



***ACTIVE LEARNING***  
COMMUNITY PARTNERS  
*WORKING GROUP*

2016 Report to the Governor's  
STEM Advisory Council

# A Tool for Quality Informal STEM Programming

Dimensions of Success  
*a pear observation tool*



# STEM Active Learning Community Partners

12 Dimensions of Success  
for STEM Program Quality

September, 2015 DoS Professional  
Development Pilot Workshops

60 Participants

Workshop Goals:  
Evaluating 12 Dimensions  
and Defining a Learning Goal





## STEM Learning Goal

Pre-Workshop Score: 2.24

Post-Workshop Score: 3.84

**Average % of Improvement:**

71%

## Features of Learning Environment

(Pre -> Post):

**Organization** (1.31 -> 4.47)

**Materials** (3.34 -> 4.68)

**Space Utilization** (1.21 -> 3.39)

**Average % of Improvement:**

153%





## Activity Engagement

(Pre -> Post):

**Participation** (2.53 -> 4.05)

**Purposeful Activities** (2.68 -> 4.11)

**Engagement with STEM** (2.87 -> 3.95)

**Average % of Improvement:**

50%

## STEM Knowledge & Practices

(Pre -> Post):

**STEM Content Learning** (2.79 -> 3.55)

**Inquiry** (3.17 -> 3.96)

**Reflection** (2.1 -> 4.29)

**Average % of Improvement :**

52%





## Youth Development in STEM

(Pre -> Post):

**Relationships** (1.43 -> 3.37)

**Relevance** (2.18 -> 4.05)

**Youth Voice** (2.34 -> 3.79)

**Average % of Improvement :**

**95%**





## TOTAL STEM LESSON PLAN CHANGE

**(PRE -> POST WORKSHOP):  
(2.32 -> 3.96)**

**% OF IMPROVEMENT**

**71%**





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IMPROVING STEM EDUCATION IN IOWA,  
**ONE CHILD AT A TIME**