



HISTORY OF WINTER INTERACTIVE WEB SEMINAR

We would like to invite your students to participate in a web seminar on the History of Winter (HOW) on Thursday, February 19 from 2:45 PM to 4:00 PM EST. This experience will allow your students to interact with you and other NES educators while on location in Lake Placid.

Your students will be able to:

- chat with other classrooms that have NES educators on location in Placid,
- compare and contrast your snowflakes with those of other NES classrooms
- mark-up images and graphs,
- observe live demonstrations of ice formation,
- answer poll questions on the science behind snowflake formation, taxonomy and classification systems,
- interact with leading NASA scientists about the History of Winter.

If you would like to have your students participate in this event, please contact Jeff Layman at: 703-312-9384, or email: jlayman@nsta.org by February 16, 2004.

After reserving a spot for your classroom, if time and the weather cooperate, please have your students complete the optional snowflake collection and identification activity prior to the HOW Web Seminar on Thursday, February 19, 2004. If it snows this week, you might be able to do this with them as well!

Someone at your school will also need to serve as the *technology coordinator* to make sure that your students will be able to participate in the event by setting up a projector and speakers connected to a computer with Internet access for to the event. They will also need to install HorizonLive using the instructions listed below so that the computer system will be ready to go on the day of the event.

As you'll be up at Lake Placid while your students will have a substitute, you may want to pass the "Preparing for the Web Seminar" instructions to your on-site *technology coordinator*, so they can ensure that a room is ready to go on February 19, 2004. You will want your *technology coordinator* to contact our HorizonLive coordinator, Jeff Layman, at 703-312-9384, or email: jlayman@nsta.org and walk through the "Preparing for the Web Seminar" on the next page.

At the bottom of this document is the complete agenda for the program on January 19, 2004. If participating in the event you should leave copies of the agenda for your substitute teacher and technology coordinator, so that they will know what to expect during the program on February 19th. It will also give you an idea how you may be interacting with your students from Lake Placid.



PREPARING FOR THE WEB SEMINAR

We are excited about your student's participation in this event and want to make sure it is a valuable learning experience. In order for this to occur it is **IMPERATIVE** that your *technology coordinator* work through the HorizonLive "Wizard" that automatically checks your system to make sure the proper settings are installed. If you have any questions, contact Jeff Layman at: 703-312-9384, or email: jlayman@nsta.org.

Go to: <http://channel.horizonlive.com> and select the link titled: "**Launch our handy Wizard...**" When prompted for the Channel ID, type in nstainstitute. You can type in any username you wish, but we recommend using the following format: *name_schoolname*, so that we know who is online and which school you are from, e.g. john_riverdale.

Should you have any problems with the Wizard, you will need to contact HorizonLive at (212) 651-8060. HorizonLive provides technical support every day from 8am through 8pm EST. Users experiencing technical trouble can contact HorizonLive via e-mail at help@horizonlive.com. Please allow at least 2 days to troubleshoot any problems you may encounter. Waiting until the day of the presentation to check the computer is **NOT RECOMMENDED**.

One potential glitch that we discovered: Sometimes in the last step of the HorizonLive Wizard, called LiveShare—where a cursor follows eyes around the screen—the window sometimes does not display the entire wizard screen, just the eyes. If this occurs, it does **NOT** mean you are unable to use HorizonLive, but the wizard sometimes “hangs” on this last step. If you encountered this, but you saw the eyes move around, you have successfully completed the wizard.

To attend this event on February 19, have your technology coordinator or substitute teacher follow this link at the appropriate time:

<http://channel.horizonlive.com/launcher.cgi?channel=nstainstitute>

You will want to enter the same Channel ID and name format specified above.

Technology Recommendations for participation:

Recommended Hardware

- Pentium PC, Macintosh G3 or higher, or UNIX
- 128 MB of RAM
- Internet access (not through a telephone line) for streaming video
- Sound card
- Speaker for sound output
- LCD to project computer screen for classroom

Recommended Software

- RealPlayer 8 or higher
- Internet Explorer version 5.0 or higher OR Netscape 6 or higher
- The browser must be JAVA and JavaScript enabled



OPTIONAL ACTIVITY: SNOWFLAKE IDENTIFICATION

Students: If the opportunity becomes available, collect and identify some local snowflakes. During the Web Seminar we'll ask you to identify what types of snowflakes you observed and what factors might affect their formation. If you find that snowflakes from different geographic locations are different—What does this mean? If the snowflakes are the same, why would this be so?

Snowflake Collection: Take a black piece of construction paper or cloth or any type of flat surface and leave it outside for several hours so that it can cool below zero degrees Celsius (32°F) for several hours. (Find a sheltered location to do your observation once the snowflakes have been collected.) Move the collection surface with the snowflakes to an area where it is still cold, but snow cannot continue to fall on the surface. Use a magnifying glass and try to identify the shape of the snowflakes and then classify them to a similar type of snow/ crystal as shown below.



NAME				Symbol	
Hexagonal Plates					
Stellar Plates					
Hexagonal Columns					
Needles					
Spatial Dendrites					
Capped Columns					
Irregular Crystals					

* Photographic images provided by snowcrystals.com. Please visit them if interested in purchasing their [new book](#).



HISTORY OF WINTER WEB SEMINAR AGENDA

February 19, 2004

2:45 PM—3:00 PM EST

System Check 1-2-3

Al Byers and Ryan Foley—NSTA

- Log into NSTA Institute HorizonLive channel
(<http://channel.horizonlive.com/launcher.cgi?channel=nstainstitute>)
- Confirm reception of audio/video
- HorizonLive interface Help Screen: Maximized Screen for system: LCD/Speakers

3:00 PM—3:05 PM EST

Welcome to the History of Winter

NES Educator (TBD)

- Goal of the Web Seminar
- Introduce Principle Investigator of HOW: Dr. Peter Wasilewski and Eric Erbe
- Scientists get to do some outrageous stuff

3:05 PM—3:15 PM EST

Solar System Ice and Snow

Dr. Peter Wasilewski and Eric Erbe

- Winter on other planets
- Ice formation on Earth versus Mars: Dry Ice/Water Ice formation demo

3:15 PM—3:23 PM EST

Local Snowflake Classification & Taxonomy

NES Educator(s) (TBD)

- NES students capture snowflakes prior to program
- Use classification and taxonomy system to identify their local snowflakes
- Answer Poll Question: How many were able to identify and classify a snowflake in their location?
- Mark up image identifying different type of snowflakes and identify which type(s) were produced in their location
- Answer Poll Question: Which type snowflake they saw most produced in their location

3:23 PM—3:48 PM EST

What affects the formation of Snowflakes?

NES Educator(s) (TBD)

- Answer PowerPoint question using chat: Why do you think there are different types of snowflakes produced? What might be some of the things that affect how a snowflake forms?



- Mark up image of US identifying where NES schools are located in the country that are participating today
- Answer question using chat: Looking at the map and location of schools, what is different about each geographic location and how might this affect snowflake formation?
- Answer Poll Question: From the list select which factors you feel might have the biggest impact on how snowflakes are formed?
 - Wind Speed
 - Temperature
 - Day time
 - Night time
 - Amount of water in the air (humidity)

3:48 PM—3:55 PM EST

Graph Analysis: Snowflake formation

NES Educator(s)

- Graph showing relative temperature versus type of snowflake
- Questions from educators asking students to identify reasons for differences in formation from graph due to:
 - Temperature
 - Water content

3:55 PM—4:00 PM EST

Closing/Review

Pete Wasilewski

- What to take away from today's session
- Remind them of tomorrow's interactive video conference and webcast