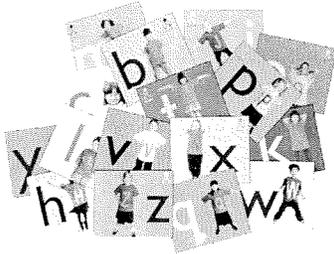


**ABC's of Michigan:  
Many Ways of Learning**



**Kelloggsville Middle School**

Fruitport School District

Art Teacher:  
Chris VanAntwerp

Grand Rapids, Michigan

Grade 8

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Adelin  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned that a snowflake is made out of a hexagon and that it has six arms. A snowflake starts out as a hexagon then the cold air freezes the water and then the six arms come out and after that the patterns start to form. I also learned that if you have the right temperature and environment you could make two snowflakes exactly the same. The first man to take a picture of a snowflake is Wilson Bentley.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Malhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Alethea  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned about snowflakes. They are hexagonal in shape, with six identical arms coming off of each side. I also learned that they form in cold and dry, overcast climate. In ice, able to form. Lastly, I learned of snowflake beauty, the Vermont Series. They are decorated with intricate things snowflakes.

**Student's First Name** Amber  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

### LEARNING STATEMENT

While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...

snowflakes all look very different but when I looked harder, I realized all of the snowflakes did have some of the same features. They all have a hexagon shape and six arms. Most people thought snowflakes can't be the same but they can under a certain environment. I would have never known this if Wilson Bentley (better known as snowflake Bentley) had never been so interested in the snowflake. Snowflake Bentley took some 5,000 images of snowflakes. He also finished the first book on snowflakes in 1931. The book had about 2,000 of his pictures. The most interesting part of our project was taking the clay together. The coloring of the snowflake was very cool because it will appear its texture and the underglazing was very fun but difficult to do.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Audrie  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

What I learned from this project is about snowflakes and hexagonal crystals. The snowflakes always have six arms coming off the hexagon. Wilson "Snowflake" Bentley took pictures of snowflakes. A couple years before he died he published a book, which included 2,000 out of the 5,000 pictures he took in his lifetime.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name**

Austin

**School**

Kelloggsville Middle School

**School District**

Kelloggsville Public Schools

**Grade**

8th

**Teacher's Name**

Chris VanAntwerp

**Art Teacher's Name**

Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned about snow flakes that at a certain tempature you can duplicate a snowflake. Also I learned that when the water reaches a tempature then the crystals freeze into a six sided hexagon snowflake.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Malhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Aera  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

What I learned about snowflakes in my art class is that there's a hexagon in the snowflake and that they have six arms. Snowflakes are made of water, when the water freezes then snowflakes come to be! Wilson Bentley was the first person to take pictures of the snowflakes. In fact he took about 5,000 photographs! I also learned that some snowflakes can be exactly the same.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Brittany  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

what I learned was that snow-  
flakes have 6 arms. They also  
are formed on a hexagon crystal.  
2 snowflakes can look the same  
depending on the temperature.  
Snowflakes come in many different  
shapes and sizes. As snowflakes  
form they fall and slowly form  
into a snowflake.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Bryan  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I have learned from this project that all snowflakes are hexagonal. A very fascinating thing I have learned from this is that snowflakes are made out of snowcrystals. Another strange occurrence about snowflakes is that they have 6 limbs and almost all snowflakes are different, except if the environment and temperature are almost exactly the same.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Chelsie  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned that snowflakes start out as hexagonal crystals. Then as the snowflakes go through the cold and moisture they form six arms off each side, all six arms are the same exact shape, size, and texture. Also were learning how to underglaze. Also some more things I learned is that no two snowflakes seem to be identical.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Elizabeth  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

While working on "ABC's of Michigan- *Many Ways of Learning*,"  
I learned...

I learned in the process of making snowflakes I had to use 6 legs for the snowflakes because it starts from a hexagonal crystal. I loved making snow flacks it was so fun.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Ernesto  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

A snowflake starts out as a hexagon made of a crystal with 6 arms coming off of the hexagon. The man that first showed the world a snowflake's true design was Wilson "Snowflake" Bentley. Snowflake Bentley was a farmer that loved to photograph snowflakes so he published a book that showed 2000 snowflake pictures. Shortly after the book was published he died, but he is still remembered.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** David  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

### Snow crystals

In the three booklets that I read, I learned that the temperature for forming snow crystals is  $-40^{\circ}\text{C}$ . They're formed when water is placed on top of a vapor Diffusion Chamber.

To take pictures of snow crystals, scientists use a simple video camera and attached it to one eye of a stereo microscope. The pictures are digitized using Snappy frame grabber with SnapCap software for time lapsing imaging. The digitizing process was used by  $640 \times 480$  pixel resolution.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name**

Israel

**School**

Kelloggsville Middle School

**School District**

Kelloggsville Public Schools

**Grade**

8th

**Teacher's Name**

Chris VanAntwerp

**Art Teacher's Name**

Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned that a snow crystal starts as a hexagon shape and that it has six arms and that they are not any snow flakes that are alike but you can make two snow flakes that are alike in a controlled environment.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Jasmina  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

What I learned while making snowflakes is that they have to have a hexagon in the middle and to have six arms. Wilson Bentley was the first to take pictures of snowflakes, he was called Snowflake Bentley. Also, in a controlled environment there can be two or more of the same snowflake.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Josh  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned that all snowflakes  
have a hexagon in the  
middle and have six arms  
coming from the hexagon.  
And a very intelligent snowflake  
person was William "Snowflake"  
Bentley.  
There can be two of the same snowflake  
in a certain area if it the same of  
everything.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Leni  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

how a snowflake is formed. Also, I found out that a snowflake has a hexagonal shape. They can only have six arms. What I found interesting was that Wilson Bentley (also known as "Snowflake Bentley") was the first person to ever capture a photograph of the snowflake. When I made the snowflake I had to put it onto a medallion piece of clay, so I needed to press the two pieces of clay together. When color is put on the snowflake it shows the texture. Finally, I learned how to underglaze, which I've never done before. I really enjoyed making snowflakes for the governor!

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Lisa  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

While working on "ABC's of Michigan- *Many Ways of Learning*,"  
I learned...

From the snowflake project, I learned that all snowflakes have six arms. Also, there are no 2 snowflakes that are the same. Wilson Bently was the 1st guy who took photographs of the snowflake.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Michael  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

While working on "ABC's of Michigan- *Many Ways of Learning*,"  
I learned...

From this project I have learned a lot about snowflakes. I also learned how to design a snowflake. It was a good experience because it taught me that snowflakes are made of a hexagon.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Michelle  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

From this project I have learned about snow and how it forms. Now I start to make my own snow. My favorite G arms are green. Being was the first person to take pictures of a snowflake.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Nicholas Green  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...

I learned a lot like how to  
cut clay. I also learned  
that snow flakes are  
not alike. I also learned  
that there is more than  
one of the same.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mutharu's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Raul  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

That a snowflake is made of hexagonal crystal they're made within the cold environment when it's coming down. A snowflake has six arms from the hexagon.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Malhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Phuora T.  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned that snowflakes start out as a hexagonal prism.  
I also learned that snowflakes can't be identical.  
Snowflakes need the right conditions.  
Also, Wilson "Snowflake" Bentley was the first person to photograph snowflakes.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Samantha  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

We learned about how snowflakes are the same in a controlled environment. I've learn that all snowflakes have's six arms and all snowflakes has hexagons. Before I didn't know that snowflakes can be bigger in the background and with out the background its smaller.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Tessa  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

While working on "ABC's of Michigan- *Many Ways of Learning*,"  
I learned...

The size of the snowflake  
I made was bigger than the  
one I made before. The  
snowflake I made before  
was smaller.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Malhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Troy ~~\_\_\_\_\_~~  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned that snowflakes can look alike - snowflakes are  
you know, under a microscope you can see the designs.  
The first person to photograph them was snowflake Bentley.  
Snowflakes can only have six arms unless they lose one. That  
is because a snowflake grows off a hexagonal shape of snow.  
In order to get a photograph you have to do it as soon as it  
falls.

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Tree ~~XXXXXXXXXX~~  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

While working on "ABC's of Michigan- *Many Ways of Learning*,"  
I learned...

→ Snowflakes have six arms  
All snowflakes are not the same design  
All snowflakes are hexagonal crystal

Governor Jennifer M. Granholm and First Gentleman Daniel G. Mulhern's  
"ABC'S OF MICHIGAN- MANY WAYS OF LEARNING"

**Student's First Name** Zaira  
**School** Kelloggsville Middle School  
**School District** Kelloggsville Public Schools  
**Grade** 8th

**Teacher's Name** Chris VanAntwerp  
**Art Teacher's Name** Chris VanAntwerp

**LEARNING STATEMENT**

**While working on "ABC's of Michigan- Many Ways of Learning,"  
I learned...**

I learned that snow is a precipitation of  
Crystalline water ice. The environment  
Snow needs for it to exist is cold  
winter areas away from the equator.  
One snowflake crystal is made  
up of a hexagon. Coming off of  
each side of the hexagon has to be an  
arm. All together there are 6 arms  
making up one snowflake.