

MODES DE LA CONNAISSANCE | FORMAS DE CONOCIMIENTO
WAYS OF KNOWING

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Closing the Gap with PYP

Nancy Gerber, South Saint Paul Public Schools
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Kirsten Wickman, Fridley Public Schools



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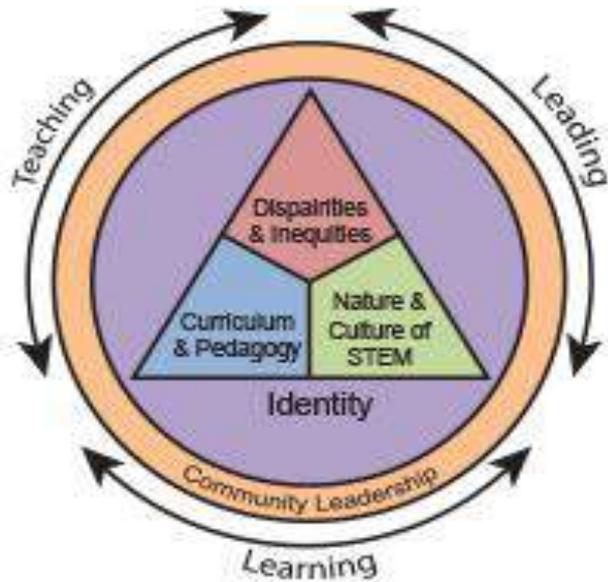
Science House of Minnesota Professional Development in partnership with **Minnesota Association of IB Schools** offers a workshop in Access, Equity, and Transdisciplinary Learning in STEM.





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Science Museum of Minnesota Framework of Equity and Access

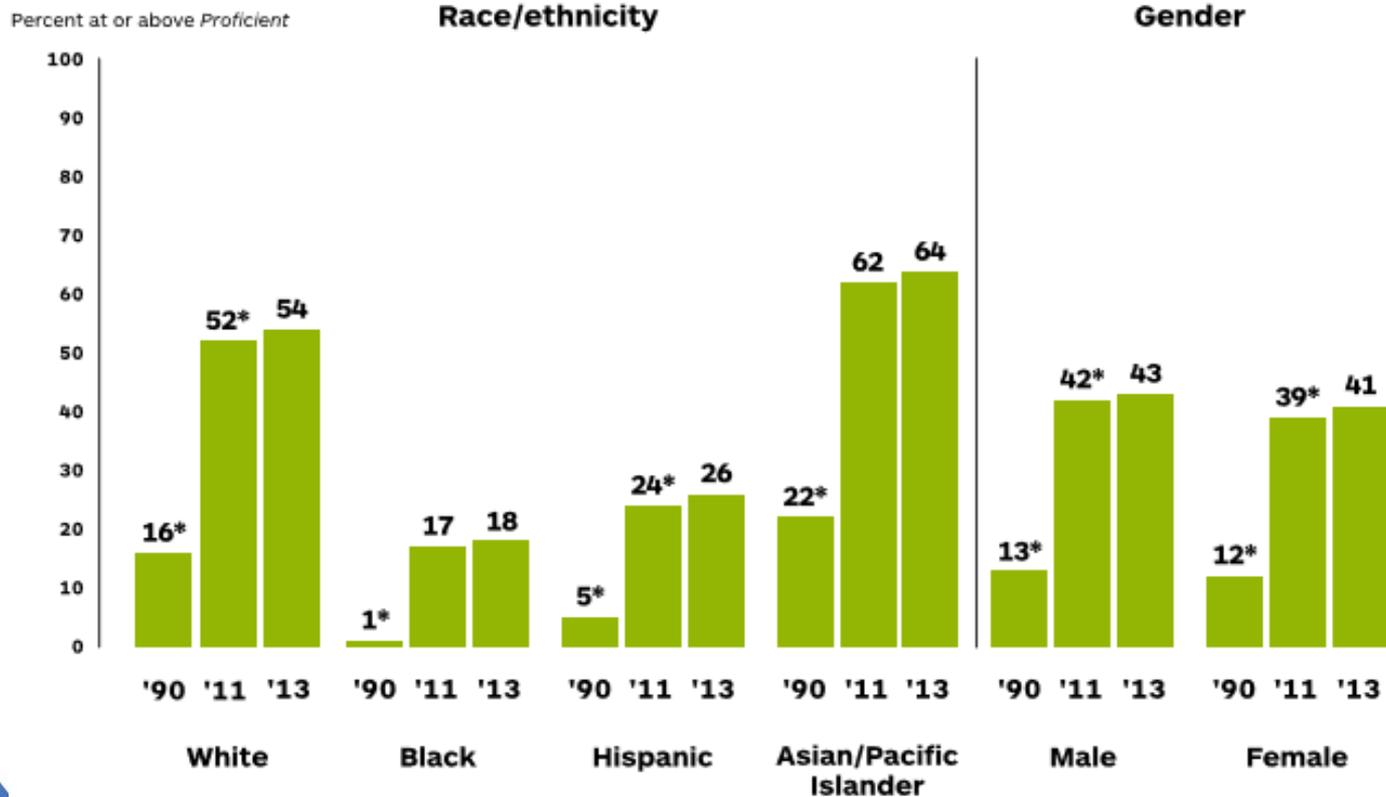




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The GAP Disparities and Inequities (Lens 1)

Percent Proficient in 4th Grade Math





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Disparities and Inequities (Lens 1)

Beliefs and Values – high expectations

Discontinue ability tracking

Educators collaborating and reflecting on achievement data



John Hattie's Research

Cooperative vs competitive learning --	.54
Direct instruction -----	.59
Cooperative vs individual learning ----	.59
Meta-cognitive strategy program -----	.69
Teacher student relationships -----	.72
Reciprocal teaching -----	.74
Feedback -----	.75
Formative evaluation to teachers ----	.90
Student expectations -----	1.44



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Identity (Lens 4)

Self Theories

Discourse and the Single Story

Geography of Identity

Carol Dweck

James Heckman

Angela Duckworth

Paul Tough



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Identity (Lens 4)



Carol Dweck

Carol Dweck (Barnard, Yale, Columbia, Harvard, currently a Professor at Stanford) Has developed a theory based upon years of research about mindset.

- **Mastery** – you get smarter with effort. The brain is changeable.
- **Fixed** – intelligence is fixed – “you got what you got”



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Effort



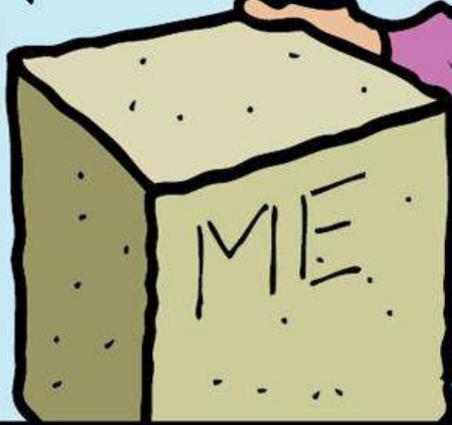
Carol Dweck, PhD
Stanford University

<http://www.youtube.com/watch?v=2jDVd-nCEYc>



There are two views children have of intelligence

This is the way
my intelligence
is...!



No, intelligence
WILL grow and
develop





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“You are born with a certain amount of intelligence and you really cannot do much to change it.”

“You can learn new things, but you really cannot change your basic intelligence.”



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School in the Cloud

SOLE self organizing learning environments

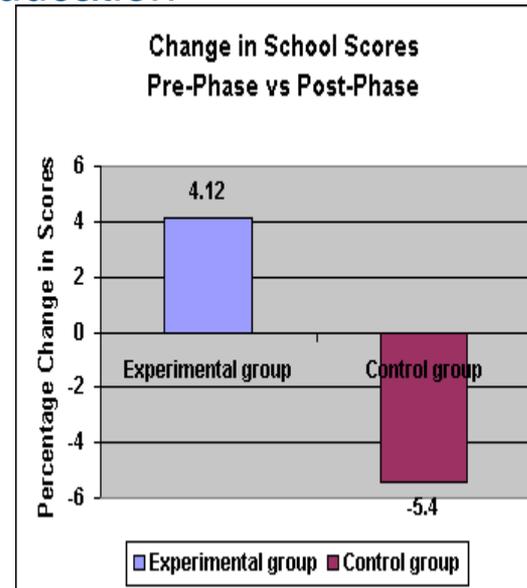
Grannies are supportive and encouraging mediators for SOLEs as children begin to learn for themselves.

Struggle??

Hole-in-the-Wall Education

Sugata Mitra,

Minimally Invasive Education





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Do you identify with any of these teacher behaviors with PYP?

- Labelling students as gifted, smart or slow?
- Hovering over students while they are working?
- Intervening too soon when students are confused?
- Identifying difficult concepts and allowing students to grapple with them; using questions to probe and extend thinking.
- Providing strategy oriented feedback “I noticed that you tried this strategy to solve the problem, what other approaches could you try?”



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Mindset and PYP Connections

Fixed Mindset / Growth Mindset

Helpless Response / Mastery Response

Performance Goals / Learning Goals

Task: Compare implications of Dweck's research and the PYP Framework. (Refer to purple handout and PYP Overview).

Write three connections on three different post-it notes.

Post on appropriate chart as directed.



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Debrief

- How activity was structured or could be structured for access / equity
- Making PYP connections





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Approaches to Learning: Self- Management Skills

MYP: From Principles into Practice

(May 2014)

page 100

IV. Affective skills

How can students
manage their own state
of mind?

Managing state of mind

- Mindfulness
 - Practise focus and concentration
 - Practise strategies to develop mental focus
 - Practise strategies to overcome distractions
 - Practise being aware of body–mind connections
- Perseverance
 - Demonstrate persistence and perseverance
 - Practise delaying gratification
- Emotional management
 - Practise strategies to overcome impulsiveness and anger
 - Practise strategies to prevent and eliminate bullying
 - Practise strategies to reduce stress and anxiety
- Self-motivation
 - Practise analysing and attributing causes for failure
 - Practise managing self-talk
 - Practise positive thinking
- Resilience
 - Practise “bouncing back” after adversity, mistakes and failures
 - Practise “failing well”
 - Practise dealing with disappointment and unmet expectations
 - Practise dealing with change



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The Geography of Identity

an imperfect model



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Scissors come in all sizes
Pens and pencils are easy to use
Folding desks help you take notes
Softball mitts help you catch a ball
Picture diagrams in instructions are helpful

Cash machine works well.
Subway ticket swipe.
Cursive writing is easy
Handshakes
Eating
Filling in test bubbles
Combination locks go clockwise
and counter clockwise – so do keys



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Scissors don't cut
Pens and pencils smear as you write
Folding desks don't support your arm
Softball mitts are backwards
Picture diagrams are backwards
Cash machine is backwards.
Subway ticket swipe on the wrong side.
Writing is tricky – penmanship is hard
Handshakes –oops – which hand
Eating sitting next to a righty !
Filling in test bubbles backwards
Combination locks are backwards.

Right-Handed



Scissors come in all sizes
Pens and pencils are easy to use
Folding desks help you take notes
Softball mitts help you catch a ball
Picture diagrams in instructions
are helpful
Cash machine works well.
Subway ticket swipe.
Cursive writing is easy
Handshakes
Eating
Filling in test bubbles
Combination locks go clockwise
and counter clockwise – so do keys

Left-Handed



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Normal
Access to Power and Privilege
Dominant in society at large



Not Normal – unusual
Defined by Dominant as “Other”
Non-dominant



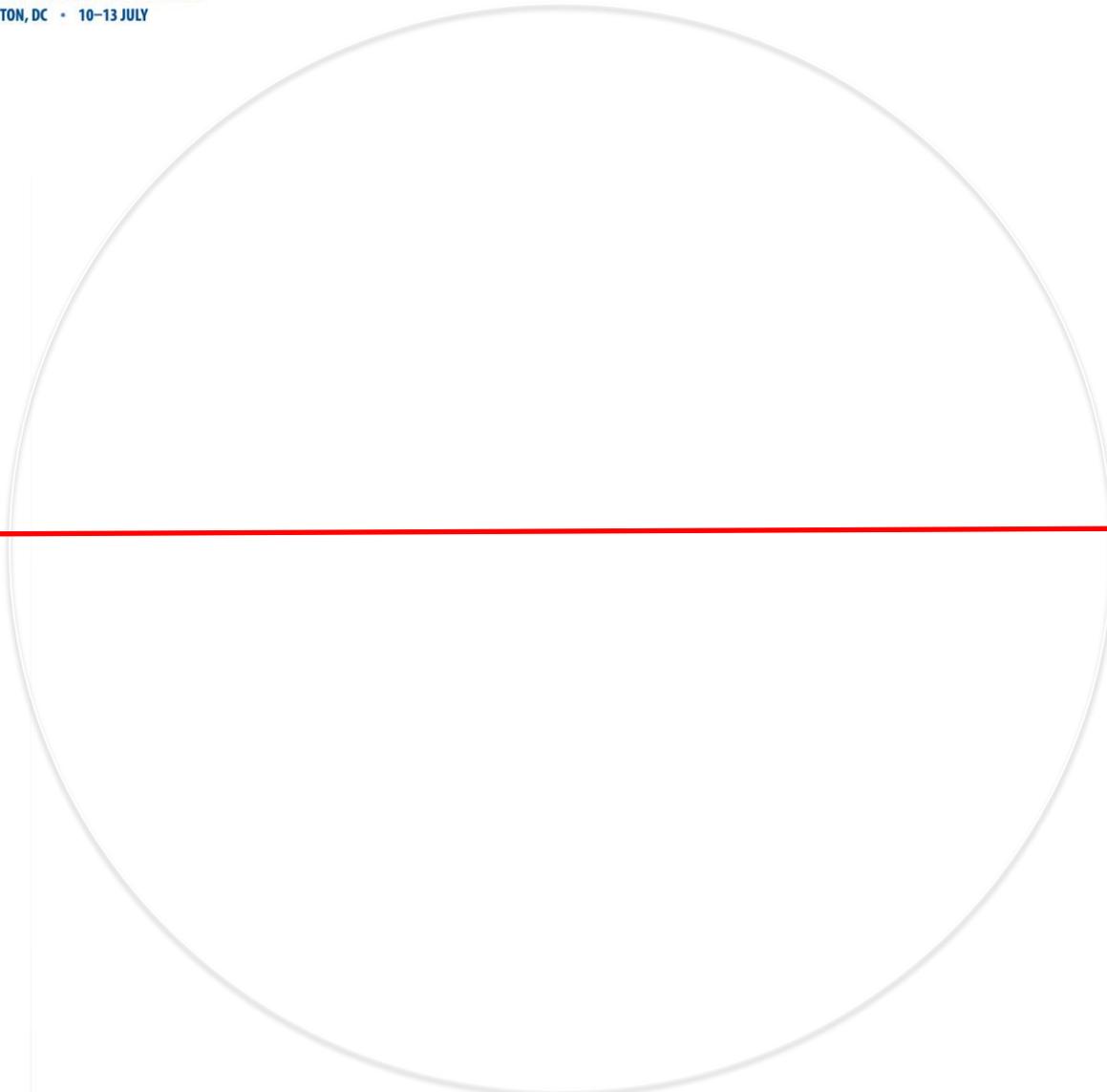
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Many Aspects of Identity



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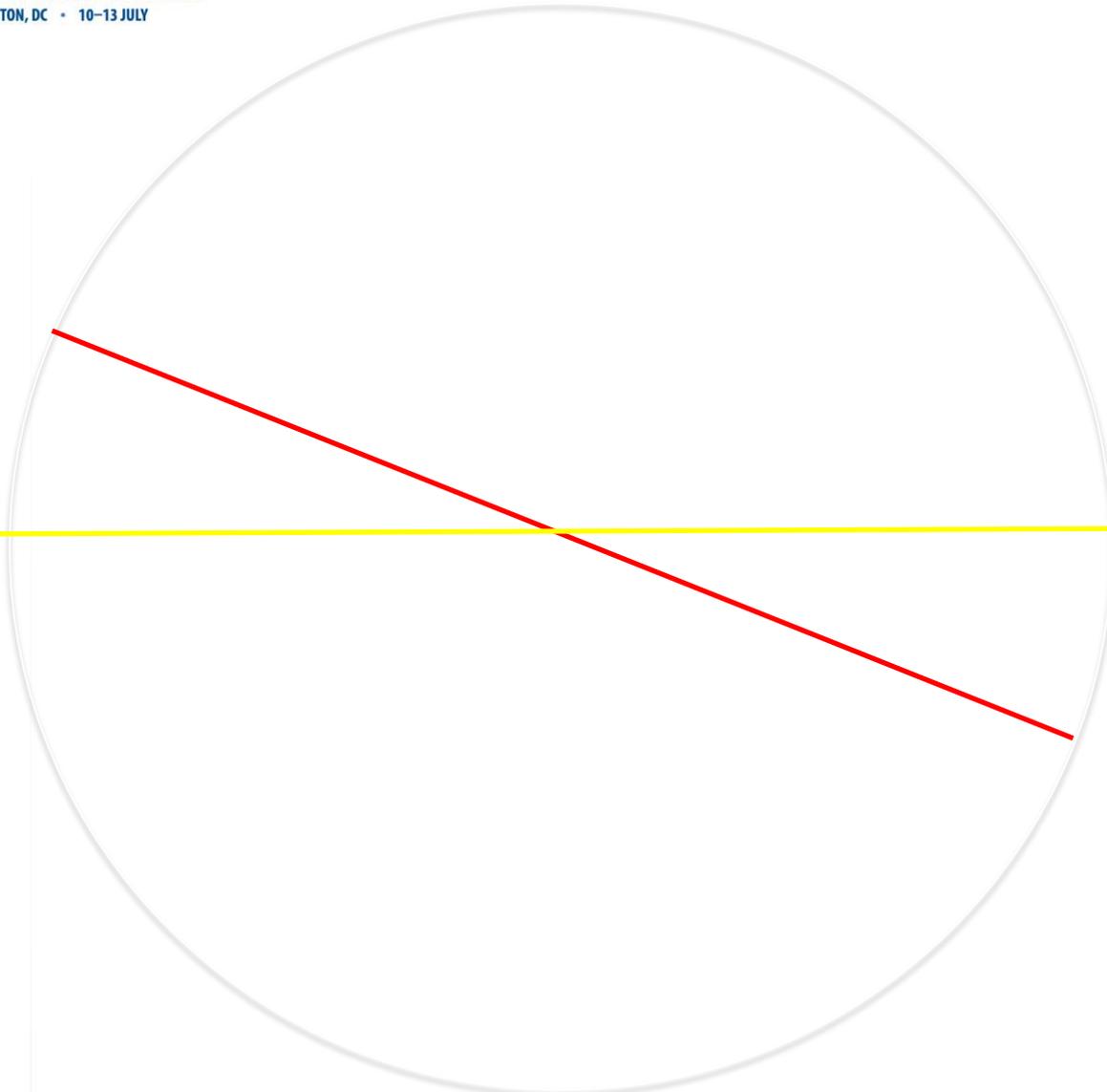
Race





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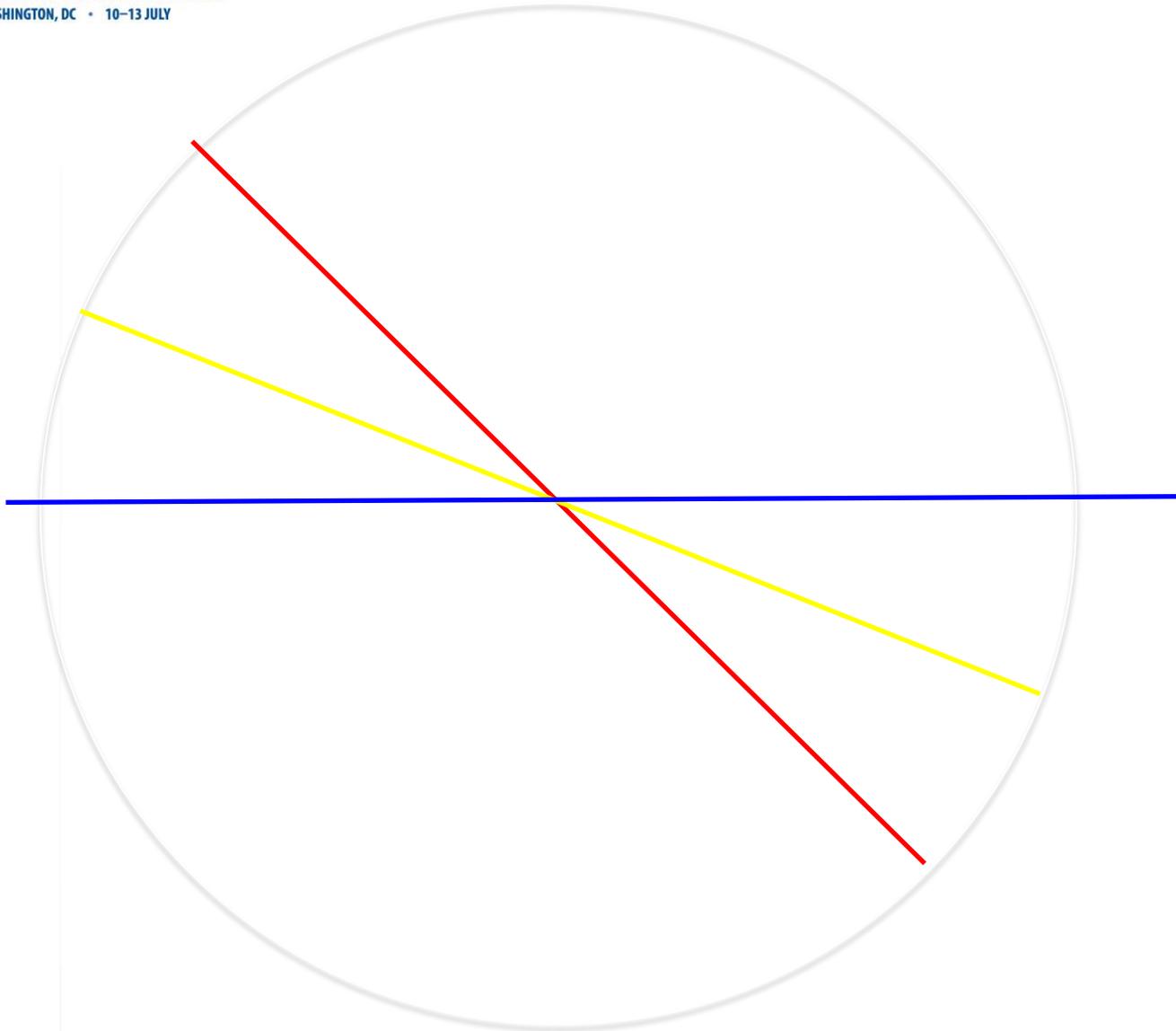
Ethnicity





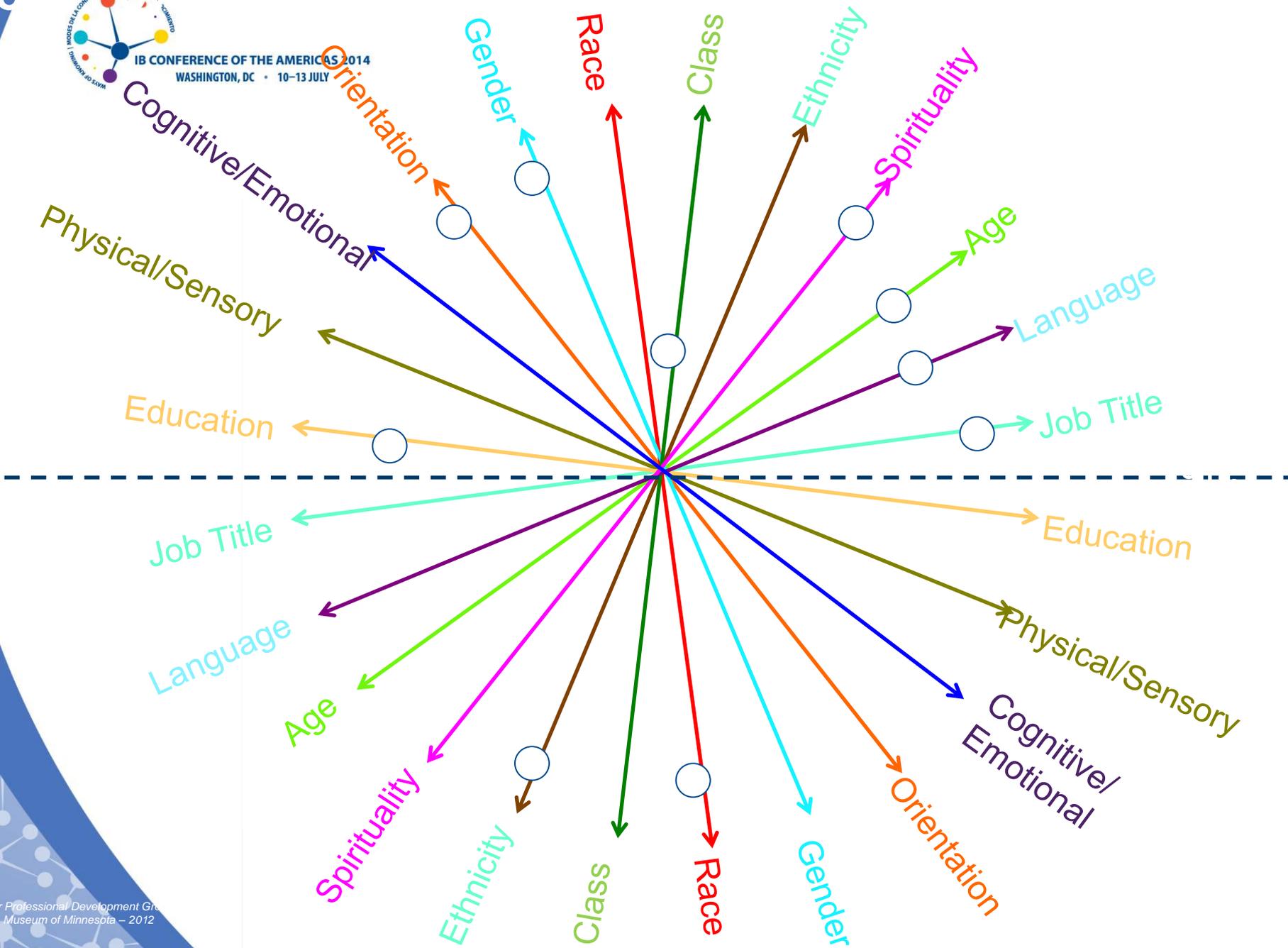
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Dis/Ability





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Cognitive/Emotional

Physical/Sensory

Education

Job Title

Language

Age

Spirituality

Ethnicity

Class

Race

Gender

Orientation

Cognitive/
Emotional

Physical/Sensory

Education

Job Title

Language

Age

Spirituality

Ethnicity

Class

Race

Gender

Orientation



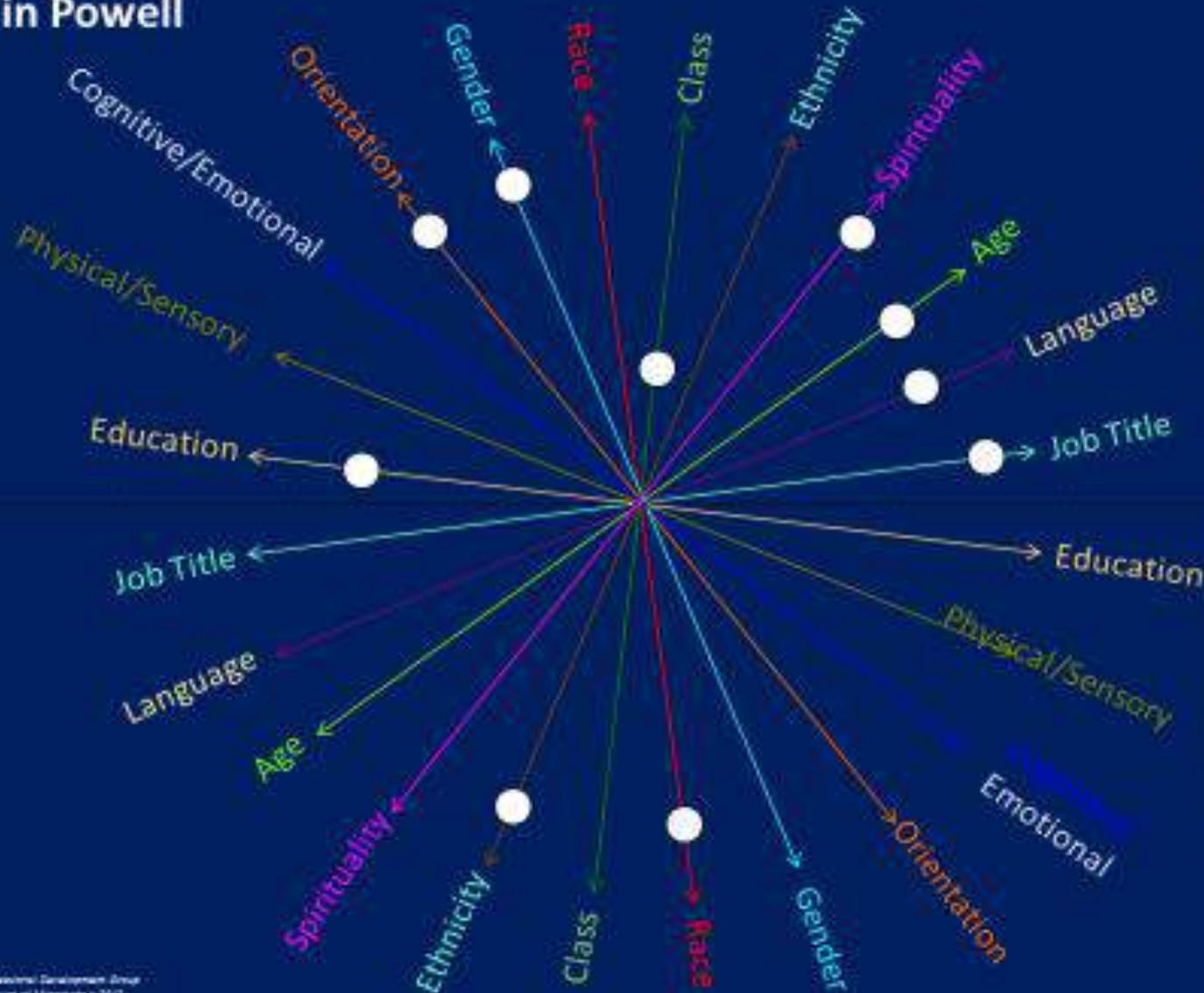
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Examples of Identity Geographies



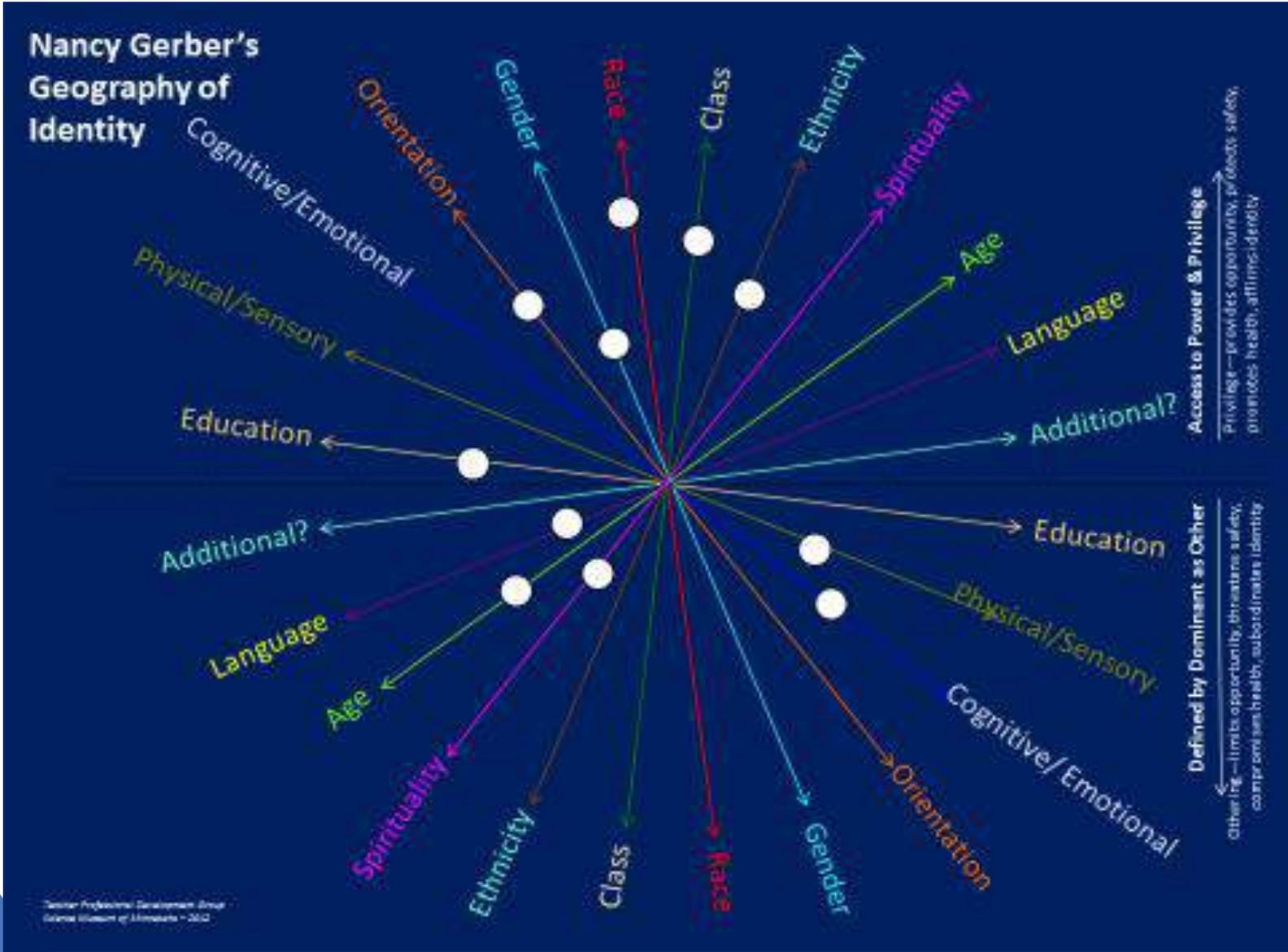
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Colin Powell



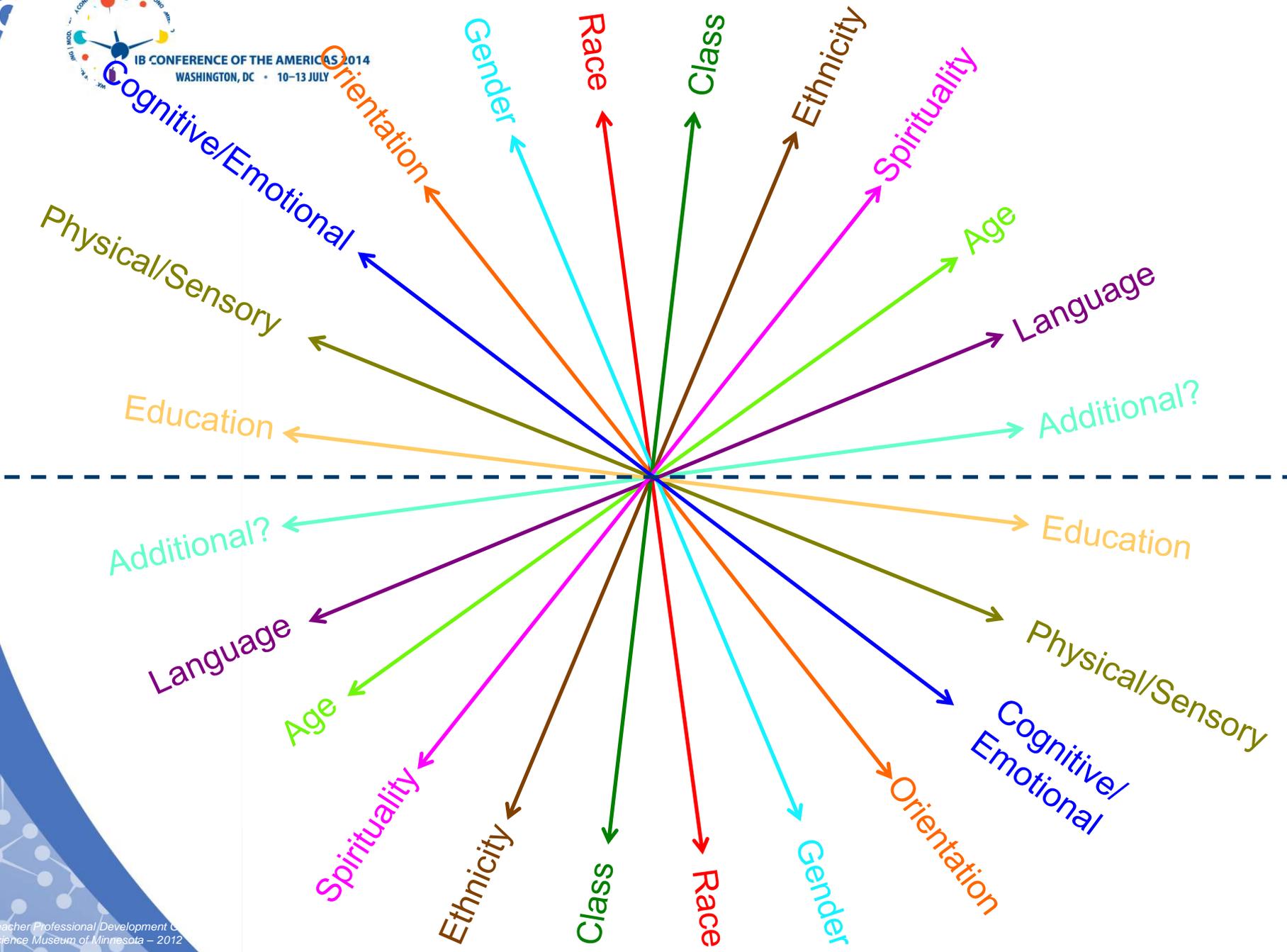
Access to Power & Privilege
Privilege — provides opportunity, protects safety, promotes health, affirms identity

Defined by Dominant as Other
Othering — limits opportunity, threatens safety, compromises health, subordinates identity





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Creating Your Geography of Identity

Identity lens is complex and varied.

Identity is fluid and context dependent

We need to be insightful in order for each student to feel welcome and celebrated in our classrooms.



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The identity wheel is a reflective tool that is contextually challenging. Thinking about identity is fluid and personal.

ORID Questions:

O - What new insights emerged as you developed your own identity wheel?

R - How has thinking about identity affected how you think about identity as a complex social construction?

I - How has thinking about identity affected how you think about the relationship between identity and privilege?

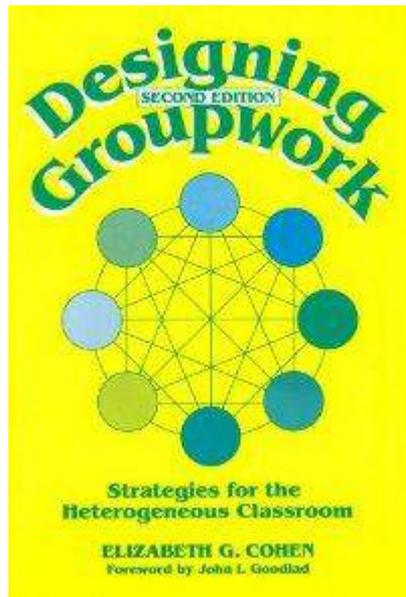
D - What are the implications for you as a teacher/leader in your school?



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Curriculum and Pedagogy (Lens 2)

- Culturally Relevant Pedagogy
- **Complex Instruction (Cohen)**
- Curriculum Deconstruction



*Power of
groupwork to
minimize
status issues and
maximize
engagement.*





Groupwork in the PYP

IB Standards and Practices (C3 10.a)

- “The school provides for grouping and regrouping students for a variety of learning purposes.”

Approaches to Learning (Social Skills)

- Working cooperatively in a group
- Adopting a variety of group roles
- Sharing materials and taking turns

Exhibition Guidelines (p 6)

- Collaborative inquiry involving all students
- Students should show a genuine sense of participation in collaborative effort

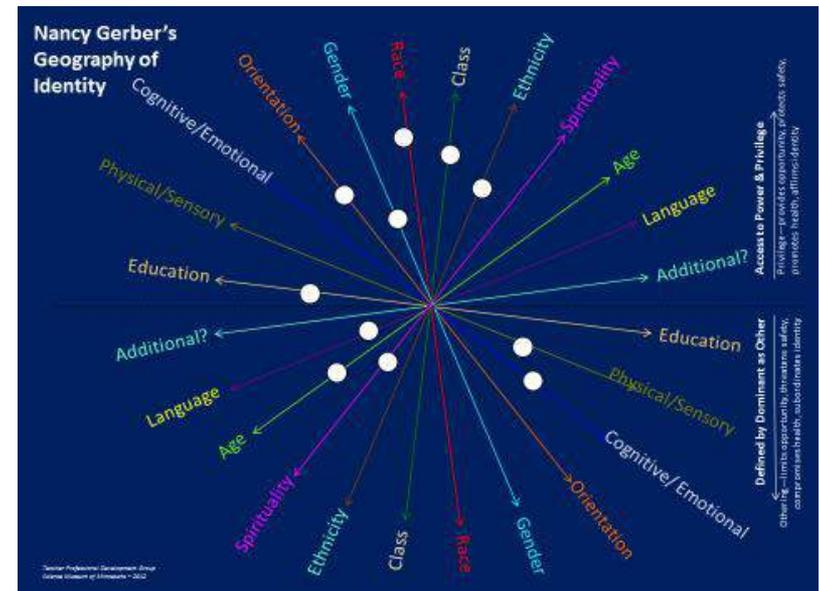


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Status and Groupwork

Status issues manifest themselves within classrooms and affect learning.

Geography of Identity Wheel





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Video Clip

“Status Treatments for the Classroom”





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Key Elements of Effective Groupwork

We must practice a range of “status treatments” to equalize status among group members

- PUBLICLY acknowledge specific intellectual contributions of individuals with lower status
- Establish and teach group norms
- Consider groupings carefully and deliberately. Mix frequently.
- Ensure members of group need each other to complete the task
- Assign group roles (Procedural, *not* Intellectual)
- e.g., Note Prompter vs. Note Taker



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Procedural Group Roles

- Roles relate to *how* the work gets done
- Every group member has a role
- Assign roles
- Rotate roles in a visible way, so everyone gets a chance to try all roles
- Make roles public – wear a badge
- Provide written job descriptions for roles



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Curriculum and Pedagogy (Lens 2)

Practical Teaching Strategies that Promote Learning

- Everyone has a role; students cannot “opt out.”
- Strategies are engaging for all students.
- Strategies promote speaking, listening, thinking, reading, and writing.
- All students have access to materials (hands on), all students are talking = access to learning.
- Listed on the handout



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Kagan's Cooperative Learning Structures

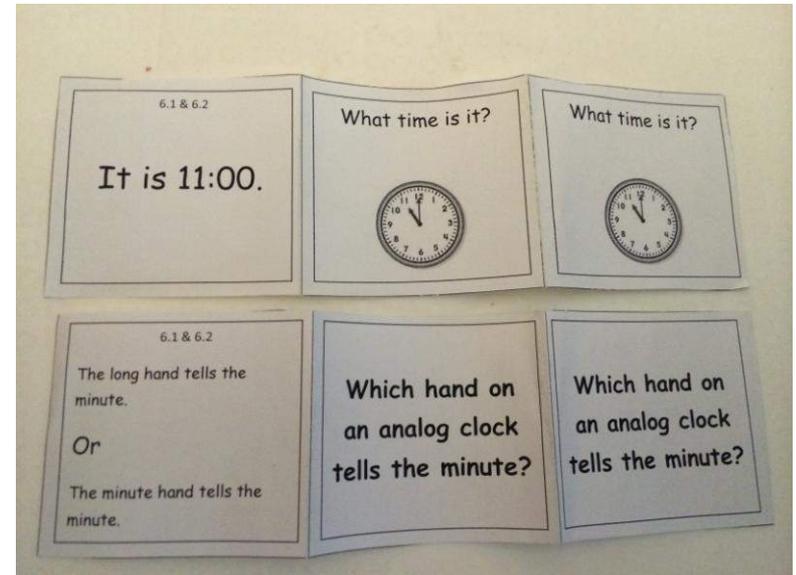
- Pairs or small groups
- Structured – everyone has a specific role. Students rotate throughout each role.
- Flexibility - questions or statements may be teacher created, student created, or a combination.
- Beneficial for English language learners – promotes thinking, speaking, listening, reading = learning



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Quiz-Quiz-Trade

- All students receive a question card.
- Students find a partner. They quiz each other, trade cards, and find a new partner to ask and answer questions.



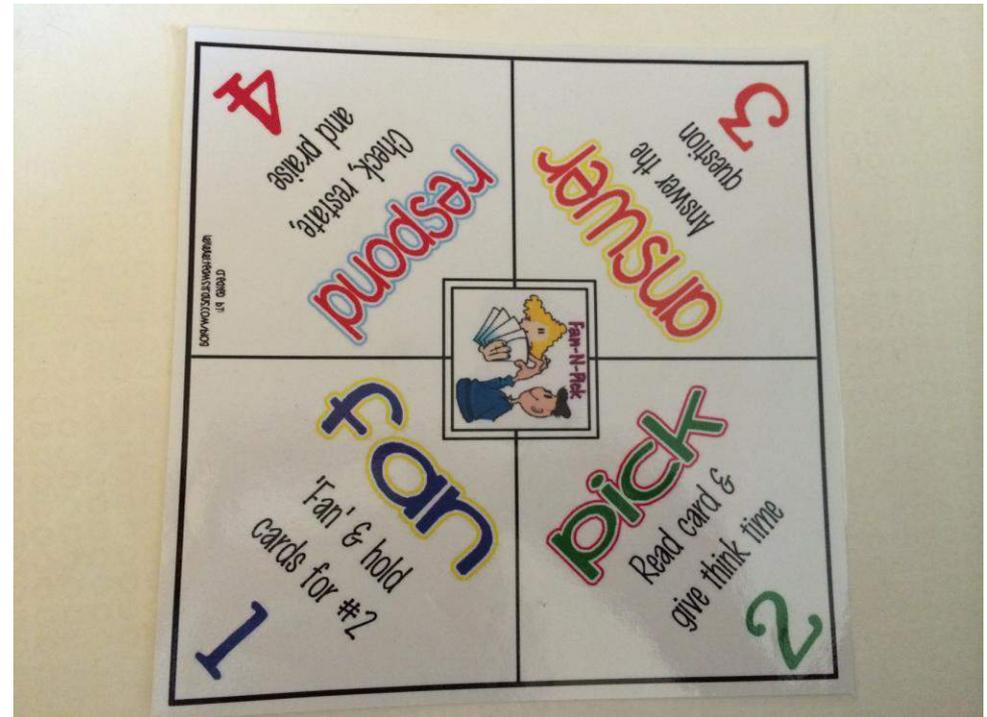
http://www.kaganonline.com/free_articles/research_and_rationale/journalism_students.php



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Fan-N-Pick

- 4 students in a group
- All students have a role.
- Students rotate roles.





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Showdown

- Whole group or Small groups
 - Teacher led
- or
- Student led (with question/answer cards)
 - White boards, picture cards, vocabulary cards
 - Multiple content areas: math, language arts, science

<http://www.youtube.com/watch?v=gVvn7G792jI>



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Jot Thoughts

- Students answer questions or write their thoughts about a particular topic (poster paper or small paper)
- Elicit prior knowledge or review
- Open-ended or structured (# of Post-it notes, pass the pen, etc.)
- Whole group, small groups, pairs, individual
- Students rotate around the classroom
- Carousel at the end



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Talking Chips

- Can be used in a small groups that are teacher led, for example, a guided reading group
- May be used in conjunction with a learning cube, or a series of teacher/student generated questions.
- All students receive 1 or more talking chips.
- Teacher or student poses a question – students move their talking chip to the center when they are ready to answer.
- All students answer before moving to the next question.





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Other Strategies

- Whole group, small groups, pairs
- Students are engaged and have access to materials, thinking, speaking, and learning
- Can be used across content areas



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Dip-A-Strip

- Pairs or groups of 3
- Sorting - open and guided sorts
i.e. Nonfiction text features, cause and effect,
-ed word endings, genre study, literary
elements

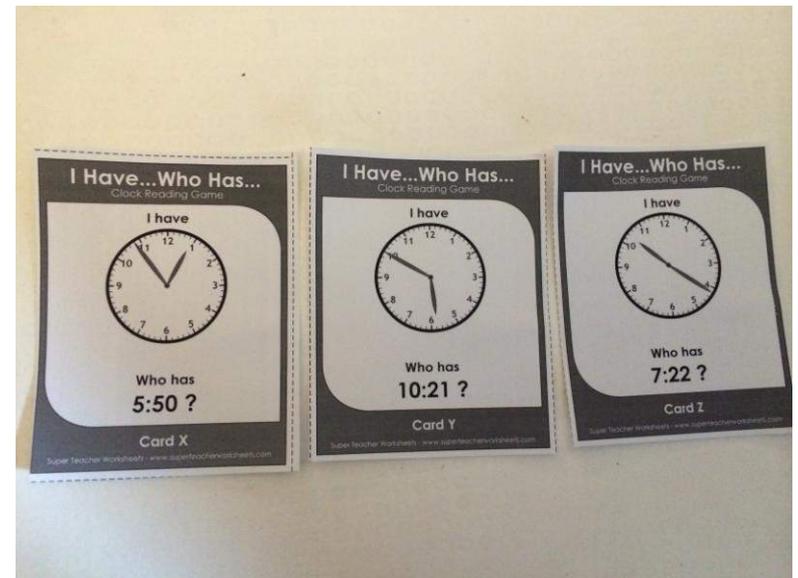




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I Have, Who Has

- Whole group or small group
- Multiple content areas





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Inside Outside Circle

- Whole group or small group
 - Multiple content areas
 - Specific questions/answers
(use QQT question cards so both students can read the question)
- or
- Structure for students to share their own thoughts



Image Source:
http://www.ohiorc.org/orc_documents/ORC/Adlit/InPerspective/2005-11/images/inside_outside_circle.jpg



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Snowball Fight

- Whole group or small groups
- Multiple content areas
- Examples: fact and opinion sorts, compliment lists, jot thoughts, synonyms

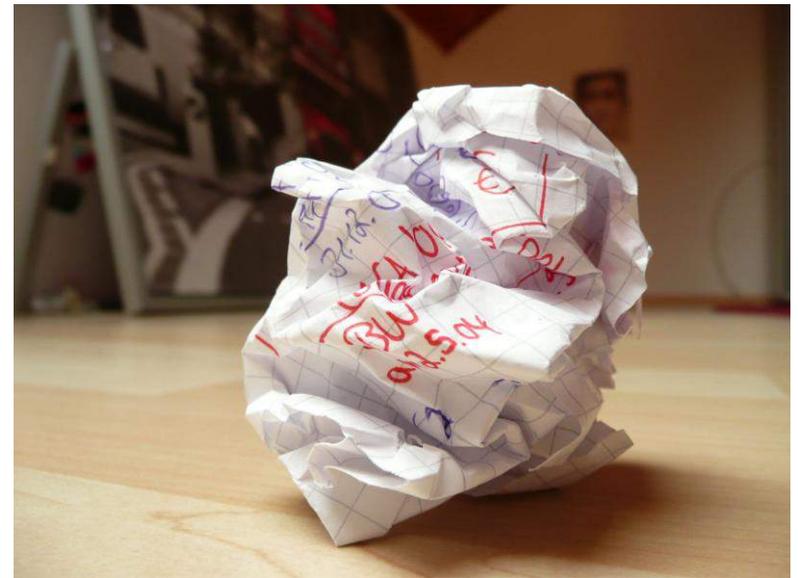


Image Source:
<http://nccscurriculum.org/wp-content/uploads/2014/03/snowball.jpg>



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Visible Thinking Strategies

Harvard Project Zero

- All students are engaged
- Open-ended
- Encourage thinking about multiple perspectives
- Can be used in conjunction with other strategies previously mentioned (i.e. inside/outside circle, talking chips, jot thoughts)



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3-2-1 Bridge

- Activates prior knowledge
 - Helps students make connections
 - Same structure can be used to used to introduce and close/review
- Teacher poses a topic, students generate:
 - 3 thoughts or ideas
 - 2 questions
 - 1 analogy



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CSI: Colour, Symbol, Image

- Reading, listening, watching
- Non-verbal, visual
- Encourages reflection, connections
- After reading, listening, or watching students...
 - choose a colour that represents the idea
 - choose a symbol that represents the idea
 - choose an image that represents the idea



I used to think...

But now I think...

- Reflection
- Multiple perspectives



Think Pair Share

- Quick
- *Easy*
- *Many variations*
- *Thinking, listening, speaking*
Allows students to process before sharing with the class
- *Elbow buddy, elbow partner, shoulder partner*
- *Find someone who...*
- *Assign 1s and 2s*
- *Share partner's thinking*



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Practical Teaching Strategies and the PYP

- What connections did you make between the teaching strategies and the PYP?
- Jot down your thoughts.
- Share in an inside/outside circle.



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Community (Lens 5)

We are not in this alone!

- **Cooperation and Collaboration** - Cannot be accomplished by individuals working alone
- **Who we are:** Share your stories and listen to the stories of others.
- Take **action**. Take **responsibility** for what is important.
- Strive for deep cultural and organizational **change** with the goal of universal student achievement.



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IB is the Vehicle



- The IB is the lens through which we envision our curriculum and instruction
- Components that can make a transformational difference are already part of the PYP framework
- PYP is inclusive – provide access and equity for each and every student



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