CSD CHELTENHAM SCHOOL DISTRICT

Educational Affairs
March 21, 2023
STEM - PBL - Challenge

Mission Statement
Drawing on its cultural richness, creativity, and tradition of scholastic excellence, the Cheltenham School District strives to nurture each child through a wealth of academic endeavors and community partnerships that provide the skills and vision needed to lead a productive and meaningful life beyond our classroom walls.

Vision Statement
With a clear connection between the classroom and the world, the Cheltenham School District will strive for excellence by:

1. inspiring our students to develop principled and knowledgeable responses to the local, national, and global challenges of the 21st century;
2. actively engaging parents in their children's intellectual, social, and moral education;
3. encouraging faculty and staff to continually broaden the web of connections between their academic disciplines and the world on which they depend;
4. stimulating dynamic leadership of building and district administrators; and
5. creating partnerships with community individuals, institutions, organizations, and businesses that model real-world connections for all students.

DEEPER LEARNING

Deeper Learning

4
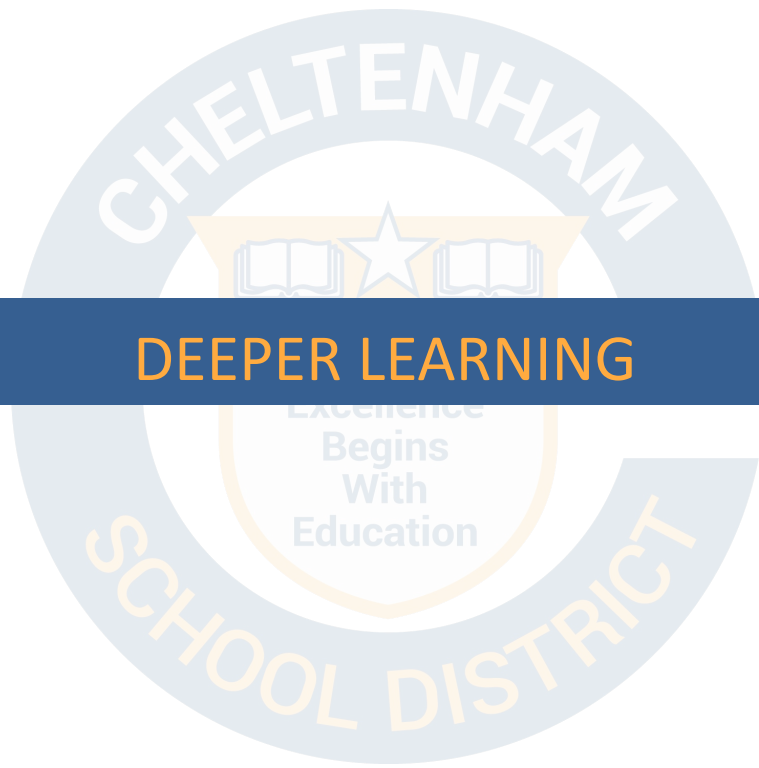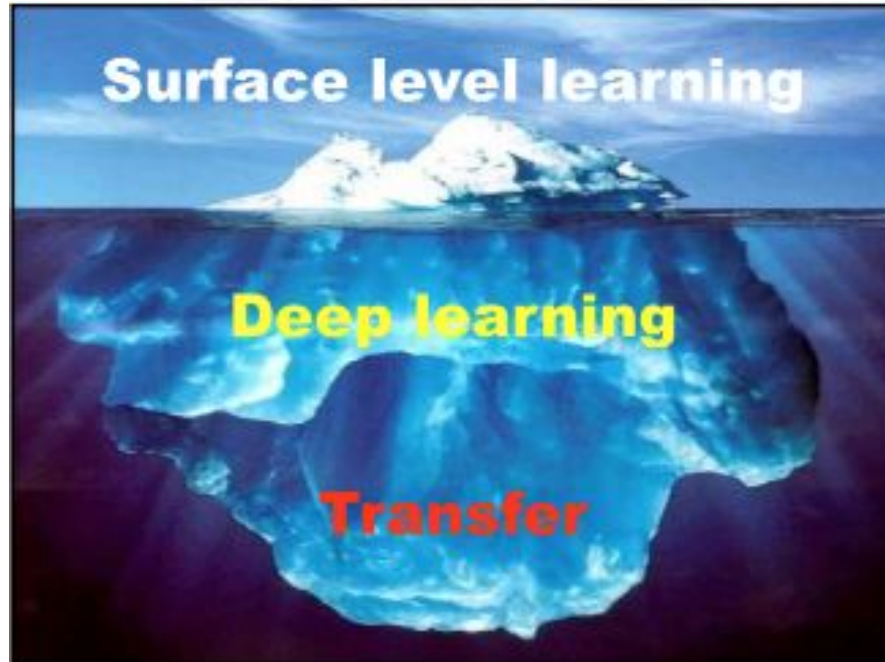
Deeper Learning Defined

DEEPER LEARNING HUB

Although the job market in the United States has changed significantly over the past few decades, our K-12 classrooms still operate the same way they did in the industrial era 100 years ago. **The students of today need more than basic Math and English skills to succeed in the workplace of the future. They need to engage in Deeper Learning.**

Deeper Learning describes the higher-order thinking skills, learning dispositions, and collaboration skills needed for students to succeed in twenty-first century work and civic life. Deeper Learning competencies promote the ability to transfer learning and apply to new and complex situations in an ever-changing global environment.

Partnerships

Center for
Love & Justice
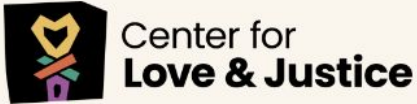
Our Work

We see school as a place where young folks feel seen, heard, activated and connected to their community. We use justice-driven, love-centered design to fiercely challenge inequity and co-create radically loving visions of the student experience—prioritizing cultural, economic and environmental justice. We design for the collective liberation of everybody.

KALEB RASHAD

CREATIVE DIRECTOR, CENTER FOR LOVE & JUSTICE

Partnerships

Partnerships

HIGH TECH HIGH

EQUITY
- Zip code based lottery
- No tracking
- Project design provides numerous access points
- College going culture

AUTHENTIC WORK
- Flexible Schedule
- Internships
- Community Partnerships in Project work
- Making student work public (Exhibition)

PERSONALIZATION
- Year of small cohort of students and teachers
- Advisory

COLLABORATIVE DESIGN
- Teachers and students are the artists the school year is their canvas
- Students as colleagues and partners in the design and learning
- Professional development is constant, teacher-led, and driven by our work

8

CONTINUOUS SCHOOL IMPROVEMENT

CSD CHELTENHAM SCHOOL DISTRICT

Continuous School Improvement

Education for the Future

Where are we now?

- Demographics
- Perceptions
- Student Learning
- School Processes

How did we get to where we are?

- Contributing Causes
- Predictive Analysis

Where do we want to be?

- Purpose/Mission
- Vision
- Goals
- Student Learning Standards

Continuous School Improvement

Education for the Future

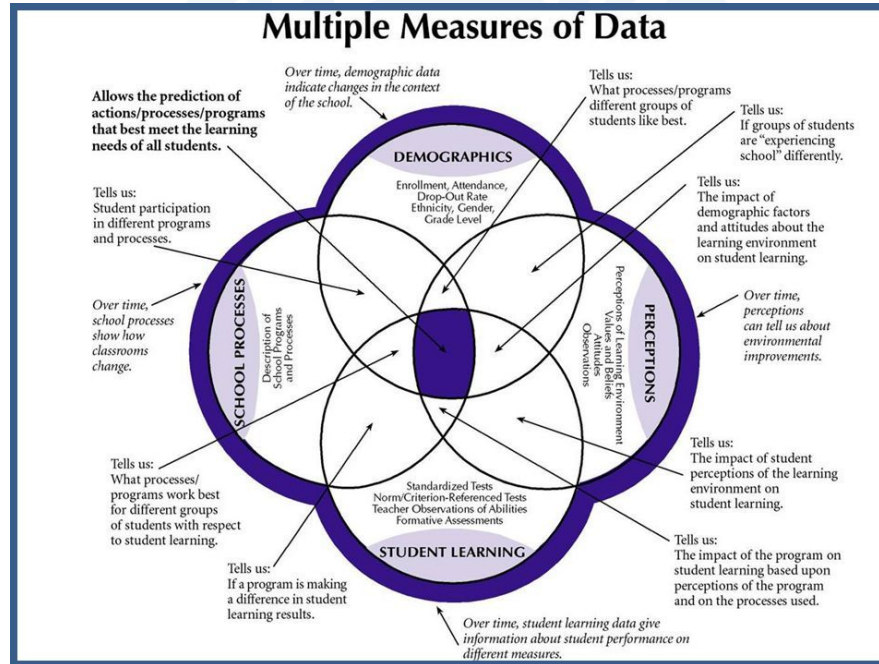How are we going to get to where we want to be?

1) Continuous Improvement Plan
   - Objectives
   - Strategies
   - Activities
   - Budget

2) Implementation Strategies
   - Leadership Structures
   - Collaborative Strategies
   - Professional Learning
   - Partnerships

CSD CHELTENHAM SCHOOL DISTRICT

Multiple Measures of Data

Questions that drive the work

1) Are we creating opportunities that result in transferable and authentic learning experiences?

2) What is a CSD graduate prepared to BE or DO?

3) Are we preparing students for the reality of life?

CSD CHELTENHAM SCHOOL DISTRICT

Plan to accomplish the work

1) Portrait of a Graduate
2) Teaching and Learning
3) Social Emotional and Mental Health
4) Diversity, Equity, Belonging and Inclusion
5) Climate and Culture for Student Success
6) Communication
7) Infrastructure, Facilities, and Finance

CSD CHELTENHAM SCHOOL DISTRICT

Plan to accomplish the work

Teaching and Learning

Student success will increase through rigorous curriculum design, instructional best practices, meaningful programming and purposeful environments that maximize learner autonomy and capacity to thrive.

Curriculum - Transfer Goals

Transfer goals specify particular transfer abilities; they reflect what we want students to be able to do when they confront new information, issues, challenges, and opportunities.

- Develop and deepen over time
- Performance based
- Application of learning in new situations
- Require strategic thinking
- Independent performance
- Apply habits of mind

Curriculum - Authentic Performance Tasks

A **performance task** is any learning activity or assessment that asks students to construct a multifaceted response, create a product, or produce a demonstration … to *perform* their learning.

G - a real world **goal**
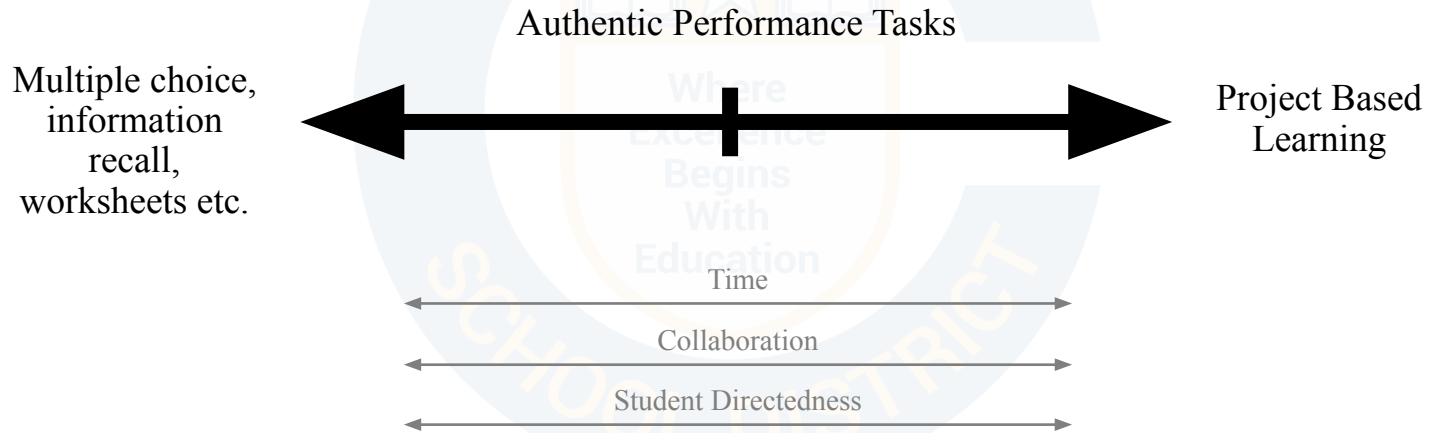**R** - a meaningful **role** for the student
A - a target **audience**
S - a contextualized **situation** that involves real-world application
P - student-generated culminating **product(s)** and **performance(s)**
S - criteria for judging **success**

The Deeper Learning Continuum

Understanding where authentic performance tasks lie in the curricular spectrum

Authentic Performance Tasks

Multiple choice, information recall, worksheets etc.

Project Based Learning

Time

Collaboration

Student Directedness

CSD CHELTENHAM SCHOOL DISTRICT

Addressing the Tension Directly

Deeper Learning and standardized testing can live harmoniously given proper contextualization

Profile of a Graduate

- Think creatively
- Communicate clearly
- Collaborate effectively
- Act responsibly
- Think critically
- Create digitally

Good Assessment is a photo album, not a single snapshot

- Standardized tests are a great measure of what they measure
- Deeper learning helps build a proper assessment portfolio

Ruminations on Deeper Learning and Standardized Tests

- Tests do not assess a holistic set of performance measures
- The most widely missed questions on state tests are at DOK (depth of knowledge) levels 3 and 4 (inference and creativity), not levels 1 and 2 (recall and basic application)
- Therefore, Deeper Learning IS the best test prep
- Analogy: Activities of an athlete in the off season
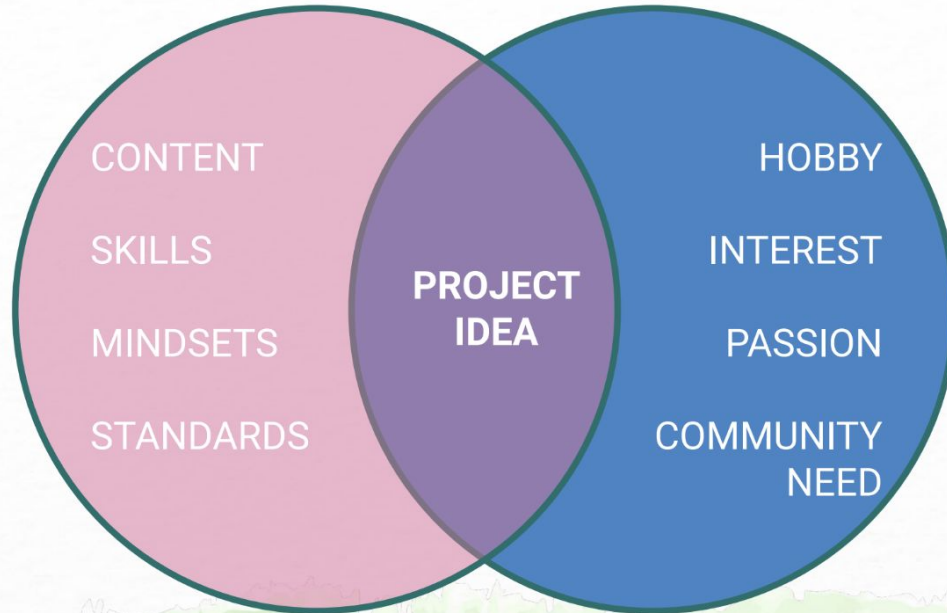
PBL or STEM or Interdisciplinary?
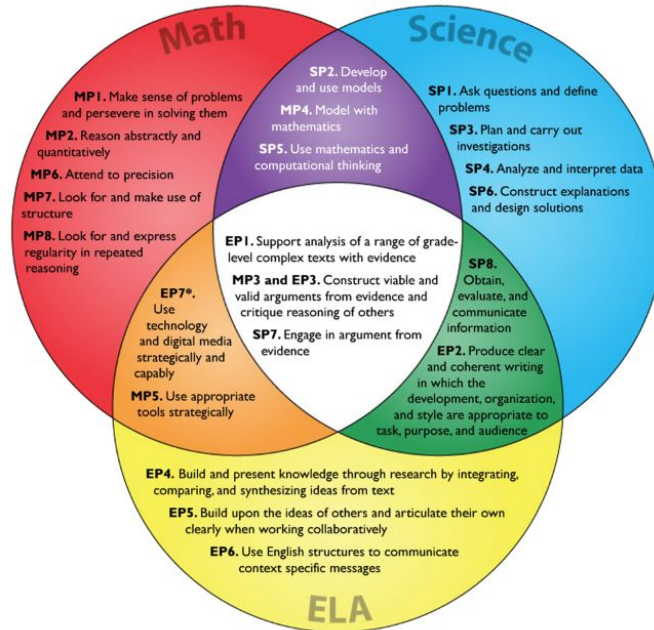
MP: Mathematical Practice
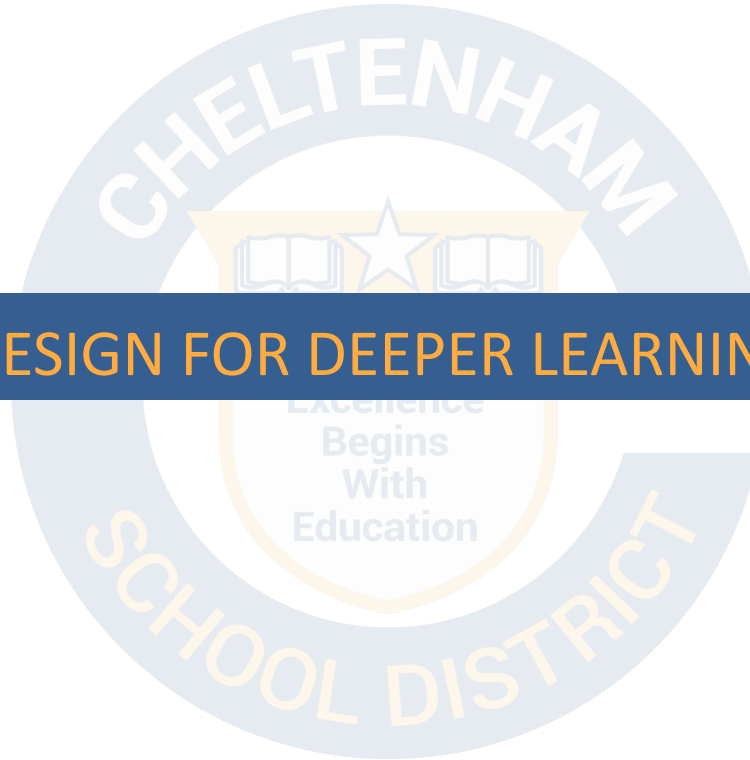
SP: Science and Engineering Practice

EP: English Language Arts Competency

Note: The Dimensions from the C3 (College, Career and Civics) Framework for Social Studies Standards also overlap.

Where do project ideas comes from?

Venn diagram with two overlapping circles. Left circle: CONTENT, SKILLS, MINDSETS, STANDARDS. Right circle: HOBBY, INTEREST, PASSION, COMMUNITY NEED. Overlap: PROJECT IDEA.

DESIGN FOR DEEPER LEARNING

Design Thinking - to - Design Abilities
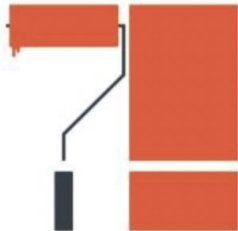

Experiment Rapidly

Synthesize Information

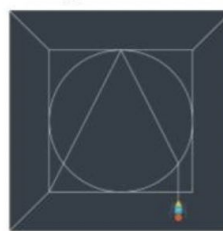Learn from others (People and Contexts)

Navigate Ambiguity

Build and Craft Intentionally

Communicate Deliberately
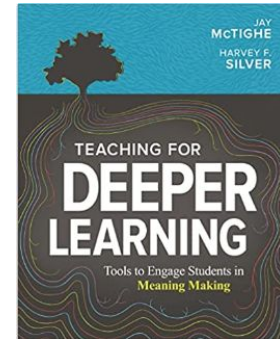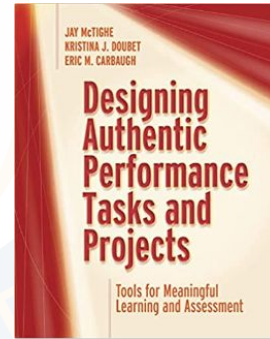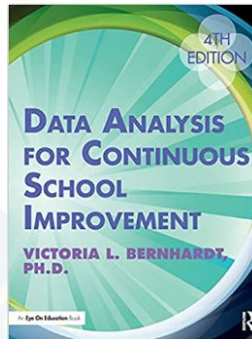
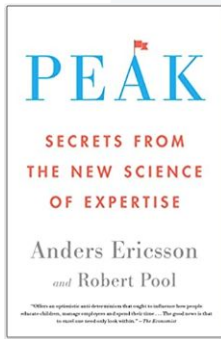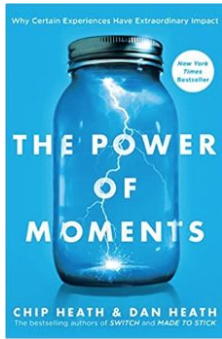Design your Design Work

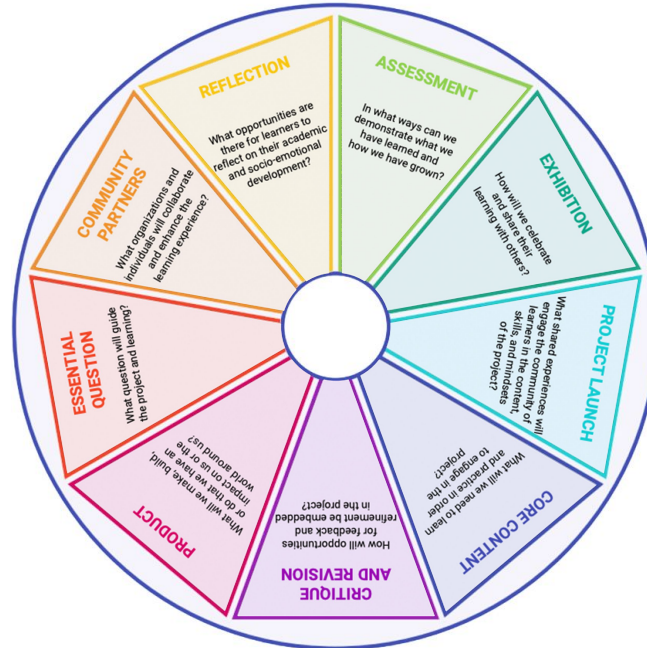Move Between Abstract and Concrete

Educators as Experience Engineers

Designing Moments so students can celebrate Peak experiences as part of the Continuous School Improvement process measured by Authentic Performance Tasks as we progress toward Deeper Learning.

Design for Deeper Learning Kaleidoscope

26

Deeper Learning Competencies

DEEPER LEARNING HUB

CONTENT EXPERTISE

Students develop key competencies, skills, and dispositions with ample opportunities to apply knowledge and engage in work that matters to them.

CRITICAL THINKING & PROBLEM SOLVING

Students consider a variety of innovative deeper learning approaches to address and understand complex questions that are authentic and important to their communities.

EFFECTIVE COMMUNICATION

Students practice listening to understand, communicating with empathy, and share their learning through exhibiting, presenting and reflecting on their work.

COLLABORATION

Students co-design projects with peers, exercise shared-decision making, strengthen relational agency, resolve conflict, and assume leadership roles.

ACADEMIC MINDSET

Students establish a sense of place, identity, and belonging to increase self-efficacy while engaging in critical reflection and action.

SELF DIRECTED LEARNING

Students use teacher and peer feedback and self-reflection to monitor and direct their own learning while building self knowledge both in and out of the classroom.

27

Who is already creating these moments?

Challenge

Computer Science

Engineering

Project Based Learning

STEM

Deeper Learning Practitioners

Who and what is in the room?

Grade(s)	Topic	Teacher(s)
3	Ozobots	Ryan Morrison
3-4	FIRST Lego League and PBL for Elementary Schools	Jaime Osea
4	PBL in Elementary Science - Circuits	Nancy Bianchini
4	Scratch Coding for Multiplication	Nancy Bianchini, Christine Decker and Postell
4	Recycled Orchestra	Tavia Brooks
4	FIRST Lego League	Maria Hobson
5-6	On-Tour Music	Tiffany Lee

Who and what is in the room?

Grade(s)	Topic	Teacher(s)
7	APP Lab - design for 3rd graders	Sean Quenzer
7	Daily Overview, StoryMap and Chimera Projects	Isaac Stanford
7-8	Logic Maze, Sphero Maze, String Art, Copper Homopolar Sculptures, and Hovering Through History Projects	Omar Rose
9	The Power Project	Johanna Cella and Mike Kwas
9-12	Cyber:bots, Cyber Range, Oculus/Game Design, and Girls Who Code	Sarah Putterman
9-12	Student Independent Projects	Brian Smith

APPENDICES

CSD CHELTENHAM SCHOOL DISTRICT

Appendix A: Department of Innovation Blog

CSD INNOVATION BLOG

CREATIVE TEACHING FOR ENGAGING LEARNING

https://csdinnovation.wordpress.com

Appendix B: Deeper Learning (from its inception)

Appendix C: Redesigning Experiences

34

4 Elements of Defining Moments

1) **Elevation**: to construct elevated moments, we must boost sensory pleasures.
2) **Insight**: moments when people abruptly see things as they were, and recognize the potential lasting impact.
3) **Pride**: defining moments capture us at our best - moments of achievement, moments of courage.
4) **Connection**: defining moments are social - these moments are strengthened because we share them with others.

CSD CHELTENHAM SCHOOL DISTRICT
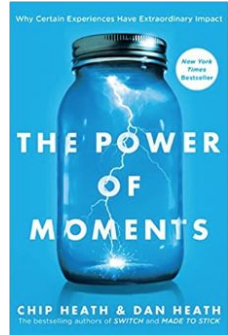
Moments are either …

1) Transitions = A peak moment can be delivered at the time of transition.

2) Peaks = milestones need to be celebrated.

3) Pits = negative defining moments - moments of hardship or pain or anxiety. Pits need to be filled.
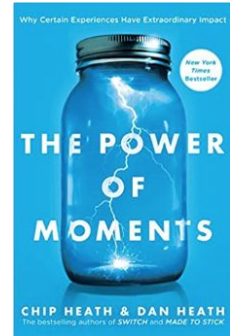
Peak Performance (limitations of performance automaticity)

We all follow pretty much the same pattern with any skill we learn, from baking a pie to writing a descriptive paragraph. We start off with a general idea of what we want to do, get some instruction from a teacher or a coach or a book or a website, practice until we reach an acceptable level, and then let it become automatic … If all we want to do is to safely drive your car from point A to point B … then this approach to learning is all you need.

PEAK

SECRETS FROM
THE NEW SCIENCE
OF EXPERTISE

Anders Ericsson
and Robert Pool
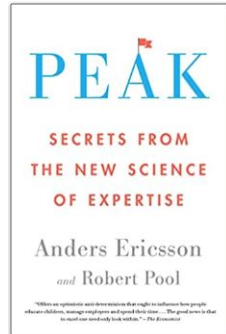
Peak Performance (limitations of performance automaticity)

But there is one very important thing to understand here: once you have reached this satisfactory skill level and automated your performance - your driving, your tennis playing, your baking or pies - you have stopped improving.

Once a person reaches that level of "acceptable" performance and automaticity, the additional years of "practice" don't lead to improvement … **These automated abilities generally deteriorate in the absence of deliberate efforts to improve**.

PEAK

SECRETS FROM
THE NEW SCIENCE
OF EXPERTISE

Anders Ericsson
and Robert Pool