



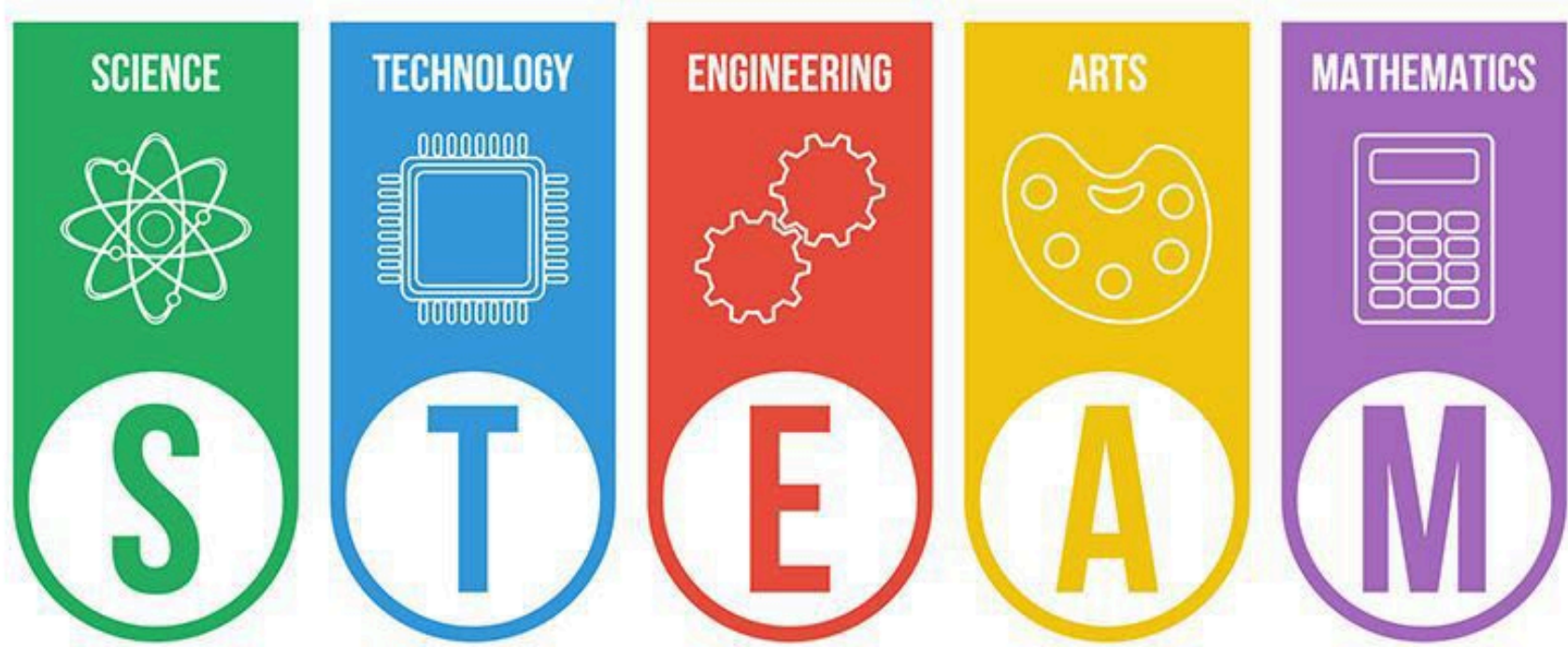
Fireside Chat with the SDE!

STEM Ecosystem Convening – March 30, 2023



Idaho State Department of Education

DEBBIE CRITCHFIELD, SUPERINTENDENT OF PUBLIC INSTRUCTION



EDUCATION



State Science Programs

Includes:

- Science Coaches
- Professional Development Classes
- Science Education Grant
- Think Make Create Trailers Partnership
- Idaho Science and Aerospace Scholars Program



Science Coaches



Offering Professional Development Classes

- Idaho Science Standards Class (75 participants this year!!)
- Supporting Educators class for Admin
- Bite-Sized Science in Literacy- online and in person workshops
- Storylines- Next level taking standards and creating units around phenomena

The Idaho Science Coaches are a FREE resource; we can support you by:

- Providing tailored PD to departments, schools, & districts.
- Mentoring new science teachers.
- Being a content driven thinking partner.
- Building, modeling, or co-teaching 3D science lessons.
- Locating or building resources that fit your classroom needs.
- Mapping out curriculum.
- Shifting science instruction to 3D teaching and learning.
- Incorporating phenomena in lessons.
- Aligning classroom assessment to state standards.

Informal Science Education Support



Think, Make, Create Trailers



Idaho Science Education Grant

- Non-profit programs registered in Idaho for more than 1 year.
- Expansion or maintenance of existing program
- \$24,100- program must match 50%





State Technology Programs

Includes:

- ✓ Software
- ✓ Curriculum
- ✓ Professional Development
- ✓ Certifications










Create Idaho Adobe



Middle & High



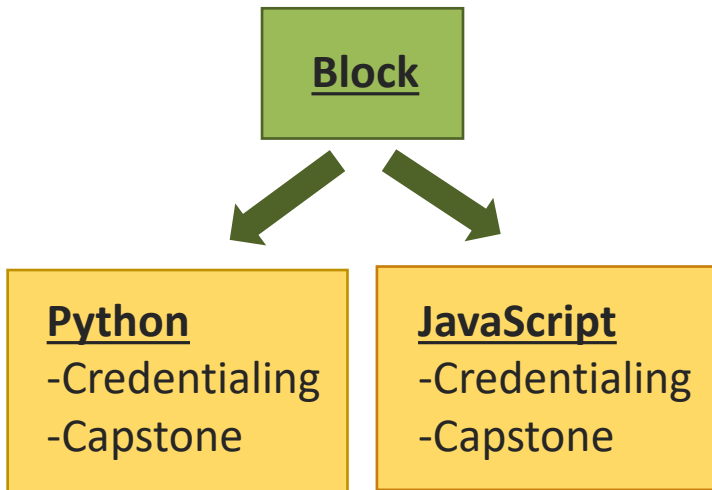
	After Effects
	Animate
	Dream Weaver
	Illustrator
	In Design
	Photoshop
	Premier Pro

Elementary



- ✓ Presentation
- ✓ Slideshow
- ✓ Infographic
- ✓ Lesson Plan
- ✓ Poster
- ✓ Learning Journal
- ✓ Flyer
- ✓ Worksheet
- ✓ Resume
- ✓ Report Card

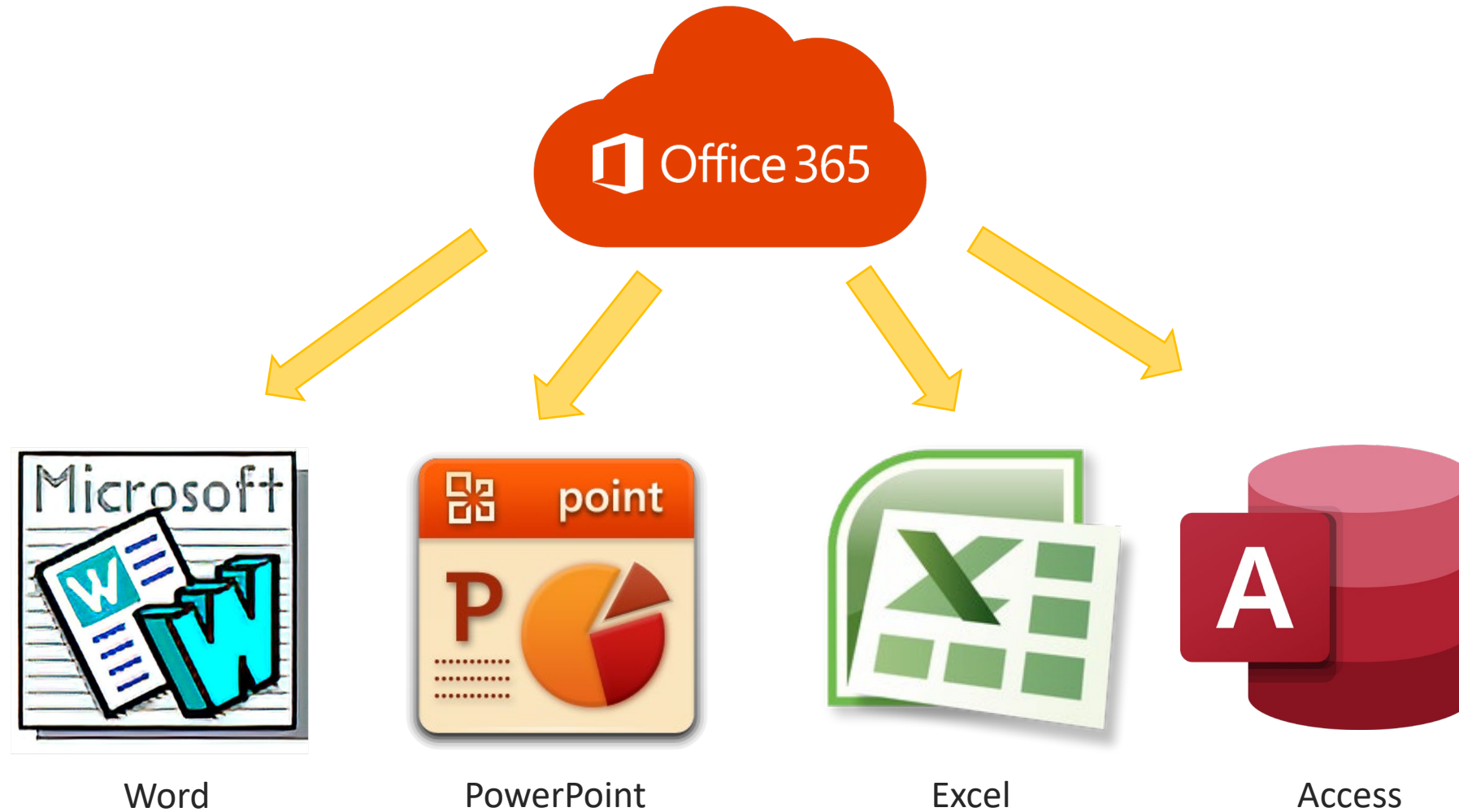
Coding in Minecraft



- Artificial Intelligence
- Cyber Security
- Developer
- Software Engineer
- Data Scientist
- Systems Administrator
- Etc.



Microsoft Office 365



Micro MAX- Summer Training



The poster features a dark, starry background with a purple silhouette of Idaho on the right. At the top, the title 'Micro MAX' is written in large, yellow, hand-drawn letters. Below it, the subtitle 'ONE DAY DEEP DIVE INTO EPIC HANDS ON WORKSHOPS' is in white. Three vertical panels list workshop topics: 'Create Idaho' with Adobe Creative Cloud icons, 'MICROSOFT' with Office 365 icons, and 'CODING IN MINECRAFT' with a Minecraft character icon. A purple box at the bottom right contains the text 'ACROSS IDAHO' and 'Grades 6-12'. The Department of Education logo is in the bottom right corner.

Micro MAX

ONE DAY DEEP DIVE INTO EPIC HANDS ON WORKSHOPS

Create Idaho
Photoshop
Illustrator
In Design
Animate
After Effects
Premier Pro

MICROSOFT
Office 365
Word
Excel
Power Point
Access

CODING IN MINECRAFT
JavaScript
Python

ACROSS IDAHO
Grades 6-12

DEPARTMENT OF EDUCATION
STATE OF IDAHO

Coeur d'Alene
July 17th 8:00- 5:00
Location- TBD

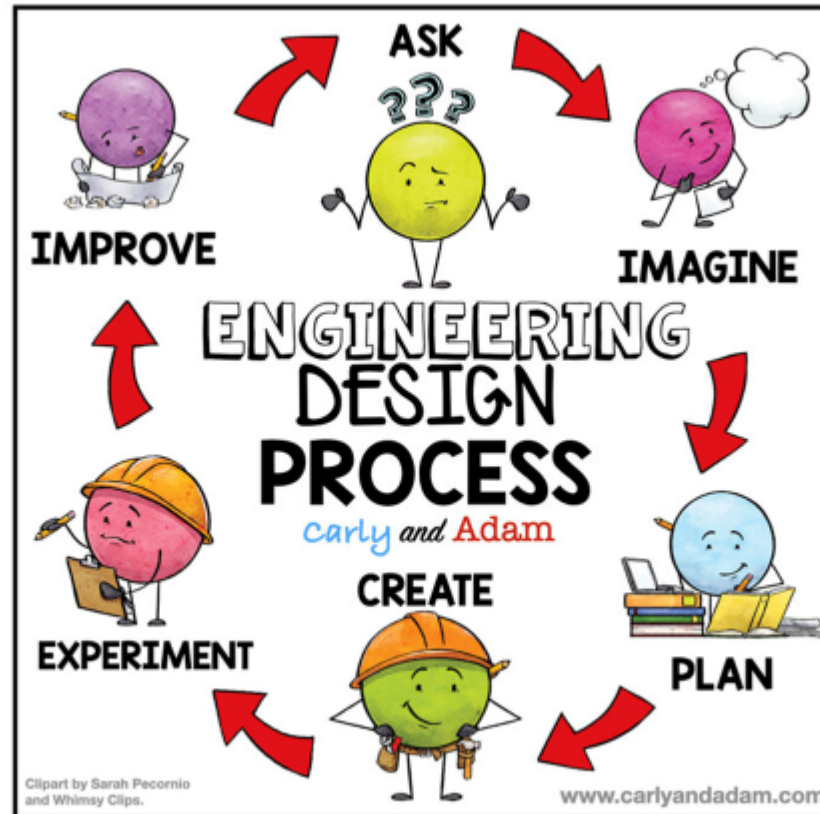
Boise
July 19th @ 8:00-5:00
Location- TBD

Eastern Idaho
July 21st @ 8:00-5:00
Location- TBD

Free for Idaho Educators with an option for a \$60 credit.



Engineering Process- The Glue



Presentation Title | 11

Presentation Title | 12



State ARTS Supports

Includes:

- Curriculum
- Professional Development
- Resources



STEM vs STEAM vs Arts Integration

[Institution for Arts Integration and STEAM](#)

	STEM	STEAM	ARTS INTEGRATION
Definition of the Approach	An educational approach which intentionally integrates science, technology, engineering, and mathematics to create real-world learning opportunities through investigations, problem-solving, and evidence-based explanations.	An educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking.	An approach to teaching and learning through which content is taught and assessed equitably in and through the arts.
Use of Standards and Assessments	Direct connection to 2 or more STEM content standards. Both content areas are assessed within the lesson.	Direct connection to naturally-aligned content and arts standards. Both are assessed within the lesson.	Direct connection to naturally-aligned content and arts standards. Both are assessed within the lesson.
	Similar	Same	
Purpose for Using the Approach	Integrates any STEM area with another STEM area through naturally-aligned standards surrounding a point of inquiry.	Integrates any STEM area with another arts area through naturally-aligned standards surrounding a point of inquiry.	Integrating the arts and any content area with another content through naturally-aligned standards.
	Similar	Similar	
Foundational Support	Grounded in inquiry, problem-solving and process-based learning. The lesson is created intentionally to address these focus areas.	Grounded in inquiry, problem-solving and process-based learning. The lesson is created intentionally to address these focus areas.	Grounded in aligned standards and assessment through a central topic. The lesson addresses the standards within the context of the topic.
	Same	Different	

Why the "A" in STEAM is important!

“Art is about discovering and creating ingenious ways of problem solving, integrating principles or presenting information. Picture an architect, they use engineering, math, technology, science and arts to create stunning buildings and structures.” - Shelley Brewer

“The goal is to foster the true innovation that comes with combining the mind of a scientist or technologist with that of an artist or designer. The idea that design thinking and creativity are essential ingredients for innovation” - John Maeda, Rhode Island School of Design



State Math Supports

Includes:

- ✓ Curriculum Review
- ✓ Professional Development
- ✓ Regional Math Centers
- ✓ Imagine Math
- ✓ Idaho Math Transitions



Regional Math Centers



University of Idaho

Lewis-Clark State College

Boise State University

Idaho State University

Imagine Math for all K-12 Students



il

imaginelearning.com

Imagine Math in Idaho

Imagine Math and Imagine Math Facts are provided for Idaho school districts and charter schools



STE(A)M starts with an authentic question or problem



A zoo wants to add more realistic shelters for their animal exhibits.

IS

- Science: students asking questions- Are all shelters the same? How does a shelter protect animals. Research various animals and their shelters to compare.
- Technology: Google Earth, Google images, or even as simple as the tools they use to create the shelters- technology doesn't always mean a computer!
- Engineering: Process of design- asking questions, plan, create, redesign, what materials would be best for that animal.
- Arts: Actual drawing or model of shelter with design elements- texture, color, 3D vs 2D
- Math: Scale and proportion- bear cave too big to fit in classroom, scale down. Hummingbird nests are super small, scale up to be able to show different aspects of the shelter.

Is Not

- Science: Animals are included in the projects so it must be science!
- Technology: All students watch the same pre-determined video
- Engineering: Doesn't have to be a physical model (but could be!)
- Arts: Cutting out patterns of different shelters
- Math: Counting numbers of twigs in the nest.

Idaho Science Teaching Association &
Idaho Council of Teachers of Mathematics &
Idaho Environmental Educators Association

Time To Travel

IMAGINE THE PLACES

**WE'LL GO
WITH S.T.E.M.**

Come be a part of Idaho's premiere summer professional development opportunity for math and science educators at Borah High School on August 3rd and 4th, 2023!

**SAVE
THE
DATE**

More information on how to sign up to present and attend will be coming later this spring!



Thanks for inspiring our learners!



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