Title of Session: BirdSleuth - What does INQUIRY mean to you?
Moderator: Jennifer Fee
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Room: BirdSleuth Inquiry Group

BJB2: Welcome to today's BirdSleuth Inquiry discussion on what INQUIRY means to you.

JenniferMF: Hi everyone, I'm leading this afternoon's discussion... I am a curriculum developer at the Cornell Lab of Ornithology.

JenniferMF: Shall we quickly intro ourselves?

JenniferMF: Are you both new to Tapped In, Brian and Yon?

BrianB: this is my first experience

YonI: yup

BrianB: trying to get a feel for proper protocol

BJB2: Jen, would you like to start with introductions?

JeffC: Well... since I'm going to be afk in a minute... let me throw in my three cents... INQUIRY means getting students engaged in active learning... which generally means *relevant and fun*. Yesterday I hurled lots of "fun science and math" urls during the resource group meetings. What fun BirdSleuth (and possibly interactive) sites, games, ideas, lessons, etc. are there for teachers to bring to K-12 students? That's it for me for now as I go to work on the back 40... should be back within 20 minutes or so.

JenniferMF: Sure... maybe everyone could share what we do/teach... and, like Jeff, share what inquiry means to us?

BJB2: thanks, Jeff ;-)

BJB2: I'm a retired teacher located in Pennsylvania and am on Tapped In helpdesk.

JenniferMF: To me, when I think about inquiry, I think about the process of science... allowing kids to ask and answer their own questions.

LindseyC: I'm a middle school substitute teacher located in Staten Island, NY

JenniferMF: At least with the curriculum I work on, BirdSleuth, the focus is on

investigating BIRDS!

BJB2: I think that not many students are really taught HOW to do inquiry, let alone given enough time to research their inquiry topic

BrianB: well, I teach ap government and economics in San Diego. I think of inquiry as real world problem based learning which is rooted in authentic relevant experience.

JenniferMF: I think that's true, BJ.

LindseyC: I completely agree...I think inquiry is a process and we must give children the opportunity to go through that process rather than rushing them

JenniferMF: Brian, perhaps it will be interesting to see the linkages and differences between science inquiry and social inquiry?

BrianB: absolutely

BrianB: I'm hoping that I can take some practical things away from this to apply in my own classroom

JenniferMF: Let me give you an example of science inquiry... check out the Spring 2009 edition of BirdSleuth Reports: http://www.birds.cornell.edu/birdsleuth/student-research/birdsleuth-reports

JenniferMF: Maybe we could all spend a few minutes finding that site, downloading the PDF, and giving it a quick look?

LindseyC: I like how everything is broken down

JenniferMF: These are some research reports written by students participating in BirdSleuth. They've been watching birds, then come up with their own questions, collect and analyze their data, and try to draw conclusions... then we even publish the most compelling reports =)

BrianB: brilliant

BrianB: that looks very fun and through

JenniferMF: Lindsey, one of the reasons the reports appear fairly structured is that we provide teachers with a free online module to help them do inquiry like this from start to finish.

JenniferMF: If anyone would like to see that unit, it's at: Check out http://www.birds.cornell.edu/birdsleuth/inquiry-resources if you get a chance.

LindseyC: that's great, it makes everything so organized

JenniferMF: One of the reasons I wanted to hold a discussion about inquiry is that it can be a real classroom challenge to do this kind of relatively independent work....

JenniferMF: Can you think of some challenges facing, say, a middle school teacher who wanted to do these kinds of investigations?

BrianB: as well as trying to adequately cover the state content standards

JenniferMF: Ugh... the standards =)

JenniferMF: Although for science the Inquiry Standards are quite important... of course there are content standards too!

JeffC is back in time to scoff and sneer at standards.

BrianB: ha

JenniferMF: just in time then, Jeff!

JenniferMF: Other challenges?

BrianB: I also would see potential problems getting some students engaged in the process

LindseyC: yes, definitely by the time children reach middle school they are very jaded towards the learning process

JenniferMF: Brian, I'm curious why you think they'd feel disengaged? Just not interested? Or too challenging? Or not challenging enough?

JenniferMF: I've definitely heard many teachers comment that their "lower ability" students tend to really like this kind of inquiry... taking responsibility for their own learning... choosing things that interest them.

BrianB: I think some students are often apathetic and resist the challenge

JenniferMF: Yeah, you are both mentioning, basically, apathy.

JeffC: when their "challenge" is to score well on standardized tests, can you blame them for their apathy?

JenniferMF: Maybe doing "real science" or inquiry might help engage them?

LindseyC: Choosing topics that are of interest to them would definitely help

BrianB: I do think it could be and I agree

JeffC posted about what... 20 Fun Science sites yesterday during Science Resources? just have the students google "fun science" and look at the top 10 or 20... then pick an activity, etc. to work (perhaps in groups on) and report back to the class as a whole.

JenniferMF: Here's something else to consider... along the lines of addressing apathy (and Brian's interest in project based learning)... Citizen Science...http://www.birds.cornell.edu/birdsleuth/about/citizen-science-projects/citizen-science-projects

LindseyC: I think once you get them interested by showing them all the different topics, they might wind up enjoying the process

BrianB: yea

BrianB: I recently tried this with externalities

JenniferMF: Ha! I just had to google externalities!

JenniferMF: Thank goodness for wikipedia!!!!!

EllenMR joined the room.

BrianB: ha it's cool

JenniferMF: Hi Ellen!

JenniferMF: Brian... can you explain your externality example a little?

BrianB: yea

JenniferMF: Oh, Ellen, you're new to tapped in!

JeffC: Here's a redirect for Jennifer's previous link: http://snurl.com/csprojects

BrianB: an externality is the difference between the private and social cost of a given behavior

EllenMR: Yes I just happened to log in

BrianB: like my neighbor gets a new drum set, his cost for practicing at 2am is different then my cost having to listen to it for hours on end

EllenMR: You lost me on that one too.

BrianB: um lets say that people dumping oil down the sewer is because it is easy

JenniferMF: gotcha, now that you use a science example =)

JenniferMF: Smart man, Brian!

BrianB: but those that are affected at the beach have no say on the behavior of those up stream

JenniferMF: So many environmental issues like that!

BrianB: so I asked the kids to choose an externality of interest everything from smoking, to water pollution to drunk driving and create a government policy that would address and remedy this situation

EllenMR: I get it too. The science example works. I have been involved just briefly with bird sleuth. I do environmental education programming for k-12 and home schoolers and several of them are now involved with bird sleuth.

JenniferMF: Thanks, Ellen.

JeffC: excellent (both Brian and Ellen)

BrianB: I love this problem based learning paradigm because it helps the students become self guided learners rather then institutional junkies

JenniferMF: Before you came in, we were talking about student apathy as a classroom challenge.

BrianB: waiting to have their ed spoon fed to them

LindseyC: that project sounds great Brian

LindseyC: when I get my own classroom I would like to give my students that freedom of choice

JenniferMF: Getting back to student apathy, and how inquiry and citizen science and PBL might be able to help counter apathy... has anyone here ever experienced that? The "turning around"?

JenniferMF: I'm sitting here wondering if these kinds of things are more challenging to do in the classroom... but the benefits are huge?

JeffC: I did... but it wasn't for science... it's when I taught 9th grade English at Richmond

High in California... I got my apathetic 9th graders (most who read and wrote at about 3rd grade level) published internationally (back in the 90s using a 386 and a shell connection). I wrote about it (and other things) at http://snurl.com/netc1

EllenMR: You are right about that and then they don't like what you fed them. The turn around happens in the younger grades 4-6 easier than the high schoolers. IMHO One problem we have is that there is no follow through at home and so there is a major disconnect.

BrianB: yea

JenniferMF: Oh Jeff... I just skimmed it. How cool... thanks for sharing!

BrianB: I really like the structure of the bird sleuth. I think structure is critical to keeping the pace moving in a positive direction.

JeffC: yw

LindseyC: yes structure is key I feel that without structure everything falls apart

EllenMR: I find if students can be made to relate to a subject- any subject not just science, they can get a light bulb moment. Doesn't happen very often and every child learns with a different level and method so teaching itself is a challenge. One light bulb moment makes it worth it.

LindseyC: kids need structure

BrianB: having a series of small deliverables helps the students progress towards the big picture ideas without getting frustrated by the size of the project

BrianB: the hard thing is getting organized enough to recognize the areas that need development

JenniferMF: Brian, that's a great way to put it.

BrianB: lucky for me my seniors love to give their opinions and that really helps me shape the assignment for next years students

JenniferMF: Another thing I was thinking of when I planned this discussion is that there are many levels to doing inquiry... it doesn't all have to be completely student-led. I mean, maybe the student comes up with the question and even how to collect the data, but the teacher provides structure when it comes to analyzing the results or writing it up. The trick may be knowing when to provide structure? And when to let things flow?

EllenMR: students need structure but they need to be able to stretch and inquiry based learning can provide that. Knowing when to let things flow is the key.

JenniferMF: Ellen, are you new to teaching?

BrianB: I would just love the opportunity to get to a point where my entire semester could be implemented through a series of inquiry based learning projects that cover the state standards, my personal learning standards, and teach students to think critically, while feeling empowered to get involved.

JenniferMF: I'm wondering how a teacher learns when to let things flow and when to provide support/structure?

BrianB: so far my exp has been trial and error

JenniferMF: One worry that I have heard expressed by some science teachers is a fear that things will turn to chaos.

JenniferMF: I want to be in Brian's class!

BrianB: I know that if there were more opportunities to have easy to implement preplanned and pre-structured assignments like the birdsleuth, it might help inspire and empower teachers to create their own

JenniferMF: I mean, when I hear about inquiry-based science, I wish so much that my teachers had that attitude when I was in high school.

EllenMR: I have not been a traditional teacher for 30 years. I now provide programming for 3 counties and I visit most of my schools weekly with an ongoing project. This way I am an outside resource for the teachers and I follow the students all year.

JeffC: controlled or structured chaos can be a very good thing... as long as the students are all doing something positive (albeit different).

BrianB: ha thx

JenniferMF: I'm too old I guess. We sat in desks and were lectured =(

EllenMR: I agree chaos is not all bad.

BrianB: I know the feeling

EllenMR: The worse thing we can do is sit and lecture.

LindseyC: yes chaos can be good as long as the outcome is positive

JeffC: right Jennifer... and the Japanese are very good still at the "sensei" method... but our students are quite different, agreed?

JenniferMF: YES!

LindseyC: as long as our inquiry is moving in a positive direction it is a good thing

EllenMR: You lose most of the students with lecturing. I believe in hands on experiential activities where students can see, touch, feel and take ownership. They learn and retain so much better.

JenniferMF: Letting students struggle isn't all bad, either. That was another common fear when I surveyed teachers about fears of doing inquiry... " the students will struggle and get frustrated."

JeffC: the thing is that here, from very young ages now, kids are "taught" to "*perform*" and that means standardized tests... which goes 180 degrees away from internalizing (fun, engagement, etc.) till the will to learn is basically sucked out of the munchkins by the time they reach 5th grade.

JenniferMF: The most worthwhile things in life can be frustrating!

BrianB: yea

BrianB: I think too we need to empower the students

LindseyC: I agree...if it all comes easy to them then what is the point but when i see students working through a problem and finally getting the answer they feel they have succeed and are more excited to move forward

BrianB: build them up to the level of our expectations

JenniferMF: That feeling of success is so very motivating (at least for me... I tend to be competitive)

BrianB: I think sometimes we cater to the slower students at the risk of stifling the higher achievers

BrianB: like in sports you only get better when you play someone who is a better athlete

LindseyC: agreed

BrianB: there is just a fine line between hard work and discouragement

BrianB: for some of these students

BrianB: I think group work is one of the ways to try and minimize this effect

JeffC: if you have assigned roles that each and every kid is into.

JenniferMF: It's my hunch that the "slower students" will "catch up" more easily with inquiry lessons.

JenniferMF: Levels the playing field maybe? Due to the high interest?

BrianB: some of my lower performing students excelled in the inquiry based learning assignment

JeffC: excellent

LindseyC: I think this might be because there is less pressure to "perform" in inquiry based learning but rather they are going on their own path

JenniferMF: interesting.

BrianB: I had more problems with the higher performing students creating great research projects, but failing to make their own personal policy proposal

JenniferMF: Brian, why do you think that is?

JeffC: @Brian... if you're interested (and anyone else as well)... I lead a tour and support of the K-12 Campus on Saturday at 11a.m. Pacific. I help teachers create virtual classrooms here and also collaborate with other classes (if interested). I think this would be an excellent piggyback to the inquiry method outlined here... getting students to work together online (from different sites) on whatever science (or other) projects.

JenniferMF: What is the difference between coming up w the project and personal proposal?

BrianB: I think some students become very adept to parroting information back to teachers to get the a

JeffC: yup... because we've programmed them to be grade and performance conscious.

BrianB: I think too often that level of comprehension is all many teachers ask for from our students

JenniferMF. o O (I was one of those students)

JeffC: so much for Bloom's higher order thinking skills.

BrianB: they play the system at the detriment to their own cognitive development

BrianB: a nation of tape recorders

BrianB: or parrots

JeffC: right... but it's not really their fault... it's the system's! and oh yeah... Bush!

LindseyC: yes they are so programmed now but can we really blame them since we are the ones who did it

BrianB: yea

JenniferMF. o O (but I was so good at being a parrot... it made me valedictorian)

JeffC: right Jennifer, because you "played their game" ... but you also transcended the "standards"... right?

JeffC: I mean... you didn't give up on learning just after you became the top student... weren't you still somewhat self-inspired to learn?

JenniferMF: yes, but probably because I am pretty independent too...

JeffC: now... this is in spite of, and not because of the status quo.

BrianB: but to be honest I think that we are on the verge of seeing new and more developmentally appropriate methods of instruction emerge in the classroom.

EllenMR: Sorry this has been great but I am sitting at the hospital and my mom has just come out of surgery. Another time

JenniferMF: good luck Ellen!!!

EllenMR left the room (signed off).

JeffC hopes so too Brian... but I've been waiting many years for it to come.

BrianB: we are conducting collaboration on a national level for out own personal development

BrianB: without the schools mandating

BrianB: or forcing us into predetermined collaborative teams

JenniferMF: HOPE SPRINGS ETERNAL =)

JeffC: like I said... I did quite a bit in the mid-90s, and I don't want to take away *anything* from what you've accomplished Brian, but don't you consider yourself the rare exception rather than the emerging rule?

BrianB: well I can't speak for everyone

JeffC: of course the schools don't mandate it, just like tech isn't mandated... because it isn't a supported standard... and... it's one of the major reasons that computers in general are used for high stakes testing much more than they are for GPBL or anything else 21st Century.

BrianB: I am a new teacher in CA, but I know that the education programs here are pushing teachers in that direction

JeffC: sounds like life in El Cajon might be getting better then!

BrianB: most of my colleagues are trying to break the traditional molds

BrianB: if only because it is fun for us

BrianB: and good for the students

LindseyC: I have noticed a lot more teachers where I'm from attempting to do the same

JeffC: I remain skeptical... because I have tried for years to support educators with collaboration, forward thinking approaches to teaching/learning... but even though enthusiasm starts high, practicum dissipates over time.

LindseyC: their classrooms seem much more engaged because of this

BrianB: I'm sure

BrianB: like most instances in life

JeffC: how many computers do you have in your classrooms (all of you)?

JenniferMF: Most of the classrooms I visit have one in the classroom (if that) and a hard-to-reserve computer lab.

JeffC: and how many hours do the students get to be online each week?

BrianB: but with the emergence of new charters and online schools i think that there will be more competition for the state schools

LindseyC: agreed...most of the classrooms I'm in have 2 or 3

JeffC: you really think that charter schools are going to increase the number of computers per student in regular public schools?

BrianB: my students are very affluent, I have one computer in the classroom but I know every single one has a computer at home

BrianB: we have 2 comp labs though

BrianB: mac and pc

LindseyC: the students love going on them but the resources just arent there...but with the introduction of smartboards in the classroom technology is getting in there somehow

JeffC: so still... not much computer time during the school day for either of you. are those labs constantly filled Brian? do you have an online checkout calendar for it?

JeffC: 4 or 5 computers per class should be de rigueur in 2010.

JeffC: that's my pipe dream anyway

BrianB: no but I believe that charter schools will provide an impetus or at least experimental opportunities to try more theory and inquiry based learning assignment

JeffC: oh... absolutely... but if and only if the regular schools listen and respond to them.

JenniferMF: Jeff... you talked about your struggles to implement novel approaches. One hope I share with Brian is that the teachers graduating now were raised in a different age than we were!

JenniferMF: They are savvy to tech.

BrianB: yeah half my students blog

JenniferMF: It may take time, but things will be pushed hard.

JenniferMF: At least I hope so.

JeffC: to an extent they were, Jennifer, but even new MAT students resist constructivism, not accustomed to it. when I ran the computer lab for the College of Ed at Pacific University, you'd be surprised at the high number of students who had no clue about tech.

BrianB: facebook, youtube, and myspace is the common language

JenniferMF: Same with inquiry. The standards are different than when I was in school...

BrianB: even their papers are full of online babble like lol

JenniferMF: lol

BrianB: imho

JenniferMF: Jeff, I guess I would be surprised.

JeffC: even if they buy into constructivism, when the pragmatics of K-12 politics hit them in the face their first year(s) of teaching, many feel so intimidated by the daunting task ahead that they ditch every laudable theory and replace them with worksheets.

LindseyC: yes I definitely see their online jargon peeking through in their work

JenniferMF: I'd assume they are digital.

BrianB: I remember trying to talk about what life was like before cell phones and the students could not comprehend the idea of waiting until you got home to check your messages

JeffC: digital worksheets? uh... well... there are of course many sites with them, but no... I sub in the local district, and paper worksheets (and packets) are omnipresent.

JenniferMF: or even no email!!!

JenniferMF: email hit when I was in college. Now I can not imagine life without it!!

BrianB: we are tech junkies

BJB2 looks at the clock on the wall

JenniferMF: no, I mean the teachers are digital natives, not immigrants

BrianB: I think tech is changing how our students thing n learn too

JeffC: let me throw in another site... that I think can be integrated with all of the above: http://www.tikatok.com ...students may create their own virtual books (works for all K-12 students, ELD etc.)... imagine doing inquiry based bird stuff and writing books about them, sharing with others, even printing (the last thing is the only thing on the site that costs, otherwise it's Web2.0).

BJB2: The next BirdSleuth discussion is Monday, April 13

JenniferMF: true. which as an environmental educator scares me.

JeffC: well... virtual books don't waste paper!

BJB2: I suggest that you join this group so you can continue the dialogue on the discussion board

JeffC heads back out to the Back 40.

BrianB: yeah

JeffC: Thanks Jennifer!

BrianB: see ya Jeff

JeffC: And great to meet you too Brian, and Lindsey.

LindseyC: thanks this was very interesting

LindseyC: you too

JenniferMF: wow! this has been so interesting! I do hope we can continue in the group's discussion board or future meeting!

JeffC: Please try and come back Saturday and I'll help you get set up with virtual classrooms here.

JenniferMF: thanks so much!!!

BrianB: buck institute has a great book called problem based learning that is quite interesting

BrianB: thanks for everything i had a great time

JenniferMF: thanks so much for your input Brian, it was so good to meet you.

BrianB: yeah take care

JenniferMF: bye all...