Wisconsin Water Library
UNIVERSITY OF WISCONSIN-MADISON

Lesson Plan
"Blubber n' Books (it's Winter!)"

This lesson plan works very well with children preschool through second grade. The lesson lasts between 45 minutes to an hour, based on the number of books read. To orient the children to what it means to be a scientist, think scientifically and "do science," use the **"A Scientist Is. . ." and "Scientific Method"** handouts available at the end of this lesson plan.

SING

Begin with your favorite welcome song.

SCIENCE CHAT

Begin a theme on winter at circle time by freestyle asking the children what fun things they are doing in winter.

HOW DO WE STAY WARM IN WINTER?

What happens outside in winter? How does winter make us feel?

What kinds of things to kids & grown-ups do in winter so we don't feel cold?

What about ANIMALS? What do animals do? (MIGRATE, HIBERNATE, ADAPT, BLUBBER!)

- **MIGRATE** (go to warmer places): Birds, Fish, Butterflies, Elk/Caribou
- **HIBERNATE** (sleep, lower heartrate): Bears, Skunks, Chipmunks, Snakes
- **ADAPT** (change behavior or appearance):
  - Squirrels grow a thicker coat of fur
  - Snowshoe Rabbits change the color of their fur so they can hide in the snow
  - They both (along with other animals) look for warm places to sleep like holes in logs
  - Some animals even sleep underground (like bees!)
- **BLUBBER (**thick layer of fat, also called adipose tissue, directly under the skin of all marine mammals)
  - Covers the entire body of seals, whales, walruses (except for fins, flippers, and flukes!)

READ

Suggestions from the Wisconsin Water Librarians, but feel free to swap out with your own OR visit our

subject specific reading list: Winter Fun!

READ: *Snow (2002)* by Manya Stoic

READ: *Big Snow (2013)* by Jonathan Bean

READ: *Snowmen at Night (2002)* by Carolyn Buehner illustrated by Mark Buehner

READ: *Winter Eyes (1999)* by Douglas Florian

READ: *Time to Sleep (1997)* by Denise Fleming

SING

Use any song you like adapted to the theme of winter. Here are two suggestions:

Snowman Hokey-Pokey

You take your right mitten out.
You put your right mitten in,
Then you shake it all about.
You do the winter pokey, (shiver)
And you turn yourself around.
That's what it's all about!

(Then continue exchanging "right mitten" for the following in separate verses:)
Left mitten. . .
Boots. . .
Scarf. . .
Warm hat. . .
Snow suit. . .

Snowman Song
(Tune: I'm a Little Teapot)

I'm a little snowman,
round and fat. (Point to tummy)
Here are my mittens,
Here is my hat. (Point to head)
When the sun comes out
I melt away.
See you next year
On a snowy day.

I'm a happy fellow, here's my nose. (Smile and point to nose)
I'm all snow from my head to my toes. (Point to head and to toes.)

When the sun comes out
I melt away.
See you next year
On a snowy day.

I have two bright eyes so I can see. (Point to eyes.)
All the snow falling down on me. (Wiggle fingers downward.)

When the sun comes out
I melt away.
See you next year
On a snowy day.

When the weather's cold I'm strong and tall. (Stand up tall.)
But when it's warm I get very small. (Crouch down low.)
When the sun comes out
I melt away.
See you next year
On a snowy day.

DO SCIENCE: BLUBBER GLOVE

Simulate the insulating effect of blubber by making this blubber glove adapted from Steve Spangler Science: http://www.stevespanglerscience.com/lab/experiments/blubber-gloves

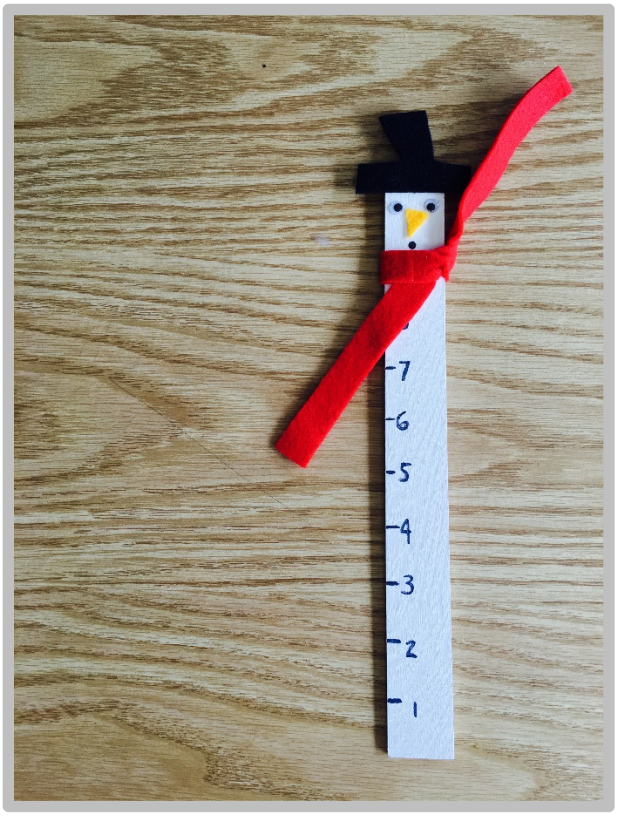
Supplies needed:

2 large Ziploc bags
shortening
spoon
duct tape
cold water
ice
bucket
clipboards/pencil
timer

Make the Blubber Glove by putting about 2 cups of Crisco (or other shortening) into a Ziploc bag. Put your hand in the second bag, and put that bag/hand into the bag with Crisco. Spread the Crisco throughout the bags to create a thin layer around the hand. Fold tops over to create a lip. Duct tape this lip to seal.

Have children put their hand in a bucket of ice water and see how long (with timer) they can keep it there; have them try the same thing (with timer) using their other hand in the Blubber Glove. Return to the **scientific method handouts** at the end of this lesson to walk children through the experiment. Have them **form a hypothesis** as to how long they think they can keep their bare hand in the water. **Test the hypothesis** by timing them with their bare hand in ice water. **Record results** on the **record log** at the end of this lesson plan. Repeat process with the blubber glove!

CRAFT IDEA: SNOWMAN RULERS (for measuring snowfall)



Supplies needed:

wooden craft sticks
white paint
sponge paint brushes
tacky glue
rulers
scissors
googly eyes
black markers

How To:

- paint sticks and let them dry (maybe ahead of time)
- cut out felt pieces for hat, scarf, and nose
- have children measure out and mark inches on the sticks
- glue and tie felt pieces on
- add googly eyes

BLUBBER GLOVE/HYPOTHERMIA EXPERIMENT
RECORD LOG

SUBJECT #	**Hypothesis**: Guess how long you can keep your bare hand in ice water	**Test**: Record how long you kept your bare hand in ice water	**Hypothesis**: Guess how long you can keep your blubber glove hand in ice water	**Test**: Record how long you kept your blubber glove hand in ice water
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A SCIENTIST IS SOMEONE WHO…

Observes and wonders

Asks questions

Listens to ideas of others

Conducts experiments

Shares his/her ideas and discoveries

Explores the world around him/her

Uses tools to solve problems

A SCIENTISTS SAYS…

I agree with you because…

I disagree with you because…

Why do you think that?

So, what you're saying is…

Can you tell me more?

Can you give me an example?

How could we test that?

That reminds me of…

DOES IT SINK OR FLOAT?

SCIENTIFIC METHOD