

Rich Mathematics Through Habits of Mind

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Working Together

Introduce Yourself

What sometimes makes you feel tense about doing math in a group?

What norms can we establish to minimize that?

NOTES

positive communication

not solely concerned on our product

ensure that there is think time for all

consider mistakes as opportunities

take turns....share the air

check to make sure everyone understands

Consecutive Sums

$$1+2+3+4=10$$

$$8+9=17$$

$$5+6+7=18$$

Play around with sums of consecutive numbers.
Investigate any questions that arise for you.

Group Discussion

Were you "doing math" during the Consecutive Sums activity?

How do you know?

Can you name the ways of thinking and acting that signaled to you that you were being mathematical?

NOTES

looking for patterns

create a formula/rule

expanding on other ideas

testing conjectures

trying to predict (use what we know)

*make connections/relationships**

critiquing the thinking of others

posing questions

using basic operations

developing number sense

Group Discussion

How is "doing math" usually defined in schools?

Can you name the ways of thinking and acting that a student might say defines being mathematical?

NOTES

*getting the correct answer
following a procedure/algorithm
solving an equation*

adding/subtracting/etc.

NUMBERS!...

*more numbers = more difficult
writing something down
happens TO me*

*copying/re-creating
symbols/operations*

*by course (algebra, geo.,)
answer=finished; definite*

Group Discussion

How are students impacted by the way "being mathematical" is defined in schools?

NOTES CONT'D

The teacher's way is the right way, not their own

self-confidence, gender/sex

defines their future...who am i?

who could i be? social status

how many concepts could be

"played" with? instead of taught?

factors to play: failure, grades, etc.

NOTES

*only a few people are good
removes itself from other subjects
math as a thing, not as a way of
thinking*

*if i can't get THE answer=i'm not
good at it*

*limits how they see themselves as
mathematical & how they see
themselves in mathematics*

*naming classes/levels creates an
expectation to live up/down to
more open could lead to better
math students; develop math'l
thinking*

A Final Dilemma

"What counts as knowledge, how we come to 'know' things, and who is privileged in the process are all part and parcel of issues of power."

Rochelle Gutierrez

(The Sociopolitical Turn in Mathematics Education, 2012)

What counts as mathematical activity? In schools?

What are the implications of that choice?

Thank You

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