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## **Flip Chart Transcription from December 9<sup>th</sup> STEMCAP Forum Recruitment/Retention**

### Chart 1

Goal statement (key aspects/inclusions)

- Student engagement – Relevance (address the “why”)
- Student awareness
  - Tough area
  - Parent-driven (career decisions)
  - Need bi-lingual sessions
  - Address perceived “inaccessibility” of science – lab scientist image is only perceived career – no “accessible” career options
  - Teacher not a desirable path
  - Can we target first generation college?

### Chart 2

Goal statement (key aspects/inclusions, cont'd)

- Hidden jobs
- Articulation of career options
- Value of STEM career
  - Personal impact of STEM career not clear
    - Some students want career to make impact
  - Financial benefit of STEM career not clear
    - Some students want financial success
  - Recruit retirees as SMEs (subject matter experts)
- Math standards hurting
- Resources – attraction tool

### Chart 3

Goal statement (key aspects/inclusions, cont'd)

- Hands-on, experiential
- Skill sets

(Riordan) Call for rigorous research, especially as regards hands-on, experiential learning...anecdotal policy development creates disconnect

- What is out there?
- What new research is needed?

Standards checklist

### Chart 4

Goal statement (key aspects/inclusions, cont'd)

Increase number of...

Address root cause

All available resources to engage  
Value of STEM  
Awareness/exploration  
Value Proposition  
Paradigm

## Chart 5

Increase number of STEM students, graduates, teachers, professors, mentors by utilizing all available resources (public and private) to .....

Building  
Pedagogy  
Reverse trend  
Change model

## Chart 6

### **INSPIRE**

CCST recommendation: Governor serve State as S&T champion  
Return on Investment  
Achievability/awareness of value  
Role models  
Script manipulation – Hollywood/television (e.g. Numbers, CSI)  
Websites  
Update image of S&T  
Personalize crisis – call to action re: generational fears/concerns of upcoming generation, e.g. global warming, etc. Create social relevance  
Field trips

- Liability issue

## Chart 7

### **ENGAGE**

Relate science and tech to everyday life  
Technical mentors in classroom  
Resources – Subject Matter Experts (SMEs)  
Relevant – women, others  
Volunteers – Future Scientists/Engineers

## Chart 8

### **ENGAGE (cont'd)**

Models

- Customize engagement

- Pre-service opportunity
- Math and science classes at University
- Adj Teacher Corps – S&Ts part of Corps to support
- Teacher as scientist – give S&T teachers scientist status – opportunities in industry, informal science etc.

## Chart 9

### **EDUCATE**

Saturday programs

Ombudsman to translation

El Camino Space and Science Day

- First Robotics
- Family

Different strategies, different audiences

15 scans/CDE standards

## Chart 10

### **EDUCATE (cont'd)**

Legislative awareness of Board of Education/Governor

Students – early identification

No mandated minutes except PE (CDE clarification re: mandated schoolday subject times)

## Chart 11

### **EMPLOY**

Utilize HR research re: employee satisfaction – key aspects:

- Relevance – do they know where they fit in big picture?
- Confidence in leadership of their organization?
- Do I feel valued, are they investing in me?
- Etc.

Pedagogy

Strong induction (BITSA induction)

Retention – teacher collaboration

Tough Districts – incentives

Measures/sustainability

## Chart 12

### **EMPLOY (cont'd)**

Internship

Parallel: Pedagogy/content

### Chart 13

#### **Criteria for best prax, model programs, etc.**

Leadership capacity  
Hands-on, experiential  
Impactful objectives: Audience identified/assessments  
Third party evaluation performed  
Replicability  
Teaming  
Cost-effective  
Measurability  
ART – Achievable, Relevant, Time-Based  
Accountability  
Contribution to deep understanding  
Demonstrated value  
21<sup>st</sup> Century workforce relevance  
Collaboration – integrated beyond mere partnering  
Appropriateness  
Sustainability  
Systemic  
Scalability  
Inquiry-based  
Both qualitative and quantitative objectives  
Transferability  
Not dependent on one champion or SME or founder for future success

### Chart 14

#### **What measures/outcomes could be used to evaluate success within this priority area?**

Positive impressions delivered e.g. news clips, conference addresses, etc.  
Media time/dollars  
Evaluation models/tools identified  
Recommendation of metrics/baseline  
Amount of new partnerships  
Changes in programs

### Chart 15

#### **What other orgs/individuals?**

California School Boards Assn.  
California Math Council  
County Science and Math Coordinators  
County Supts  
Prof Student  
CTC (California Teacher Credentialing)  
IWITTS – Institute for Women in Technology Trades and Sciences  
California Business Roundtable

Military

Media – California Media Council

CalSpace Institute

CTA?

AFTA?

HR reps

TechNet (Nano, Info, Bio)

Communication:

- Web/electronic
- Videocams
- Webinars
- CCC Conference