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Curriculum Working Group

CSEWI and ARCHES (Alliance of Regional Collaborations for Heightened Educational Success) thank all working group participants for their time, insight and input at our December 9 STEMCAP Forum. I believe we are off to a very good beginning, I request that you do two things:

(1) Please review your working group assignment in the attached roster and email Teresa Henderson with any working group changes:

teresa.henderson@csewi.org.

(2) Please find below rough "first notes" from each of the three working group sessions. You will see that working group inputs have been arranged to align with the four categories of a STEM-related continuum outlined at the Forum: Inspire, Engage, Educate, Employ. These are rough notes and more complete working group session recaps will be forwarded by the end of January.

Before then, the facilitators ask that you review these first notes and provide any comments by January 15, to ensure incorporation into the complete recap. We especially welcome your comments on the draft goal statements and the criteria for STEMCAP program models/best practices. To accelerate the feedback, we ask that you forward comments directly to the facilitators:

Recruitment/Retention: Victoria Conner (v.conner@strategicvitalityllc.com)

STEM Curriculum: Diane Siri (iris1996@aol.com)

STEM Transitions: Dennis Galligani (galligani@arches-cal.org)

Curriculum Working Group Notes

Draft Goal Statement:

Create, fund, train and integrate relevant and inspiring STEM curriculum, activities, materials and courses into both formal and informal education beginning at preschool.

INSPIRE

Each student

Each teacher

Each community through collaboratives

With curriculum that is global and innovative

Include activities that are relevant

Show possibility of future opportunities

Show relevant role models "doing it"

Increase expectations and access

Show early success and eliminate exclusivity

Connect innovation and application

ENGAGE

Students, educators, parents, community and industry as partners
Teachers and counselors through STEM professional development
Align public and private resources
Cultural relevancy and role models
Non-traditional teachers (industry, retirees, volunteers)
Regional collaboratives
Novice to expert
Geographic diversity- urban to rural
Time and resources outside of traditional school day and year
New measures of success
Public private partnerships
Enhance academic relevance of STEM curriculum
Career technical education redefined
Popular media and technology
Informal STEM opportunities

EDUCATE

Each student
Each teacher
Vary delivery to include more visual, auditory, And kinesthetic activities
Provide real examples and applications for theoretical concepts
Increase relevancy by connecting 3 R's
Expand STEM activities p-20
Fund materials and facilities
Redefine academic relevance
Embrace alternative approaches
Identify best practices and scale up
Expand student exposure to STEM career options
Expand internships for students and teachers
Educate for growth STEM industries and skills

EMPLOY

Develop and integrate relevant curriculum for growth STEM career opportunities
Identify future workforce career skills for middle and high school career technical ed

Gain agreement that the one of goals of
education is to prepare for future jobs
Link education to California's economic vitality
Link STEM courses to current academic standards
New marketing to attract students
Connect school and family to STEM employment
Provide access to job experts
Increase apprenticeships and work experience

CRITERIA FOR BEST PRACTICES AND ROLE MODELS

Measured
Evaluated
Both formal and informal
Portable
Replicable
Applicable to diverse audiences
Inspiring
Access or delivery mechanism
Success based
Sustained
Relevant to STEM
Innovative
Scalable
Partnerships include all stakeholders
Cross segments
Defined focus area
Leadership driven
Cost effective...affordable
Improvement cycle defined

MEASURES AND OUTCOMES

Must include traditional tests somehow
College entrance and exit in STEM majors
Community college tech training completion
Job employment, applicants, success
Gap analysis
Success in implementing curriculum in ms and hs
Cost
Number of students served

ADDITIONAL NOTES

Need to review other states' successes
Evaluate current curriculum models

STEM curriculum needs to compete for time
Current tests and standards not aligned to STEM
Need a statewide champion...
Need dissemination plan
Need to understand and address current barriers to students choosing STEM careers and address those through new strategies

WHO IS MISSING?

Labor and Trade Associations
Chambers
Business Roundtable
Informal Science and Tech
Tech workforce suppliers
Geographical rep
CTA and CFT
Media