

STEM, the EYLF, and Intentional Teaching

**STEM - you're
already doing it!**

**STEM and
Intentional
Teaching**

**Any
questions?**

**STEM and the
EYLF (V2)**

**STEM and
the ERA
approach**

**Contact
us**

STEM - What is it?

STEM stands for Science, Technology, Engineering, and Mathematics - with the letters joined together to indicate integration.

We think about STEM a little differently to many others - we discussed this in our first presentation.

In this half hour we want to value add to what you are already doing by proposing a way to plan for intentional teaching opportunities in STEM.



Why STEM?

Why STEM is important

It's important for children to be introduced to STEM in preschool because it:

- helps them understand their world and how it works
- helps them to develop positive attitudes towards STEM
- translates to confidence and success in STEM at school
- prepares them for the jobs of the future

Let's look at what the EYLF has to say about STEM.

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Why STEM?

STEM and V2

Here are some of the major changes in EYLF-V2 that relate to STEM:

- Sustainability
- Emphasis on dispositions - which we refer to as STEM Ideas, Methods and Values
- Multimodal play - included in our ERA pedagogical approach
- Types of assessment
- Focus on conceptual thinking in maths and science
- Indigenous perspectives

A key addition is strengthening the relationship between PBL and intentionality, which we will discuss later.

Outcomes

**'I Can'
Statements**

STEM & EYLF outcomes

Most reference to STEM learning is in **Outcome 4** - for instance, a focus on:

- developing a growth mindset
- development of learning and thinking processes
- conceptual thinking (e.g., in STEM)
- building numeracy (Outcome 5)

Outcome 2 - children use digital technologies to connect with their world (updated).

Outcome 5 - children use digital technologies as they become more confident communicators (updated).

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Assessment

Version 2 suggests assessment:

- **for** learning (Formative)
- **of** learning (Summative)
- **as** learning (self)

We think this is best done in play-based, natural ways.

We do so with 'I Can' statements - e.g., I can create a pattern, I can select materials to complete a task.

These are 'assessed' as children play the digital games and are presented back to you for reporting purposes.

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Intentional Teaching

What is intentional teaching?

There is a focus in the new EYLF on the intentional role of both the children and their educators to engage, extend, and enrich learning.

In the new EYLF you are encouraged, in all aspects of your work, to act deliberately, thoughtfully, and purposefully to support children's learning through play.

This means you are encouraged to take an active role in planning and practice (as well as still being spontaneous as opportunities arise).

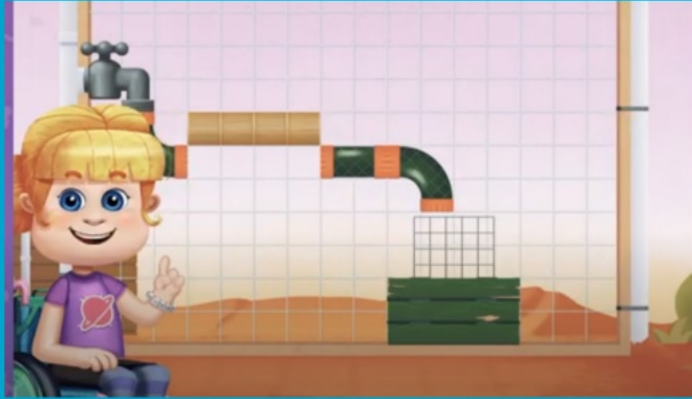
We will suggest our approach to intentionality later in this presentation.

What does this look like?

More ideas for STEM

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Within the context of STEM, educators can plan and create environments, building on children's interests to support their play.



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More ideas for STEM

Ideas for intentionality in STEM

Some suggestions include:

- **Extend and challenge** children's ideas through shared thinking and think-alouds.
- Support children's progress through **open-ended questions** that support their guided self-discoveries.
- **Join in** children's play by taking on a role where you can model concepts or physical demonstrations.

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More ideas for STEM

ERA - A play-based, intentional approach

We suggest, in our work with educators, our ERA approach:

Experience (E) - build on what children already know using familiar language to develop concepts (off app).

Represent (R) - children represent their learning using digital tools (on app).

Apply (A) - children transfer their learning to a new context.

Example of
ERA
in action

Educator role
in ERA

Example of ERA loop

Experience... establish foundation pattern concepts (e.g., children find, copy and extend patterns using familiar shapes - off-app).

Represent... children create patterns with preloaded (or their own) objects to decorate a cubby (on-app).

Apply... new patterning understanding in different contexts (e.g., children translate shape patterns into movement patterns).

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How the ERA can support your work

The ERA is a tool that can help you be more intentional in supporting children's play.

In this short video, Luke Carroll explains the ERA, and how it can help in your centre.

<https://youtu.be/rWbMHoRJplE>

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What would you like to know more about?

- From this presentation?
- In future presentations?
- About the ELSA team and what we do?

Thank you

Today we have spoken about connections between STEM and the updated EYLF (V2).

We hope we've shown you new ways to be more intentional in your STEM teaching.

We hope to see you online again for future presentations.

As a new "Storypark Grandad" - thanks for all you do for our precious young children.

**Our Contact
Details**

Our contact details

Feel free to explore the ELSA program for your centre – it's full of high-quality STEM resources, and ERA aligned activities, that can support and extend your existing STEM teaching.

elsaprogram.com.au

team@elsa.edu.au

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