NOAA's Detroit/Pontiac National Weather Service

September 2006

www.weather.gov/detroit

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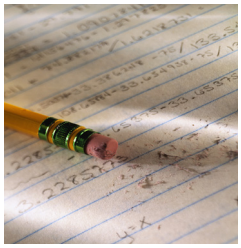

Annual School Newsletter

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Special points of interest:

- Winter Weather Awareness Week November 12-18
- Autumn begins September 23 @ 1:03 a.m.
- Winter begins, December 21 @ 7:22 p.m.
- Return to Standard Time Sunday October 29 & Daylight Savings Time Begins 2AM **Sunday March 11, 2007**
- Severe Weather Awareness Week March 25-31, 2007
- NOAA Weather Radio All Hazards Awareness Week February 4-10, 2007

Tours and Forecasts

Welcome to our yearly School Newsletter from your Detroit/ Pontiac NOAA National Weather Service! Mark your calendars for Saturday September 30th as your National Weather Service will open its doors for everyone. Along with the NWS staff, our NOAA partners from the Great Lakes Environmental Research Lab (GLERL) and Thunder Bay Marine Sanctuary will all be under one roof. This will be a unique opportunity that will run from 9am–2pm and we look forward to seeing you here! Planning is well underway for this open house, but we are looking ahead into the autumn and winter season. You can be sure that the latest forecast information will be available from our dedicated staff of meteorologists, hydrologist, electronic technicians and information technology personnel. Updated forecast information are available 24 hours a day from our web site at weather.gov/detroit and on the NOAA Weather Radio All Hazards Network. NOAA Weather Radio All Hazards broadcasts warnings, watches, forecasts and other hazard information 24 hours a day. Specially designed receivers will alert you via an audible warning alarm and text message. Receivers even have the ability for you to program counties and message types that you want to be alerted for your convenience. These devices should be as common as smoke detectors in everyone's home! For more information on these radios, please visit: www.nws.noaa.gov/nwr

NOAA's Great Lakes Open House
Saturday September 30th, 2006

The WeatherBox

The WeatherBox offers:

- Flexible teaching materials for Grades 4-9
- FREE delivery to your school
- Students exposure to weather
- Useful tools, classroom exercises, and experiments
- Ideas for finding & doing Science Fair Projects

What's in the WeatherBox?

This box contains numerous teaching tools for both presentation and hands-on learning. Some items include:

- Videos
- Cloud Charts
- Thermometers/ psychrometers/beakers
- Belt Weather Kits

Due to high demand, we schedule a two week tour for your class. For additional information, call or email Richard.Pollman@noaa.gov

Online Educational Links

The World Wide Web has several educational resources available

The Internet has a wealth of meteorological information and here are some web sites of interest. FEMA (Federal Emergency Management Agency) has developed a site that teaches kids how to be prepared for disasters and how to prevent disaster damage. Visit www.fema.gov/kids

The NOAA Educational resource center has information and additional links for both educators and students alike. Visit www.education.noaa.gov and NOAA educational opportunities for students at www.magazine.noaa.gov/stories/mag201.htm

Introduced a couple of years ago, JetStream is an Online Weather School. This site is designed to help educators, students, or anyone interested in learning about weather and weather safety.

www.srh.noaa.gov/jetstream

We have launched our new Preparedness web page with links and information which you can visit at http://www.crh.noaa.gov/dtx/spotter/prepare2.php

The office of climate, water and weather services has numerous links and resources that will provide educators materials range from coloring books, puzzles and games, to lesson plans, brochures, satellite images, and career information for weather related fields, such as meteorology, hydrology and climatology.

http://www.weather.gov/om/

National Oceans Science Bowl

"The NOSB provides an educational forum for students to excel in math and science and receive national recognition for their diligence and talents."

The National Ocean Sciences Bowl (NOSB) is a nationwide academic competition among teams of high school students. Regional competitions will be held around the United States in February 2007 with the final national competition held in Monterey, California in May 2007. This competition will test students' math and science skills as applied to topics on the ocean and Great Lakes biology, chemistry, geology, physics, technology, history and economics. Additional information is available to help students and teachers prepare for the competition at http://www.nosb.org

You can also contact the Great Lakes Environmental Research Laboratory at http://www.glerl.noaa.gov/pr/nosb/cur

The Great Lakes Bowl of this competition will be announced shortly and held at the University of Michigan Central Campus in Ann Arbor. High school teams of 4 students (with one alternate) and a coach will compete in question and answer matches during the day-long round-robin, double elimination competition.

The Great Lakes Bowl will award cash prizes, trophies, medals, and other prizes to top-finishers. The overall winning team wins a paid trip to Monterey, California in spring 2007 to compete in the National Ocean Science Bowl finals. The grand prize may include cruises on research vessels, visit to research laboratories, computer/hardware for the winning team's school, scientific equipment and laboratory supplies, scholarships, endowments, t-shirts, trophies, and medals.

For entry forms and additional information please contact:
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MICHIGAN COMMITTEE FOR SEVERE WEATHER AWARENESS

The Michigan Committee for Severe Weather Awareness

The Michigan Committee for Severe Weather Awareness was formed in 1991 to coordinate public information efforts regarding flood, tornado and winter safety. The Committee is made up of members from the National Weather Service, Emergency Management, Michigan State Police EMD, Department of Environmental Quality (DEQ), Media, Red Cross, Insurance industry and teachers. The Committee's **new and enhanced** web site is

www.mcswa.org

Every year, the Michigan Committee for Severe Weather Awareness sponsors a poster contest for 4th and 5th graders. The winners are honored during Severe Weather Awareness Week. Look for information about the poster contest arriving at your school in the autumn. This information will also be posted to the above mentioned web site.

The Michigan Committee for Severe Weather Awareness has updated information on severe weather planning in schools. *A Guide to Developing a Tornado Emergency Plan for Schools* and a tornado safety tri-fold pamphlet were revised in December 2005. This downloadable material is posted on the Michigan Committee for Severe Weather Awareness web site.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOAA
U.S. DEPARTMENT OF COMMERCE

NATIONAL WEATHER SERVICE

Severe Weather Terminology & Safety

Have several school staff members designated as "spotters" and a designated coordinator, with a backup, authorized to activate safety plans. The spotter can serve as the last line of defense in a school's weather emergency safety plan. Contact your local Emergency Management Coordinator or NOAA National Weather Service to find out about training sessions in your area. The following information is not a substitute for official training.

- A tornado watch is issued when the possibility of tornadoes exists.
- A tornado warning is issued when a tornado has been spotted or indicated on radar.

Free Spotter Classes are offered by the National Weather Service and the schedule will be posted online at weather.gov/detroit starting in the month of February.

Have a NOAA Weather Radio All Hazards with a warning alarm tone in order to receive severe weather information directly from NOAA National Weather Service.

Upon receiving notification of a tornado watch, the principal/coordinator should alert staff members. During a tornado watch, specific teachers or other school staff members should be designated to monitor commercial radio or television for tornado warnings, even if the school has a NOAA Weather Radio All Hazards tone-alert system. Remember: Severe thunderstorms may produce as much damage as some tornadoes.

Drill It!

State of Michigan law now requires all public schools to conduct a minimum of two tornado safety drills per school year.

The Michigan Committee for Severe Weather Awareness recommends that schools conduct at least one tornado drill in the fall and one in the spring. Severe weather in Michigan doesn't follow a calendar, and certainly is not restricted to just warm summer months: Michigan severe weather outbreaks occur virtually every spring and fall, and even during the month of January. All schools should have a tornado safety plan that includes efficiently moving people to designated safe areas in the building (addressing both during school and after school activities), as well as a backup method for communication should the power fail and the school's public address system becomes inoperable. For more information please visit

www.weather.gov/om/severeweather/index.shtml

And

www.mcswa.org

Winter Weather Terminology & Safety

Each year, we receive several questions regarding what does a Winter Storm Watch, Winter Weather Advisories and Wind Chill mean? The terminology can make anyone confused and we hope to clarify some of these terms:

1. **Winter Storm Watch**: can be issued up to 3 days in advance when the potential of 6" of snow in 12 hours or 8" in 24 hours. Not certain, but confidence is above 50%

2. **Winter Storm/Heavy Snow Warnings**: when the above conditions are expected or imminent within 12-24 hours.

3. **Blizzard Warning**: issued when frequent gusts to 35 mph & considerable falling and/or blowing snow reducing visibility < 1/4 mile for 3 hours or longer.

4. **Wind Chill Advisory**: minimal 10 mph wind resulting in wind chill values of –20°F to –29°F

5. **Ice Storm Warning**: freezing rain producing a significant, and possibly damaging, accumulation of ice (> or = 1/4")

6. **Snow Advisory**: a storm producing an average of > 3" but less than 6"

7. **Winter Weather Advisory**: when a storm is producing a combination of winter weather (snow, sleet, freezing rain/drizzle, blowing snow) that present a hazard and if caution is not exercised, it could lead to live threatening situations.

Here are some tips for you and your classroom:

- Have a flashlight and extra batteries
- Battery powered radio (All hazards NOAA Weather Radio)
- Extra food, water and medicine
- First Aid supplies/kit
- Additional heat source (be mindful of additional fire & carbon-monoxide hazard)
- Fire extinguisher
- Additional means of communications via cellular phones, for example.

To obtain more information, visit:

www.nws.noaa.gov/om/winter/index.shtml

Wind Chill Chart

Wind (mph) \ Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	29	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01