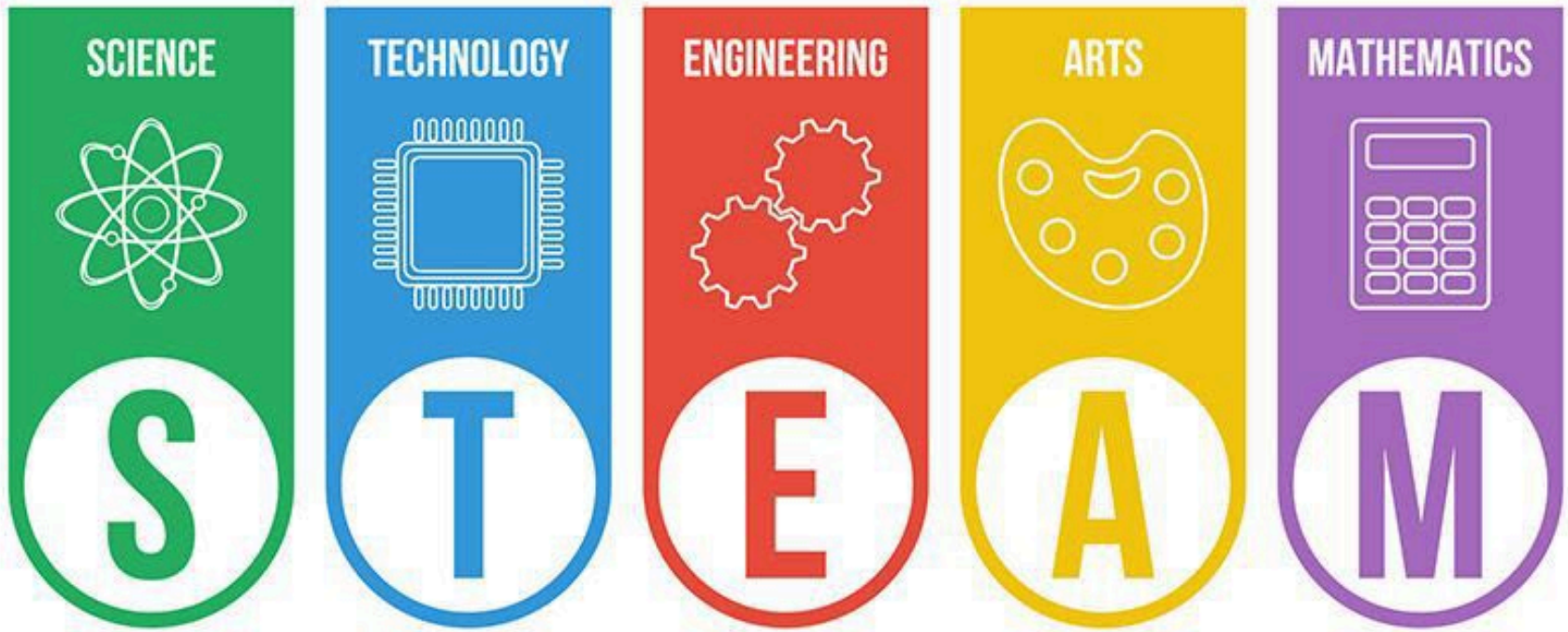
Fireside Chat with the SDE!

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

Create Idaho

- Ae After Effects
- An Animate
- Dw Dream Weaver
- Ai Illustrator
- Id In Design
- Ps Photoshop
- Pr Premier Pro

Elementary

Express

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

Coding in Minecraft

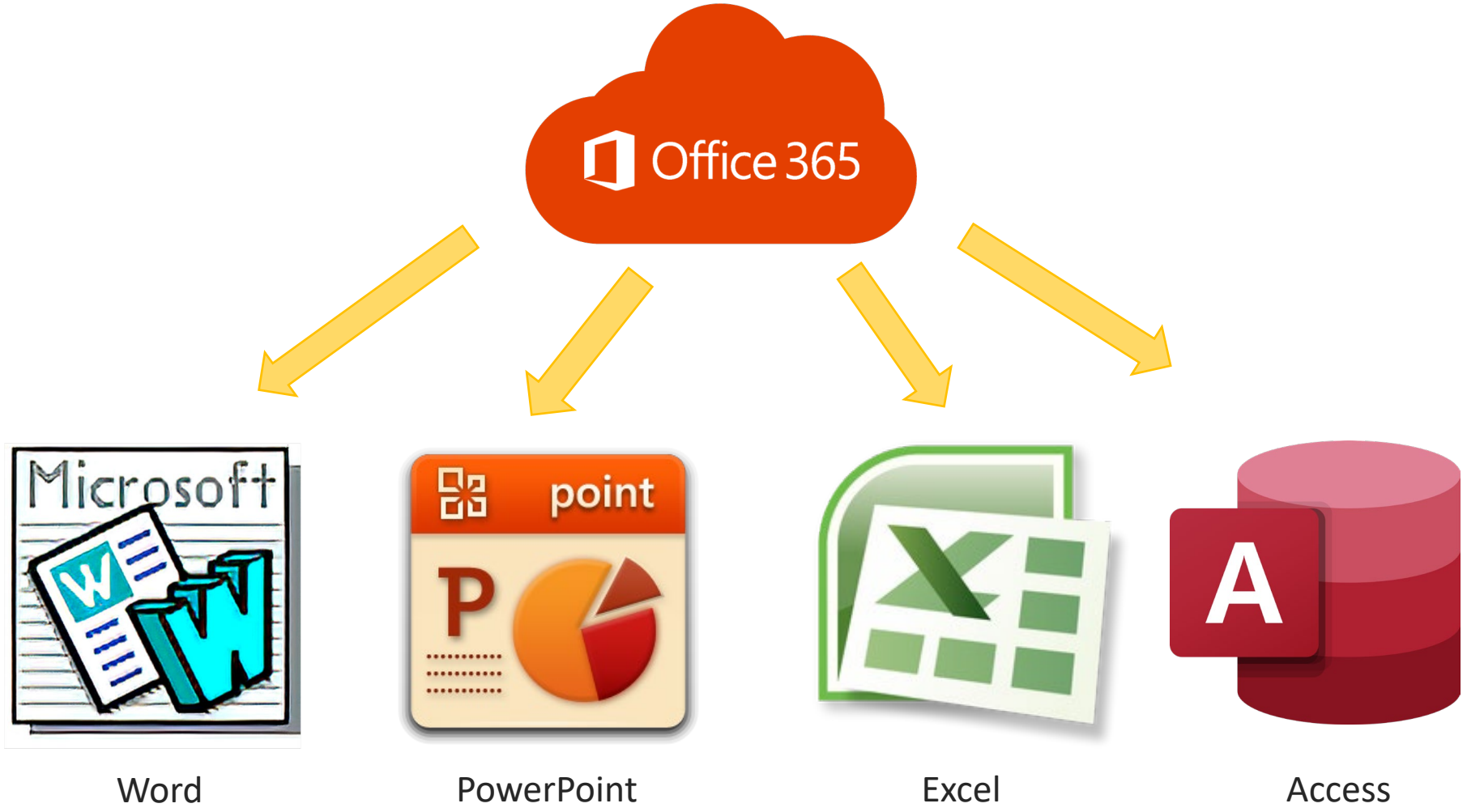
Block

Python
-Credentialing
-Capstone

JavaScript
-Credentialing
-Capstone

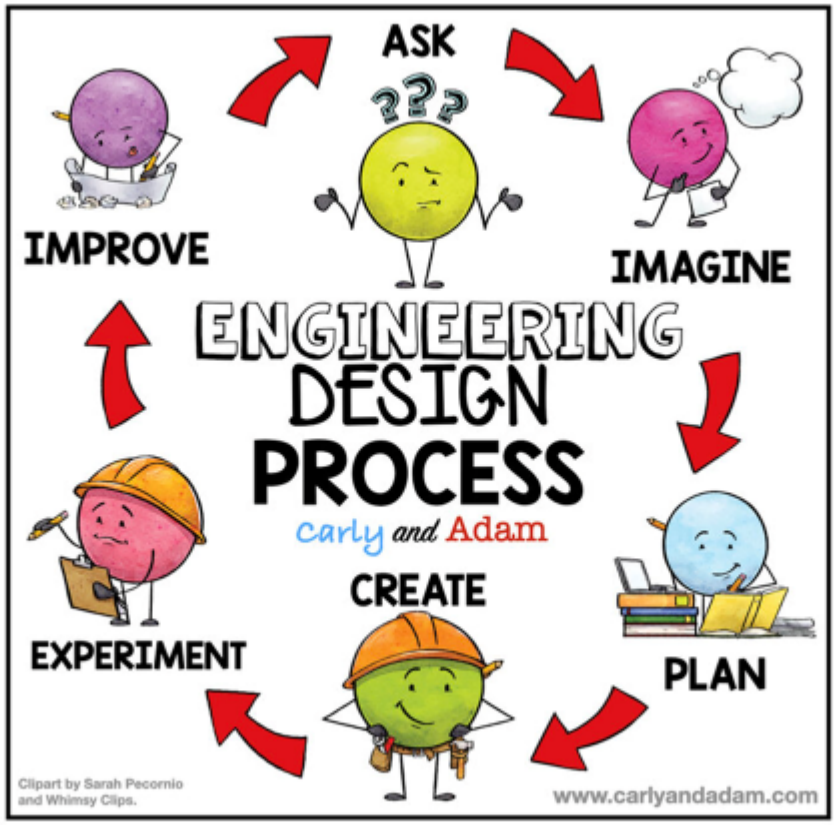
- Artificial Intelligence
- Cyber Security
- Developer
- Software Engineer
- Data Scientist
- Systems Administrator
- Etc.

Microsoft Office 365



Micro MAX- Summer Training

Engineering Process- The Glue



State ARTS Supports

Includes:

- ☑ Curriculum
- ☑ Professional Development
- ☑ Resources

STEM vs STEAM vs Arts Integration

[Institution for Arts Integration and STEAM]

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

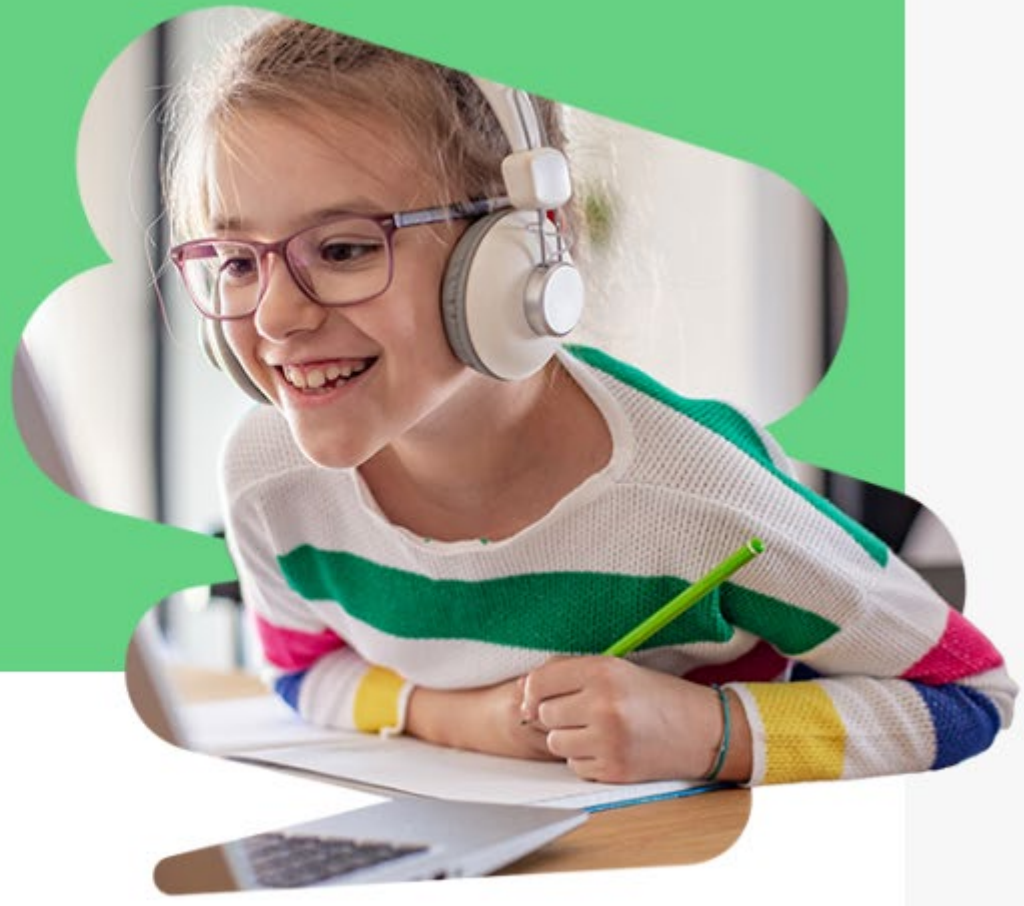
University of Idaho *Lewis-Clark State College* *Boise State University* *Idaho State University*

Imagine Math for all K-12 Students

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 to 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!

IDEEA

Thanks for inspiring our learners!

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