Leadership Systems

Virtual Breakout

Group 1

Opportunities:

- Bringing in outside supports.
- OERs
- Partnering with universities
- Authentic Integration of content

Challenges:

- Starting over each year when new teachers arrive
- Pressures on decision-makers to prioritize ELA and math
- Inequitable access to science in elementary

Goals

- Science (phenomena) and engineering (problem-solving) as the anchor for authentic integration of science, ELA, math, social studies.
- Build teacher and leader capacity in NGSS to support access to high-quality, aligned science learning

Actors:

- Examples: PAEMST, Fellows
- Teachers as change agents
- State leaders
- School Boards

Actions:

- Work towards authentic content integration in elementary (pilots, PL, partnering, materials)
- Create networks (pre-service and in-service educators, OERs, Science and Literacy, Research/ Evidence-Based Practices, Industry.)

Group 2

Opportunities/Challenges

- Recognizing the long game
- Thinking about a continuum of PL-this is an opportunity to think long term Preservice to career PL systems, perhaps an evolutionary process
- Providing multiple entry points for professional learning can serve as an equalizer…such as utilizing virtual PL..what is the menu of PL options for teachers?
- We need to recognize the moral imperative for educating students in science
- Engaging folks by getting to the heart of the issue…phenomenon!
- Not thinking there is only one way to engage students in 3D sensemaking to meet NGSS.

Goals

- Embracing the complexity inherent in our systems (time, modality…)
- Developing systems that give educators agency
- Appealing to the actors the moral imperative and equity
- Developing a communication highway about shifts, standards, resources
- Developing a continuum of PL at the national/state level from pre-service through career
- Consider coalition building models to include in a continuum such as Fullan's Coherence

Actors and Actions

- State Departments of Education
- District Leadership
- Building Leadership
- Teacher Leadership
- Partners - agency, business
- Students

Group 3

Opportunities/Challenges

- **Challenge:** Administrators need to be on board
  - **Opp:** STEM Teaching tools as a resource for support; partnerships with admin that do support science to be the voice
- **Challenge:** Laws/bills (e.g., literacy act) affect how and when science is taught
  - **Opp:** Partnerships that can have a voice at the table
- **Challenge:** Lack of professional learning
  - **Opp:** Integration of equity; what 3D looks like, etc.
- **Challenge:** infrastructure

Goals

- More administrators supporting educators with teaching in science, particularly elementary—and work with networks of educators to take up 3D instruction
  - Identify what the "six month win" looks like in their context?
- Equity to be centered in all of our work, particularly in the launch (e.g., NGSS 101)
- Take advantage of things opening up after the shutdown to build relationships in deeper ways

Actors and Actions

- **Action:** What can admin do this semester to make science incrementally better? Organizing tools to help admin make 6-month plans
- **Action:** Shaping active bills that impact SciEd; Actors: engage industry, higher ed & STEM groups to shape bills
- **Action** of SciEd Implementation teams: disrupt the tack-on models of equity work & integrate focus on equity throughout; build relevant partnerships
- **Actors:** admin, union reps, range of educators, board members, parents/community
- **Actors:** state ed leaders directing funded initiatives towards Framework implementation
- **Actors:** "The Field": Promote individuals in the SciEd network to give them more cache in the work; NSTA can be a good partner in lifting up great work & people

Group 4

Opportunities/Challenges

- 110Kin10/Al Franken - what happened to this work?
- We need something more connected and scalable (things may be happening, but not visible)
- Opportunities to impact student achievement
- Do STEM leaders value what happens with teachers and classrooms
- Teacher leadership is not respected or operationalized (and when they emerge as leaders, their continued growth is not fostered). Not just instructional (teachers can have a larger impact)
- Need for school and district leadership to support vision for science education
- aspects of the system are siloed
- lack of resources
- how to we change a system that is so entrenched in existing practices - how do we support leadership in really shifting
- How do we make our leadership systems equitable and not just give lip service to it
- A lot is built off the backs of volunteers - how can this work be more sustainable

Goals

- Structures and systems that expand leadership (wider range of audiences and stakeholders)
  - Structured opportunities (scaffolded range) for teacher leadership that fosters their continued growth and increased capacity
  - Work to create and foster equitable leadership systems and equitable access for all educators: teachers and administrators (dismantle aspects of the system that do not promote equity)
  - Increase leadership capacity and perspectives of what leadership is (load is easier when there is collective leadership and different ways to participate)
  - Create ways to foster leadership on a broad scale, make visible the work different groups are engaging in. Built networks to expand beyond your context and value the work

Actors and Actions

- Legislators
- STEM leaders
- Differential pay?
- Set up a system/coalition (perhaps a pilot that then scales) to foster connecting and scaling leadership work across different aspects of the system
- Funding for supporting this work

Summary Slide

Opportunities/Challenges

- Tension held between urgency and long term planning
  - Build out multiple structure for this support
- Professional learning happen in incremental steps
- Technical Approach to implementation and Humanizing the approach

Goals

- **Building Capacity for Leaders at all Levels**
  - Backward planning from 2yrs down to 6 mo, in a way that makes sense for each context.
- Complex System - How do we own the change? Can't always rely on outside_____. What can be dismantled?
- Promote Critical Consciousness in integrated, daily ways

Actors and Actions

- Sustainability in funding
- To build capacity for leaders, we need to develop a common robust vision. One piece is to create networks of interested stakeholders – pre-service/ in-service educators, OERs, Science and Literacy, Research/ Evidence-Based Practices, Industry.
- EQUITY – representative leaders {how do we increase opportunities}

Building Capacity for Leaders – Our Pitch

Leaders set the vision and mission for the school – there is no good school without great leaders. Leaders at all levels are needed to keep good work in science moving forward by valuing teacher expertise with science content, practices, and pedagogy.

Supporting Change

– Changes to the Leadership Development System: Actors would be all different levels within the state. Increase traditional leadership capacity by engaging other individuals around those leaders to enhance or make visible local expertise. The needed expertise includes the vision and practices of the Framework. It also includes critical consciousness. WHILE ALSO finding ways to encourage and support current science teachers to step into leadership roles.

– Over the next 2 years we need national-level work that brings research and powerful examples of this type of work to a single location that is organized. Bring people together to identify a structure of possibilities and then do the thinking of how this might be implemented within their unique context. [Coaching, mentoring, reflective practices, PLCs, NICs, Fellowships, Actor-Network Maps]

– Diversifying the workforce: How can we recruit a more diverse pool of candidates to increase representation? Attend to career pathways.

Driver in the System

– Shifting accountability systems that instigate planning for science: Combo of institutional, state/districts, leadership development organizations rethink the traditional role in responding to these planning needs so that they are more inclusive and distributed.

Working towards Equity

Actor: Funders of Science Ed Implementation Initiatives (philanthropy, state leaders, federal)

Actions:

- **Focus on Equity in Specific Ways:** Require funded groups to focus on equity in an integrated manner from the start in specific ways. Do **not** fund generalized equity efforts that fail to be specific (e.g., that are color evasive, consider coherence to be centered on equal access to uniformity).
- **Conducted by Diverse Teams:** Require funded groups to meaningfully include individuals in central roles who represent life histories, expertise, and networks needed to do the proposed, specific equity work.
- **Building Capacity for Equity:** Require funded groups to develop and enact plans that center critical consciousness development with ethical and political clarity in daily ways that are integrated into the effort throughout the project life-cycle.