the LEARNING BLUEPRINT™

WHERE LEARNING SCIENCE meets CLASSROOM IMPACT

SUMMARY

Welcome to The Learning Blueprint, an award-winning PD program for teachers and educators. Developed by leading cognitive scientist Dr. Jared Cooney Horvath, the aim is to deliver the most impactful applications from the Learning Sciences, help teachers build a deep understanding of the learning process, and introduce a practical classroom innovation tool called Micro-Projects.

DELIVERY

We recommended that The Learning Blueprint be completed simultaneously by all teachers within a school or learning cohort. This format requires scheduling five separate 90-minute live sessions with all participants present. If completing the program live is not feasible, parts-or-all of The Learning Blueprint can be done on an individual, self-guided basis.

TIMELINE

The Learning Blueprint consists of four core modules. Each module is fully scaffolded, and includes approximately 8 hours of learning and guided application. While individual modules can be completed within a single term, the full program is designed for multi-year implementation by schools and learning communities to realize the full benefits.

OUTLINE

We open The Learning Blueprint by exploring 11 key principles of learning (Mod1) and examining the foundations of how humans learn (Mod2). From there, we dive into specific topics and strategies aimed at boosting student performance (Mod3), before shifting our attention to factors that influence how students engage with the learning process (Mod4).

MOD1 | From the Lab to the Classroom

In Module One, we begin by answering the question, "Why should teachers even care about the Science of Learning?", before exploring the fascinating truth behind how the brain works to make sense of reality. From there, we examine eleven key principles of learning, and consider how scientific research can (and cannot) be meaningfully translated to the classroom.

- **S1 | The Science of Learning**
- **S2 | Learning Principles (Part 1)**
- **S3 | From Theory to Practice**
- **S4 | Learning Principles (Part 2)**
- **S5 | Learning Principles (Part 3)**
- **S6 | Micro-Projects (Application)**

MOD2 | The Learning Trajectory

In Module Two, we dive into the foundations of how human beings learn, remember and apply new knowledge. By pooling neuroscience, psychology, and personal development principles, we begin to understand how humans progress along a relatively predictable learning trajectory, and we consider how this is reflected in the performance of our students.

- **S1 | Skills, Talent, and IQ**
- **S2 | The Transfer Dilemma**
- **S3 | Shallow vs. Deep Learning**
- **S4 | Assessment at all Levels**
- **S5 | Feedback for Learning**
- **S6 | Micro-Projects (Application)**

MOD3 | Impact Topics + Key Strategies

With the foundations in place, it's time to dive more deeply into specific topics and strategies aimed at boosting student performance. In Module Three, we examine the 'big boys' of educational topics and consider how they work, how they manifest in the classroom, and how we can leverage them within our daily practice.

- **S1 | Principles of Memory**
- **S2 | Principles of Attention**
- **S3 | Cognitive Load Theory**
- **S4 | Metacognition + Homework**
- **S5 | The Truth About Creativity**
- **S6 | Micro-Projects (Application)**

MOD4 | Emotions + Wellbeing

With the 'hard skills' done-and-dusted, we shift our attention to those factors that influence how humans engage with the learning process. In Module Four, we explore the role that emotions play in learning, and consider ways to ensure our students are in the right 'head space' to perform effectively in the classroom.

- **S1 | Kids, Teens, and Tech**
- **S2 | Stress + Anxiety**
- **S3 | Interpersonal Relationships**
- **S4 | Personal Wellbeing**
- **S5 | Three Types of Engagement**
- **S6 | Micro-Projects (Application)**

APPLICATION

Throughout The Learning Blueprint, participants will complete several Micro-Projects. Rather than testing content knowledge, MPs provide a low-stakes opportunity to test, assess, document and share relevant classroom strategies. These practical and easy-to-implement application tools are integral to changing teacher practice.

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MOD3 | IMPACT TOPICS + STRATEGIES

OUTLINE

In Module Three, we examine the core cognitive processes that underpin learning, including memory and attention, before evaluating Cognitive Load Theory. From there, we explore metacognition — focusing on how students can take greater ownership of their learning — and conclude with an evidence-based look at creativity.

SESSION ONE | PRINCIPLES OF MEMORY

Memory is the foundation of effective learning — and fortunately, it's a very predictable system. In this opening session, we establish the three stages of memory, reveal eight key memory principles, and explore practical classroom strategies aimed at helping students retain and recall information more effectively. Bottom line — memory is NOT random. It operates according to a clear set of rules that we can use to our advantage!

SESSION TWO | PRINCIPLES OF ATTENTION

If memory is the basis of effective learning, then attention is the basis of effective memory! And luckily, just as with memory, attention is both an understandable and predictable system. In this session, we establish the three levels of attention, consider how each functions (and fails), and explore ways to apply this knowledge in the classroom. With a deep understanding of both memory and attention, many student behaviors that teachers witness and confront on a daily basis will come to make much more sense — and will no longer seem intractable.

SESSION THREE | COGNITIVE LOAD THEORY + HOMEWORK

Heralded by experts as one of education's most significant insights in decades, Cognitive Load Theory has transformed how we understand effective teaching and learning. But what exactly is it? In this session, we unpack the primary tenets of Cognitive Load Theory, examine its critical impact on curriculum sequencing and instructional design, and consider several ways to apply it in practice. We also have a deep (and possibly confronting) discussion about homework: when does it work, when does it fail, and what can we meaningfully expect from this time-honored exercise.

SESSION FOUR | METACOGNITION

Everyone has heard the term 'metacognition' ... but what exactly is it? In this session, we unpack metacognition through three essential phases: planning (pre-task), monitoring (during-task), and evaluation (post-task). We discover that metacognition is not about adding new activities, but rather embedding reflective questions into existing practices, and we reveal why it accounts for approximately 40% of academic variation among otherwise equivalent students. The ultimate goal of education is to empower students to take agency over their own learning — and metacognition is the key to achieving this.

SESSION FIVE | THE TRUTH ABOUT CREATIVITY

For decades, we've been told school is killing creativity. But is this true? In this final session, we reveal what creativity truly is — and is not. By exploring the great myths surrounding creativity, we uncover the three essential ingredients to creativity, consider what is required to embrace these ingredients, and then bring it back to school to determine what we are doing well — and what we might do better. When knowledge of creativity (and other C21 skills) is combined with knowledge of the Transfer Dilemma and the Learning Trajectory, a coherent framework for learning and development begins to emerge.

APPLICATION

During Mod3, you will complete at least one — and ideally several — Micro-Projects. Rather than testing content knowledge, MPs provide a low-stakes opportunity to test, assess, document and share relevant classroom strategies.

THE LEARNING BLUEPRINT

MODULE THREE OUTLINE

THE LEARNING BLUEPRINT | WHERE LEARNING SCIENCE MEETS CLASSROOM IMPACT

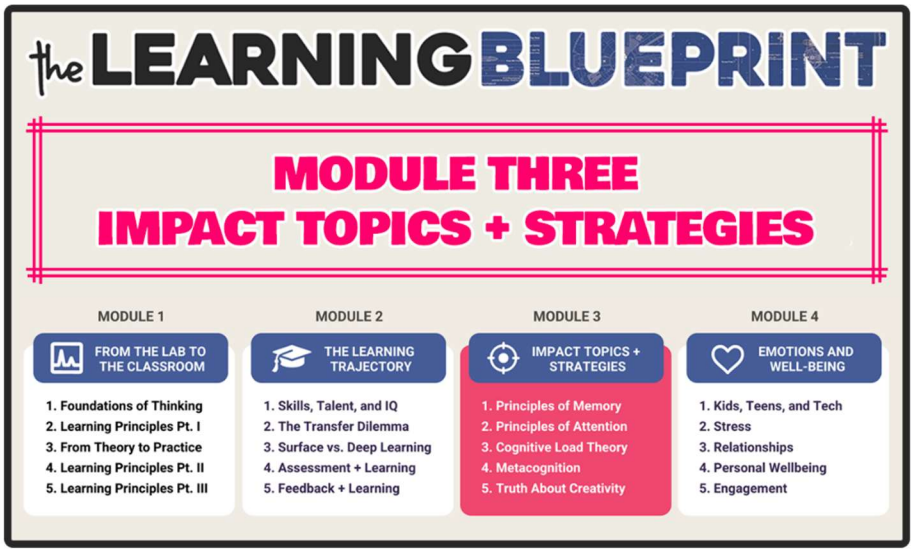
Welcome to **The Learning Blueprint**, an award-winning professional development program for teachers and educators.

Developed by leading cognitive scientist **Dr. Jared Cooney Horvath**, the aim is to deliver the latest and most impactful applications from the Science of Learning, help you build a deep understanding of the learning process, and introduce a practical classroom innovation tool called Micro-Projects.

MODULE 3: IMPACT TOPICS + STRATEGIES

In Module Three, we examine the core cognitive processes that underpin learning, including memory and attention, before evaluating Cognitive Load Theory.

From there, we explore metacognition — focusing on how students can take greater ownership of their learning — and conclude with an evidence-based look at creativity.



REQUIRED TOOLS + RESOURCES

Aside from an open mind and a good internet connection, the only tools you really need as you progress through The Learning Blueprint are: a digital copy of your participant workbook; a physical journal or notebook; and a writing device (pen, pencil, crayon, quill, etc.)

Throughout the module, we'll ask you to consider reflection questions and complete various learning exercises. Your learning will benefit most if you *physically write-down* your answers and ideas.

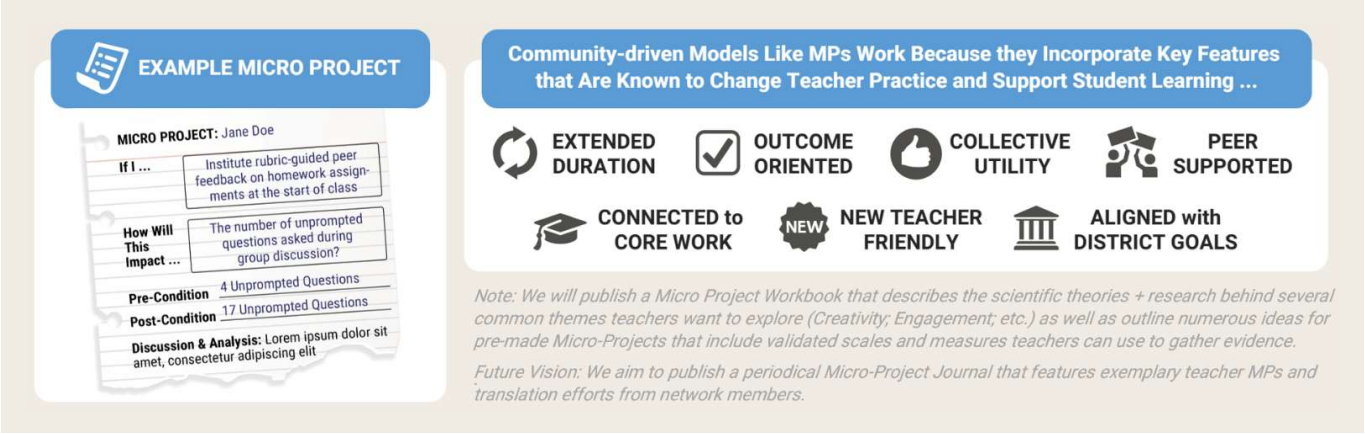
MODULE APPLICATION + ASSESSMENT

During this module, you will complete at least one — and ideally several — Micro-Projects.

WHAT ARE MICRO-PROJECTS?

Rather than testing content knowledge, MPs provide a low-stakes opportunity to test, assess, document and share pedagogical strategies relevant to your practice. Through this process, you will:

1. **DIAGNOSE IMPACT** … by testing, assessing and gathering tangible evidence
2. **SHARE IDEAS** … by collaborating via a simple, consistent framework



TIME COMMITMENT

Mod3 is delivered over five sessions, each lasting about 90 minutes. Each session includes a series of video lectures led by Dr. Horvath, along with guided reviews, quizzes, reflections and recall exercises.

You will also complete at least one — and ideally several — Micro-Projects. These can be done during class time, and typically take ~15-30 minutes each.

The total time commitment for Mod3 is approximately 8.0 hours.

MOD3 OUTLINE

MODULE OVERVIEW

In **Module One**, we established the foundations of thinking, explored 11 key learning principles, and introduced a powerful classroom application and innovation tool called Micro-Projects.

In **Module Two**, we looked deeply at The Learning Trajectory — from surface to deep to transfer — and examined how assessment and feedback align with these different stages of learning.

In **Module Three**, we examine the core cognitive processes that underpin learning, including memory and attention, before evaluating Cognitive Load Theory.

From there, we explore metacognition — focusing on how students can take greater ownership of their learning — and conclude with an evidence-based look at creativity.

MODULE 1+2 REVIEW QUIZ

Before you begin Mod3, it may be beneficial to complete the Mod 1+2 Review Quiz.

This quiz will reactivate and reinforce several key ideas we explored in the first two modules. There are 30 multiple-choice questions in total.

SESSION 1: PRINCIPLES OF MEMORY

Memory is the foundation of effective learning — and fortunately, it's a very predictable system.

In this opening session, we establish the three stages of memory, reveal eight key memory principles, and explore practical classroom strategies aimed at helping our students retain and recall information more effectively.

Bottom line — memory is NOT random. It operates according to a clear set of rules that we can use to our advantage!

- **Encoding** | What are memories ... and how do we form new ones?
- **Storage** | What are the best strategies for making new memories stick?
- **Access** | What is the key to forming deep, accurate memories?

SESSION 2: PRINCIPLES OF ATTENTION

If memory is the basis of effective learning, then attention is the basis of effective memory! And luckily, just as with memory, attention is both an understandable and predictable system.

In this session, we establish the three levels of attention, consider how each functions (and fails), and explore ways to apply this knowledge in the classroom.

With a deep understanding of both memory and attention, many student behaviors teachers witness and confront on a daily basis will come to make much more sense — and will no longer seem intractable.

- **Attention Filters** | How does your brain choose when to emphasize (or ignore) external stimuli?
- **Guided Attention** | What trick can teachers borrow from magicians to support effective learning?
- **False Memories** | How is it possible for someone to vividly recall an event that never happened?

SESSION 3: COGNITIVE LOAD THEORY + HOMEWORK

Heralded by experts as one of education's most significant insights in decades, Cognitive Load Theory has transformed how we understand effective teaching and learning. But what exactly is it?

In this session, we unpack the primary tenets of Cognitive Load Theory, examine its critical impact on curriculum sequencing and instructional design, and consider several ways to apply it in practice.

We also have a deep (and possibly confronting) discussion about homework: when does it work, when does it fail, and what can we meaningfully expect from this time-honored exercise.

Here is where everything we've learned about memory and attention comes together to form a coherent theory for learning and practice.

- **Cognitive Load Theory** | Why does Dylan Wiliam call this "the most important thing for teachers to know"?
- **Homework** | What powerful insights can research deliver regarding this time-honored academic practice?
- **Interleaving** | How can a fragmented, piteous approach to practice lead to pristine performance?

SESSION 4: METACOGNITION

Everyone has heard the term 'metacognition' … and everyone has been told it's the key to student success. But what exactly is it?

In this session, we unpack metacognition through three essential phases: planning (pre-task), monitoring (during-task), and evaluation (post-task). We discover that metacognition is not about adding new activities, but rather embedding reflective questions into existing practices, and we reveal that understanding the 'why' behind learning strategies — not just the what and how — accounts for approximately 40% of academic variation among otherwise equivalent students.

The ultimate goal of education is to empower students to take agency over their own learning — and metacognition is the key to achieving this.

- **Metacognitive Questions** | The key to unlocking learning without teaching any new material
- **Illusion of Fluency** | A ubiquitous trait among students; An interminable bane among teachers
- **Final Reflection** | The simple 5-minute practice that can significantly boost knowledge transfer

SESSION 5: THE TRUTH ABOUT CREATIVITY

For decades, we've been told school is killing creativity. But is this true? In this final session, we reveal what creativity truly is — and is not.

By exploring the great myths surrounding creativity, we uncover the three essential ingredients to creativity, consider what is required to embrace these ingredients, and then bring it back to school to determine what we are doing well — and what we might do better.

When knowledge of creativity (and other C21 skills) is combined with knowledge of the Transfer Dilemma and the Learning Trajectory, a coherent framework for learning and development begins to emerge.

- **Dubious Narrative** | Are schools really killing student creativity, or is this just measured political rhetoric?
- **Ambivalent Policy** | How can the OECD call for increased creativity in schools while simultaneously admitting its definition is unclear?
- **The Truth About Creativity** | What can masterworks by Picasso and Frank Lloyd Wright teach us about how creativity actually works?

MICRO-PROJECTS

During this module, you will complete at least one — and ideally several — Micro-Projects.

MODULE WRAP-UP

After you've completed the module, please take a few moments to complete the following items:

- **Final Recognition Exam** | Reactivate and reinforce the most important concepts we explored throughout the module.