bigpond.com)



**2021  
POWERFUL LEARNERS:  
MATHEMATICS &  
NUMERACY  
CHALLENGE**

**PRESCHOOL/CARE EDUCATOR ENTRY FORM**  
**( to be attached to educator entries only)**

**Educator:** \_\_\_\_\_

**Site:** \_\_\_\_\_

**Mobile:** \_\_\_\_\_

**Email :** \_\_\_\_\_

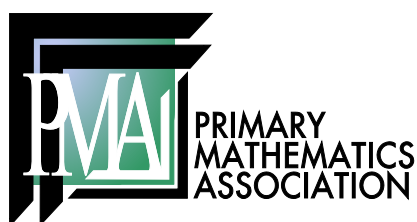
**I WISH TO SUBMIT AN EDUCATOR ENTRY IN: (please tick)**

- ☐ Reflection on Mathematics Challenge
- ☐ Reflection on implementation of the Indicators of Numeracy
- ☐ How Research is informing my practice

One of the aims of PMA is to publish and promote effective learning and teaching practices in Mathematics and Numeracy. Your educator entry may be featured in a future PMA publication, and this is a condition of entry. Please sign the release form below to signal your agreement..

I understand that as part of the conditions of entry to the Educator Entry section of the PMA Mathematics Challenge, I am giving consent for my entry (all or part) to be published as part of a PMA publication for distribution to members.

Signed \_\_\_\_\_ Date : \_\_\_\_\_



**2021  
POWERFUL LEARNERS:  
MATHEMATICS & NUMERACY  
CHALLENGE**

**LEARNER ENTRY FORM (to be attached to all learner entries) –**

**\*\*Please complete Learner Entry Form with a black pen and use BLOCK LETTERS. Place in an A4 plastic sheet protector and staple to entry. Educator, please check names. The learner's name on entry form will be the name printed on certificates.**

**Contact Educator:** \_\_\_\_\_

**Title of Entry:**

**Group / Children's Name:**

---



---

**Site:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
 \_\_\_\_\_

**Phone:** (    ) \_\_\_\_\_

**PLEASE TICK**

<b>Level of setting</b> <input type="checkbox"/> Birth to 18 months <input type="checkbox"/> 18 months to 3 years <input type="checkbox"/> Preschool	<b>Category</b> <input type="checkbox"/> Individual <input type="checkbox"/> Small Group <input type="checkbox"/> Session Group <input type="checkbox"/> Whole Site <input type="checkbox"/> Family and Child	<b>Focus</b> <input type="checkbox"/> Mathematical play provocation <input type="checkbox"/> Capturing the numeracy play in your environment <input type="checkbox"/> Specific inquiry/project through the mathematics lens <input type="checkbox"/> Picture book provocation that explores mathematics or numeracy <input type="checkbox"/> Other...
---	--	--



**CONTEXT STATEMENT FROM EDUCATORS:**  
(what do the panel need to know to have a sense of your learners and what they explored)

**ENTRY Components:** If your entry has separate components please list them below:  
*NB. Each component should be clearly labelled.*