



Virginia Informal Environments: Cultivating Vines of Commitment for STEM

Joanna K. Garner, Ph.D.

Associate Director for Program Development

The Center for Educational Partnerships

Darden College of Education

Old Dominion University

Educators came from informal learning environments across Virginia to redesign an exhibit to promote STEM



Participants were fifty seven educators from more than thirty informal learning environments

Step 1:
Articulate
mission and
values in
relation to
STEM concepts



“List the values, commitments, or real world problems that your organization is committed to disseminating or addressing”


“Preservation, conservation, protecting the natural environment”

“Learning from history”

“List the applications of science, technology, engineering and math”

“Understanding the role of plants on earth and how they directly affect land always have affected the quality of life for people (also animals). This will add a science component to our historical narrative of the Eastern Shore.”

“Math of quilting”

A photograph of a workshop or training session. Several people are seated at long tables, working on papers and using various supplies like pens, pencils, and containers. The participants are diverse in age and appearance. The text 'Step 2: Articulate STEM concepts in experiences as "big ideas"' is overlaid on the left side of the image in white font.

Step 2:
Articulate
STEM concepts
in experiences
as “big ideas”

Transformative experiences involve active, motivated use of an idea to expand or change one's perception of the world.

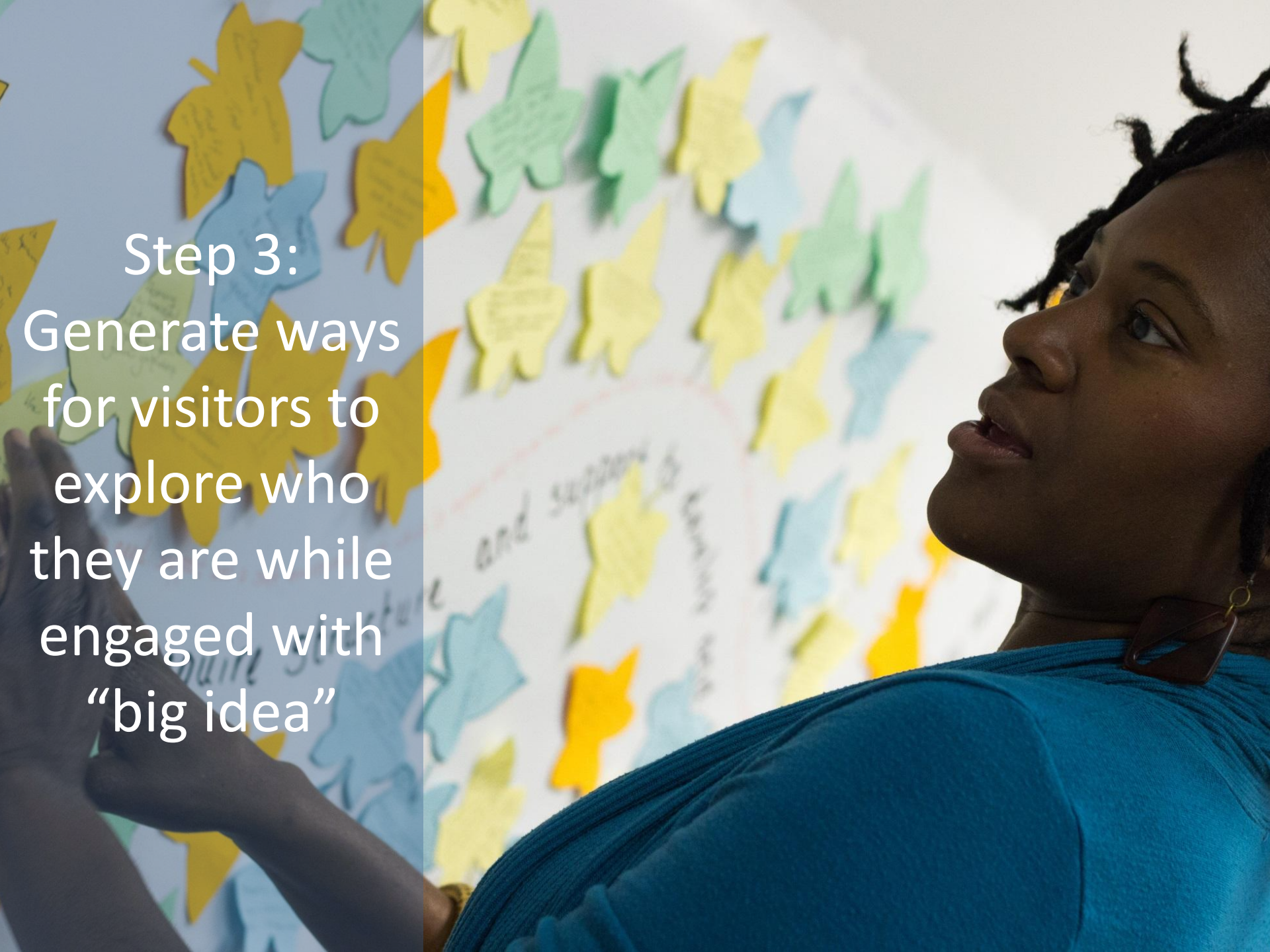


“How will your experience present concepts as powerful ideas?”

“Electro-magnetism can be used to save lives”

“After seeing the sky we could have in the planetarium and comparing to the sky we actually have in the observatory, guests will be inspired to investigate ways they can stop light pollution.”

Step 3:
Generate ways
for visitors to
explore who
they are while
engaged with
“big idea”



**Identity involves exploration and commitment
in self-perceptions, beliefs, goals, and intentions**



Because identity is role based, the role that the experience invites is important

“How will your experience promote self-awareness in the role?”

“Promote self-awareness by understanding that children are an important part of the community and have a responsibility to the community.”

“The visitor as part of the Earth System”

“By trying to visualize themselves living in the past.”

The workshop ended with a poster session to unveil their designs and promote networking among organizations



What commitments did participants make?

- Plans to use the identity model.
- Change concepts into big ideas.
- Intentions to present to their board.
- Use information for school field trip visitors.
- Take ideas for new exhibit back to their team.