

**Title of Session:** Middle Level Science - Building Inquiry Skills

**Moderator:** Jan Naher-Snowden

**Title of File:** 20040224midsci

**Date:** February 24, 2004

Room: Comfy Conference Room

**BJ:** welcome to the Middle Level Science discussion

**BJ:** Jan Naher Snowden is our discussion leader. Before we begin, please introduce yourself

**BJ:** I'm an art teacher in Pennsylvania and a helpdesk volunteer for Tapped In

**LesterG:** I am a fifth grade English teacher in Mexico City

**PamAL:** I am an 8th grade science teacher in VA

**ViN:** Karissa and I are grad students doing research in MUVE

**RebeccaIB:** I teach sixth earth science and seventh life science in Los Angeles.

**PilarS:** Hi! I am an elementary math teacher in Mexico City

**Jan\_NS:** I'm part-time faculty at U. of Akron (OHIO) - science methods and instructional technology.

**BJ:** what a great crowd, Jan!

**Jan\_NS:** Anyone get left out in the introductions?

**SusanR:** K to 8 Occasional Teacher from Canada

**Jan\_NS:** Welcome everyone.

**LesterG:** thank you

**YazidR** joined the room.

**Jan\_NS:** My science focus lately has been riveted on the lingering ice and slippery conditions here in Ohio.

**Jan\_NS:** Ohio

**Jan\_NS:** But, bigger headlines have been made on Mars.

**Jan\_NS:** I will show a URL - please skim the headline - and let's brainstorm how we might take this news story and use student interest to build science inquiry skills as well as meet NCLB.

**Jan\_NS:** <http://www.cnn.com/2004/TECH/space/02/24/mars.rock.ap/index.html>

**BJ** . o O ( if you are new to Tapped In, please click on the Actions drop down menu in the top right of the chat window and scroll to DETACH )

**BJ:** click on the hyperlink that Jan just shared to open a new window

**RebeccaIB:** depending on the age group and what you are trying to accomplish, it might be fun to have students develop experiments they would do on Mars rocks.

**Jan\_NS:** sounds feasible to me!

**Jan\_NS:** Anyone else?

**PamAL:** you could have the students make guesses about what the rock is since there is debate, and keep track of the developments that are released in the news

**Jan\_NS:** Pam, that is a good beginning for most age groups.

**RebeccaIB:** after a few months, the students could write their own news article or make a news broadcast relaying the events so far

**LesterG:** It would be possible to discover weather patterns depending on the rocks surface and layers.

**Jan\_NS:** great - we are definitely expanding the possibilities!

**Jan\_NS:** let's back up a few steps.

**PilarS:** We can also have students guess about the size of the rocks and the math applications it may have, e.g. compared to the size of the planet.

**Jan\_NS:** Pilar - that is a very interesting approach.

**Jan\_NS:** Inquiry skills are based on observation, making inferences, making hypotheses and asking questions.

**Jan\_NS:** how about creating a K-W-L in small groups? And get the students to state what they know, prior knowledge and from the article.....

**CarmenE:** students can imagine the elements and related them with prior knowledge about compositions of rocks

**Jan\_NS:** That is true, Carmen.

**PamAL:** then they can fill it in as news is released or as they do more research

**LesterG:** Do you think life on Mars is possible or existed in the past? What evidence or observations would you use to back up your data?

**RebeccaIB:** it would be helpful for younger students to have rocks with them to examine as they read about how Mars rocks are different

**LesterG:** Possible questions or inquiries students could make

**Jan\_NS:** Then have them generate their own questions based on the article, etc. and resources that they already know about.

**Jan\_NS:** Pam and Lester, both relevant ideas.

**Jan\_NS:** We always need to remind the students to start from their observations and then move to creating inferences.

**Jan\_NS:** Then we can assist the process of question making. - the beginning of their research.

**LesterG:** sort of the scientific method

**Jan\_NS:** exactly, Lester. We build in the recursive approach to allow all questions to be valued. At the beginning and during the process.

**CarmenE:** If students are interested in the topic they will investigate more, and they can ask questions about resources

**Jan\_NS:** good point, Carmen.

**PamAL:** I agree with you Carmen

**Jan\_NS:** the timeliness of the article will hopefully generate the interest and motivation.

**RebeccaIB:** hopefully:)

**LesterG:** it is important to let the students know that a hypothesis can be wrong and that the fun part is not trying to prove it but everything that is learned during the process

**Jan\_NS:** I agree, Lester.

**RebeccaIB:** exactly! sometimes you learn more by "failing"

**Jan\_NS:** all ideas, inferences, and hypotheses are relevant to the process.

**LesterG:** thank you Jan, good night

**CarmenE:** I think starting with simple ideas can elicit students to bring information and get involved in the topic, good points, bye

**LesterG:** good night all

**PilarS:** Good Bye all

**Jan\_NS:** leaving already, Lester? good evening if you are! hope to see you next month.

**LesterG** left the room (signed off).

**Jan\_NS:** We continue until the hour is reached.

**Jan\_NS:** just in case anyone else thinks this might be the time to leave.

**Jan\_NS:** this site include other good links near the bottom of the page.

**BJ** settles in her chair and waits for more

**PamAL:** I find CNN to be a great source of info when it come to current topics in science that I can use in my classroom

**Jan\_NS:** click on the one "Nasa mars rover site. spend a little time exploring and come back. ... I agree Pam.

**Jan\_NS:** <http://marsrovers.jpl.nasa.gov/home/index.html>

**Jan\_NS:** this site would probably be the next site for the students - but this would be based on the questions that each group develops.

**Jan\_NS:** please share your ideas for using one of these pages to develop a lesson or inquiry activity.

**RebeccaIB:** I love sites like these with so many ideas for educators but separate places for students, so the info available is aligned with what the teachers get

**Jan\_NS:** Yes, that makes these sites very valuable because many users are considered in the development of the site and its resources.

**Jan\_NS:** please share a few of the pages in this site that seem most student friendly and why you feel that way.

**YazidR:** Hi

**Jan\_NS:** Patrick - feel free to jump right in with your ideas, too.

**PamAL:** I can't get the site to load or I would offer suggestions

**Jan\_NS:** are you using a dial up, Pam?

**PamAL:** yes

**Jan\_NS:** it is an image heavy site, unfortunately.

**PamAL:** they do not offer dsl where I live

**Jan\_NS:** let me see if I can find a page you can view.

**PamAL:** thanks

**Jan\_NS:** <http://marsrovers.jpl.nasa.gov/classroom/schoolhouse/>

**PamAL:** what a great idea, send in rocks so now the students feel like they have ownership in the project

**RebeccaIB** joined the room.

**Jan\_NS:** This would fit in with the Academic Content Standards for earth science as well.

**Jan\_NS:** An extension would be to set up a telecollaborative project among the different classrooms to compare the composition of their respective rocks.

**Jan\_NS:** for Rebecca, <http://marsrovers.jpl.nasa.gov/classroom/schoolhouse/>

**PamAL:** students could do research about different regions in the US and compare data with others online about the composition of their rocks and what influences are specific to them

**Jan\_NS:** exactly,

**Jan\_NS:** someone mentioned doing a brochure earlier - that would fit right in here.

**PamAL:** I was thinking of making map to show the different types of rocks in the different areas

**Jan\_NS:** true. that would definitely work.

**RebeccaIB:** this is an incredible program they are doing! it would be great to set up a partnership with another class participating and maybe even send each other your rocks as penpal kind of activity

**PamAL:** that is a great idea

**Jan\_NS:** <http://www.space.com> provides other valuable resources and webpages.

**SusanR:** Thanks Jan, This is a unique project and fits into our matter and materials unit

**Jan\_NS:** although you have to wade through all the commercial baggage here.

**RebeccaIB:** yes. I am inspired to try and incorporate it into my curriculum!

**Jan\_NS:** Exactly, Sue. This news event can bridge into many areas, obviously the science standards, but also writing, journaling, etc.

**SusanR:** I can see the connections, Jan.

**PamAL:** great ideas. we are getting ready for a big writing test in my school so this is helpful

**Jan\_NS:** If you consider primary source documents as valuable resources, these sites are loaded with many images.

**RebeccaIB:** do you know of others appropriate for other science disciplines? biology, ecology, etc.

**Jan\_NS:** And given that this is not contrived (students can always figure that out!), students can get into it, because it is happening right now.

**Jan\_NS:** Rebecca, I could probably come up with many, given a few minutes. Do you have a suggestion for next month's discussion?

**Jan\_NS:** We could then take that as our next topic.

**PamAL:** a lot of students don't seem to be into science so when they can relate it makes teaching the students so much better

**RebeccaIB:** well, maybe since election time is coming up.. a look into the environmental campaigns the candidates will be trying to push?

**Jan\_NS:** anyone have an idea, (oh, please, I love finding useful sites or resources that are actually usable as is.

**Jan\_NS:** Oh, great idea!

**Jan\_NS:** Definitely an opportunity for evaluation and critical thinking for students.

**PamAL:** thanks for the help

**Jan\_NS:** Well, our time is about up for this evening. Please join us next month!

**RebeccaIB:** on a side note, is a transcript of all of this automatically sent? i haven't been writing down all these great ideas!

**Jan\_NS:** You are a Tapped In member, you will receive the transcript.

**RebeccaIB:** thanks! good night!

**SusanR:** Thanks, Jan. Some timely and relevant resources.

**SusanR** left the room (signed off).

**Jan\_NS:** Good night all. Have a good month till we chat again!

**PamAL:** night

**Jan\_NS:** Any other questions, before we all leave?

**BJ:** thanks, Jan...nice discussion