Title of Session: 7-12 Science Forum - Lab Groups
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Room: Tree House Conference Room

ElisabethS: hi Donna
DonnaLC: Hi Elizabeth
ElisabethS: here for the science group discussion?
DonnaLC: Yes I am
ElisabethS: great, shall we wait a few minutes to see if others join us?
DonnaLC: Do you teach science?
ElisabethS: yes, some times also math and tech
DonnaLC: I just teach science.
ElisabethS: Want to give a brief description of where and what?
DonnaLC: Is this your first time to a conference?
ElisabethS: no, I am the discussion leader this time round
DonnaLC: I teach 7th grade in Houston
ElisabethS: how about you?
ElisabethS: private or public? general science?
DonnaLC: Oh good, At least one of us knows what to do.
DonnaLC: I teach public
ElisabethS: I've taught gr 7 both catholic and public on the SF peninsula in CA, right now I am in a public high near Sacramento CA
DonnaLC: Yes, and general science
ElisabethS: have you been teaching long?
DonnaLC: No this is my second year. I'm working on my certification.
DonnaLC: I was a substitute teacher for 15 years though.
ElisabethS: what series of text are you using? do you have a lab? equipment? money for supplies?
ElisabethS: subs are hardy people
DonnaLC: We're using the Prentiss Hall book. I do have a lab and the major thing we do is frog dissection.
ElisabethS: the little blue books? which ones?
DonnaLC: It's a big book called Science Explorer.
DonnaLC: It is blue.
DonnaLC: Is that what you mean?
ElisabethS: We had the little Prentice Halls, very encyclopedic in nature with little to flesh out the ideas for the kidshow has it been working for you?
DonnaLC: These are brand new BIG books. They are pretty good.
ElisabethS: I'm glad they are good. Do your kids have much experience in lab science before they get to you?
DonnaLC: Yes, they are a good group this year.

ElisabethS: Do you have them sit in lab groups all the time or do you have chairs in rows for part of the day?
DonnaLC: We haven't done many labs so far though.
DonnaLC: My students sit in desks in rows
ElisabethS: Do they move to lab tables for experiments and activities?
DonnaLC: Sometimes we set up lab stations. We use the counters
ElisabethS: Yikes, no lab tables for them to sit at?
DonnaLC: This week we had a teacher demo
DonnaLC: No, some of the teachers have tables where 2 students can sit together.
ElisabethS: Do you have time in your schedule for labs or is your time tightly structured around delivery, do you have much discretion in how you deliver material?
DonnaLC: I have my students move 2 to four desks together sometimes.
DonnaLC: No, we are tightly structured on time.
ElisabethS: How many labs are you expected to have the students participate in? 1 per week? 1 per month?
DonnaLC: My problem is getting them grouped. It takes a while.
ElisabethS: because of the chairs?
DonnaLC: We don't have that many. Most of the time they are paper, glue labs etc.
ElisabethS: What difficulties do you find in getting your groups together?
DonnaLC: No it's them talking and complaining about their partners. But they know not to complain.
ElisabethS: do you work with a heterogeneous group? how big is the class?
DonnaLC: This new group is pretty good though. I usually have to choose a person close by for a partner
$\mathbf{B j B}$ joined the room.
BjB waves hi
ElisabethS: hi BJ
DonnaLC: Yes, the class size are from 18 to 30 students
BjB . o O ( sorry I'm late. Both our phone lines were down :-( )
DonnaLC: hi
ElisabethS: is special ed and rsp included in the grouping
DonnaLC: only in 1 class
ElisabethS: glad you got here BJ, Donna is a seventh grade sci teacher from Houston
BjB: cool. Nice to meet you, Donna. I'm an art teacher in Pennsylvania
ElisabethS: when the kids are in groups do they write a collaborative report or is each responsible for his/her own report
DonnaLC: Science or what?
DonnaLC: Sometimes they each write and sometimes a group
ElisabethS: do they write much following hypothesis through conclusion or are they filling out prentice hall worksheets at the end?
DonnaLC: But this group is much better.
DonnaLC: They are worksheets that the teacher types
ElisabethS: do they follow the hypothesis through conclusion or is that not part of your curriculum yet?
DonnaLC: yes, we use the hypothesis through conclusion
DonnaLC: BJ What do you teach?

ElisabethS: When the kids choose a partner near them for a lab do they always have to pick all over again or do you keep groups for a while?
BjB: I'm an art teacher, Donna
ElisabethS: BJ is our moderator incase we get sassy
BjB grins.
DonnaLC: Sometimes it's the same person who is sitting next to them or behind them. I try to change it up.
BjB: I have led a couple discussions with science and art connections
ElisabethS: Do you have them work on nonlab activities together in the groups?
DonnaLC: 2 experienced people
DonnaLC: Yes, many times
ElisabethS: Is that easier for them to handle than the labs are?
DonnaLC: yes
ElisabethS: What do you think might be making the difference for them?
DonnaLC: They are a social group and like to do things together.
ElisabethS: why do you think they find the labs harder to handle?
DonnaLC: Or should I say 13 years olds are.
ElisabethS: 13 year olds are unique, one day 2 and one day 21 sometimes both during one period. High heels and stuffed animals
DonnaLC: They like the labs and they aren't concerned with other people's property.
DonnaLC: Yes, that's them
ElisabethS: Is it materials that bring out the trouble spots and the complaining. Just paper and books are within their tolerance level?
DonnaLC: But this group is very good and I hope they continue that way.
ZaenalF joined the room.
DonnaLC: They know that they aren't to play with the equipment are there are always a few that do.
BjB: Hi, Zaenal. Welcome
ZaenalF: thank you
BjB: Zaenal, are you here for the science discussion?
ZaenalF: I am new here
ElisabethS: hi Zaena, were discussing lab groups. What grades do you teach.
DonnaLC: hi Zaenal
ElisabethS: Have you tried assigning each group an equipment monitor?
ZaenalF: 3-8 grader
DonnaLC: No that might help.
DonnaLC: What subjects?
ZaenalF: Physics
ElisabethS: Z -3-8 science is it public or private, Donna teaches 7 public, and I have taught 5-15 public and private
ZaenalF: public
ElisabethS: Donna, along with equipment monitors do you have containers that hold all the materials for an activity?
ZaenalF: I have traditional lab
DonnaLC: yes
DonnaLC: We have such a short time during class

DonnaLC: I will use monitors this year.
ElisabethS: I have had good luck with assigning someone to be the caretaker, the privilege can rotate within the group, having a tub or frozen food tray to dump materials into or out of helps speed the process
DonnaLC: Ok I'll do that.
ElisabethS: Zaena, do your students sit in their groups at the lab tables all the time or do they sit in rows for lectures
ZaenalF: they sit in row for lecture
ElisabethS: I've even gone so far when doing dissections to have them put the tools in order in the tray like surgery so I can make a quick check with each group as I collect the trays that no scalpels leave the room
ElisabethS: How are lab groups going for you Zaena, do you use equipment monitors?
DonnaLC: Last year I did a check on that and it was fine.
ZaenalF: No, we don't use equipment monitor
ElisabethS: How do you manage equipment?
DonnaLC: Last year I did have lots of little magnifying glasses disappear.
ZaenalF: I still figure out what you discuss about
ElisabethS: If I am collecting, I count how many missing out loud like Miss MaryAnn, 30 missing, 25 missing, 2 missing until everyone is desperately looking for the last two, since no one leaves the room until it is found
ElisabethS: We are talking about how lab groups handle equipment and different strategies to make it smoother
DonnaLC: I do that now. It's stuff they like that disappears.
ElisabethS: Do you have to let them go if it all is not returned?
DonnaLC: I usually don't.
ZaenalF: for DonnaLC problem, student should administer what equipment are going to use
DonnaLC: I can keep them for a minute or maybe a little longer.
ElisabethS: I will tell a group when they receive their tray that I believe all equipment is present, to tell me if anything is missing. Are the items disappearing during labs or at other times out of drawers and cupboards
ElisabethS: That way I can dismiss group by group if the tray is complete so certain jokers don't have the privilege of always keeping the whole class, harder for them to hide in a small group
DonnaLC: No just fun things.
ElisabethS: Zaena, how are you kids in handling equipment?
DonnaLC: I will do that, but they try to sneak out.
CliffordT joined the room.
BjB: Hi, Clifford. Welcome to the science discussion
ElisabethS: hi Clifford, we are talking about lab groups and equipment
CliffordT: hi sorry I'm late
CliffordT: traffic and all
ElisabethS: Sometimes it is a long year. I once had a student who poured vinegar over everyone else's plants
DonnaLC: Hi Clifford

ZaenalF: after doing experiment, I check every equipment they use
ElisabethS: Clifford can you give us a brief where and what you teach?
CliffordT: I teach earth science and biology
ElisabethS: High School Clifford?
CliffordT: yes 9th and loth
ElisabethS: Where?
CliffordT: learning enterprise hs on 39th and hamptom
ElisabethS: Donna is in Houston gr 7 Zaena has 3-8 physics
DonnaLC: Where is that?
ElisabethS: What city or state Clifford and Zaena
CliffordT: Wisconsin
ZaenalF: I am from Indonesia
ElisabethS: glad you are all here, I am in California
CliffordT: Milwaukee
ElisabethS: have any of you tried single gender groups?
DonnaLC: no
CliffordT: no
DonnaLC: Does it work?
ElisabethS: I use them for part of the year. I find that often when I try to hand a piece of equipment to a female a male will take it and when I try to give it to the female again she just waves it off and says its ok for male to have
ElisabethS: having all boy or girl group solves this problem. I don't use it all year because dealing with everyone is part of their education but it is sometimes a big relief especially in middle school
DonnaLC: I will try that.
ElisabethS: It does change the tone of the class and discussions
ElisabethS: Everyone has to learn to write and everyone has to learn to measure and build.
ElisabethS: Zaena are you in a school that has both boys and girls?
CliffordT: nothing like eliminating overactive hormones from an educational setting
ZaenalF: yes,
DonnaLC: My students have those.
ZaenalF: boys and girls like doing experiment in lab
ElisabethS: I did teach for three years in an all girls school, but that left all the other lab challenges
ElisabethS: Clifford, how do you set up your groups?
CliffordT: I am a new teacher, so I am rather inexperienced with group experiments and such
CliffordT: what I am focusing on lately
ZaenalF: I set up my groups in diverse member
CliffordT: is 1 on 1 in order to ensure that kids understand
CliffordT: so many times kids cheat on worksheets
ElisabethS: diverse skills levels Zaena?
DonnaLC: This is my second year Clifford
ZaenalF: a group should has male and female
CliffordT: but they cannot cheat if I am right in front of them with a couple pieces of
equipment and I make them tell me a process or technique or concept.
ZaenalF: diverse skill also
ElisabethS: Worksheets, ok for practice not much for assessment, do you have time to get to everyone in class for 1 on 1 Clifford
CliffordT: then I check them off in the grade book directly
ElisabethS: How is that working for you Zaena
ZaenalF: I have grade book for that
ElisabethS: Is copying the biggest challenge you are facing in lab right now Clifford?
ZaenalF: I set the group as heterogeneous as possible
CliffordT: sometimes it can take two days but I feel it is worth it to "ensure" understanding rather than give students grades knowing that a significant portion is cheating
ElisabethS: Do you ever have lab practicals as part of the tests in you highschool
Clifford?
CliffordT: well, on worksheets yes, biggest prob
ElisabethS: I often assign very low value to worksheets for that very reason, they are good practice if they do them but not much to base a grade upon.
ZaenalF: how to assess their performance during working group
ElisabethS: How do you set up your lab groups?
ElisabethS: How do you do it Zaenal, Do you get a chance to wander by the groups and ask questions?
DonnaLC: We sometimes give a participation grade on a lab
ElisabethS: just for best effort Donna
ZaenalF: before doing experiment, I demonstrate an event that stimulate them questions
DonnaLC: yes, for using proper lab techniques and following directions
ElisabethS: sound interesting Zaenal how its that working for you?
ElisabethS: Donna, that is a very necessary skill for middle schoolers to build, stuff you'd like to see in high school
ZaenalF: then I write their questions on the board
ElisabethS: engaging them in the inquiry process is very powerful Zaenal
ZaenalF: next I ask them to select which question will be tested
ElisabethS: Has anyone tried putting their low performers in a group together?
CliffordT: good one
DonnaLC: no
ZaenalF: yes I do agree you opinion
DonnaLC: sometimes they may be together in a larger group
CliffordT: have you Eliz
ElisabethS: I have and it has plusses and minuses.
CliffordT: go on
ElisabethS: I put all the jokers together, not so much those who really try but might have low skills
ElisabethS: I once asked the class why they thought I put all the people who usually don't contribute together
ElisabethS: The best answer I got was from one little girl who worked hard but had modest skills
ElisabethS: she said I did it to give everyone an opportunity to learn, no one could learn
unless they did the work themselves
ElisabethS: The minus end is all the jokers may set each other off, they sometimes lose lab privileges before they get the picture, many arguments about who will write, but eventually one of them has to if they want a grade at all
CliffordT: did the jokers get serious about their lab and did they realize that you stuck all the jokers together
ElisabethS: they usually get serious or at least more serious than they were when they had someone to carry them
DonnaLC: My jokers have language barriers and therefore don't care about grades.
CliffordT: that sounds like a good idea
ElisabethS: If they do well I realign the groups quickly if they do poorly I let them sit as long as I can take the discipline issues that sometimes arise from an arguing group
ElisabethS: there must be some language challenged who do well
DonnaLC: oh yes
ElisabethS: I've found if grades don't get them sometimes a book assignment for an individual instead of a lab assignment everyone else is doing becomes a motivator
DonnaLC: These were mostly discipline problems
ElisabethS: Some classes are rougher than others though, not all are as manageable as others
DonnaLC: Luckily, I don't have any this year.
ElisabethS: have you tried removing privileges and assigning less interesting methods of promoting their learning like outlining the chapter?
ElisabethS: Ooops I see it is already 4 pm
DonnaLC: Is it time to go?
BjB: you are welcome to continue if you have time
BjB . o O ( no one else is scheduled for this room )
DonnaLC: Thanks for all your help Bye.
ElisabethS: If you get a chance please visit my website, I have tech science samples and links you might be able to use www.sundscience.com
CliffordT: many teachers vacillate between being overly aggressive and then submissive.
A positive application of the middle round of assertion can do wonders for mutual respect.
ElisabethS: I can stay a few more minutes if there are more challenges you wish to discuss
BjB: We will miss you, Elisabeth. You have a very good rapport with participants
ElisabethS: I go with the mom routine myself, it works for me, part of it is like you say finding the middle ground and a method you are comfortable with
DonnaLC: I'll do that Clifford Thanks
CliffordT: basically give lots of praise for good behavior in bad kids and of course make an example out of a few once or twice a week
ElisabethS: The death of discipline is when the kids think they smell someone who is not being real
DonnaLC: So true
DonnaLC: Goodbye
ElisabethS: generous and sincere praise does wonders I bet it is a good first year for you Clifford

BjB: Bye, Donna
ElisabethS: Bye Donna thanks for coming
CliffordT: well this is my second year
DonnaLC: Thank You
CliffordT: I was thrust into the classroom by an alternative program (which was also in its first year)
ElisabethS: Did you intend to teach Clifford
CliffordT: I was still going to college to learn how to teach when I began teaching
CliffordT: a true trial by fire experience
ElisabethS: in CA we have to get the sci degree then the credential, did you get your bio degree already?
ElisabethS: Taking classes and teaching is draining, you are a survivor
CliffordT: I never thought I could, felt I was in the wrong profession as a chemist. so when 911 occurred and I got laid off, I took the opportunity to change careers
ElisabethS: Are you enjoying high school?
CliffordT: glad I did. much more satisfying work. even though the downs are lower and the highs are higher than any profession I could imagine, you have never seen so many anal people in your life as in a pharmaceutical laboratory
BjB chuckles
CliffordT: I am very much enjoying reaching out to inner city kids
CliffordT: one may desire suburban or rural kids, however, the kids in an urban setting have the most to gain, therefore if you can reach them, great satisfaction and commitment ElisabethS: I can imagine, my brother got his PhD in cell and molecular and chose teaching college over research partly for the reasons you described
CliffordT: good to know I'm not alone in my thinking
CliffordT: was difficult decision
ElisabethS: How large are your class sizes? do you get money for lab supplies
CliffordT: needed to hand over whole idea to the man upstairs for proper discernment if you know what I mean
CliffordT: good thing about my school is student to teacher ratio of about 1 to 20-25
CliffordT: makes a world of dif.
ElisabethS: I am envious, labs here get up into low 40s sometimes mostly high 30s
CliffordT: 30 kids is simply too much responsibility.
CliffordT: unbelievable to me at this stage of the game
ElisabethS: I must leave now, have an 1 and $1 / 2$ hour commute ahead. Thanks for coming BJ, Clifford and Zaenal
ElisabethS: Please do check out my website, it has student samples for science work posted www.sundscience.com
BjB: Thanks for all your contributions to Tapped In, Elisabeth
CliffordT: yes I must go too, thank you very much, see you again.
ElisabethS: bye everyone

