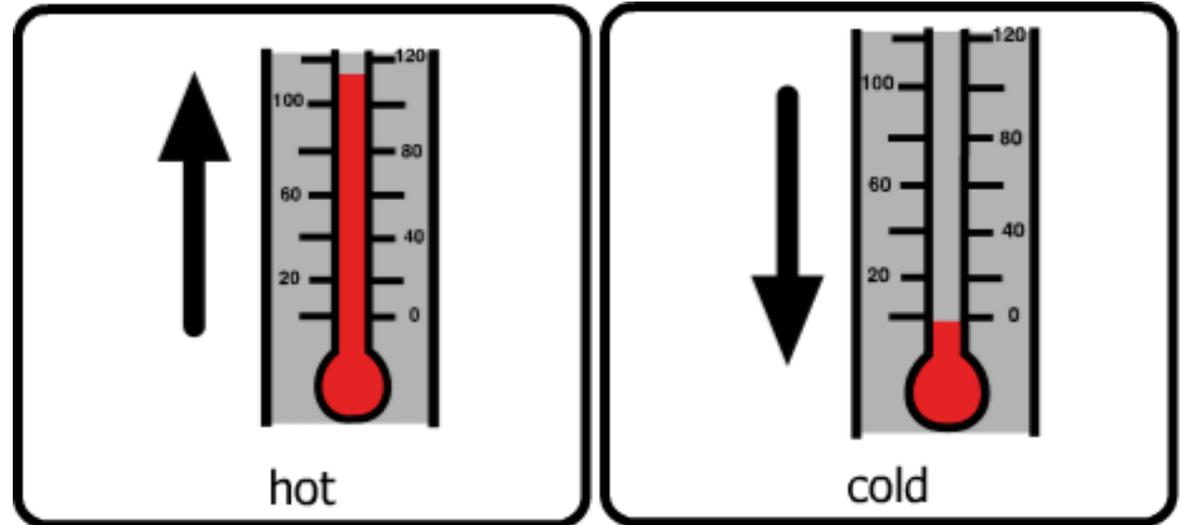


# Science

Cold vs. Hot

Today we will learn about distribution in hot and cold temperatures. Here are pictures of what we will be doing...

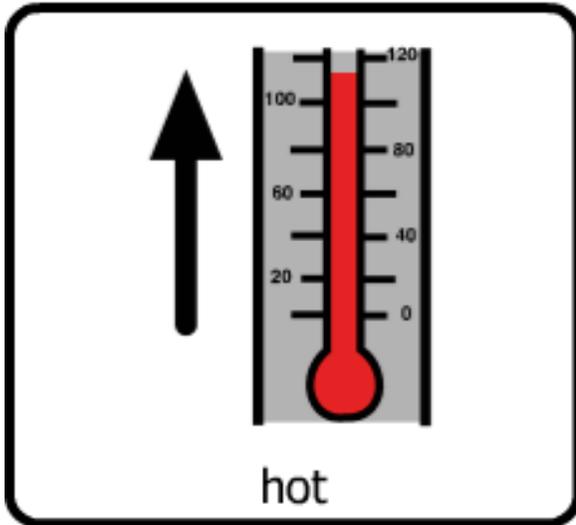


# Materials needed.

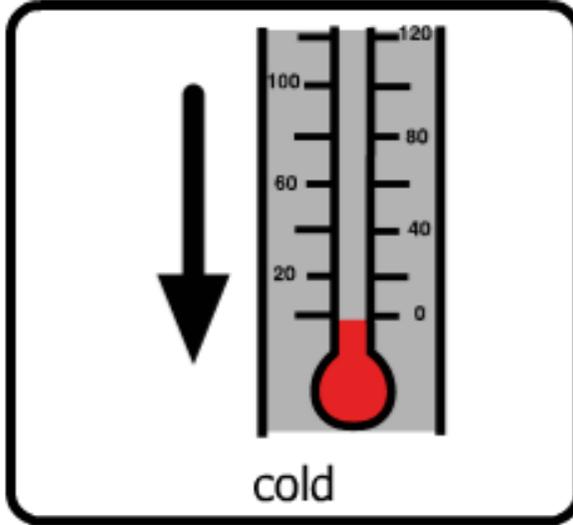
- Empty water bottles with a wide mouth(VOSS)-2
- Food coloring red and blue
- Water
- Stop watch



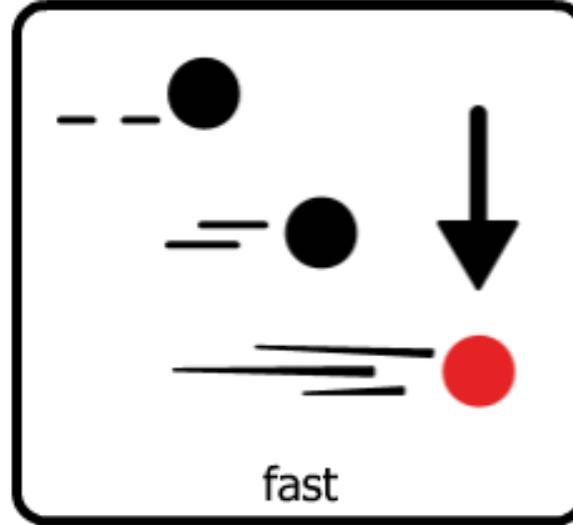
# The vocabulary for today's lesson is....



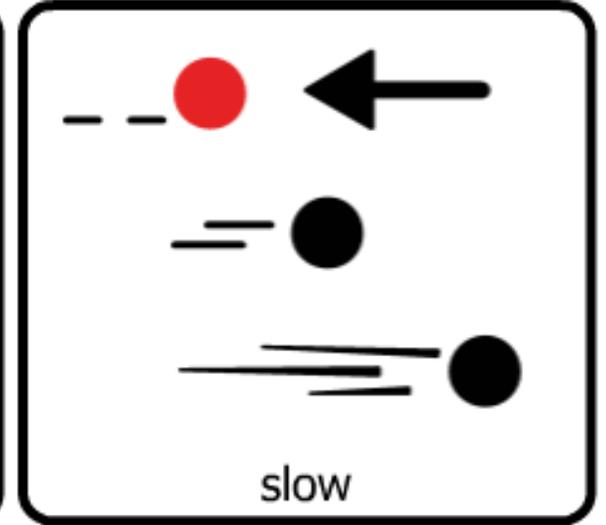
having a high degree of heat or a high temperature.



of or at a low or relatively low temperature, especially when compared with the human body.

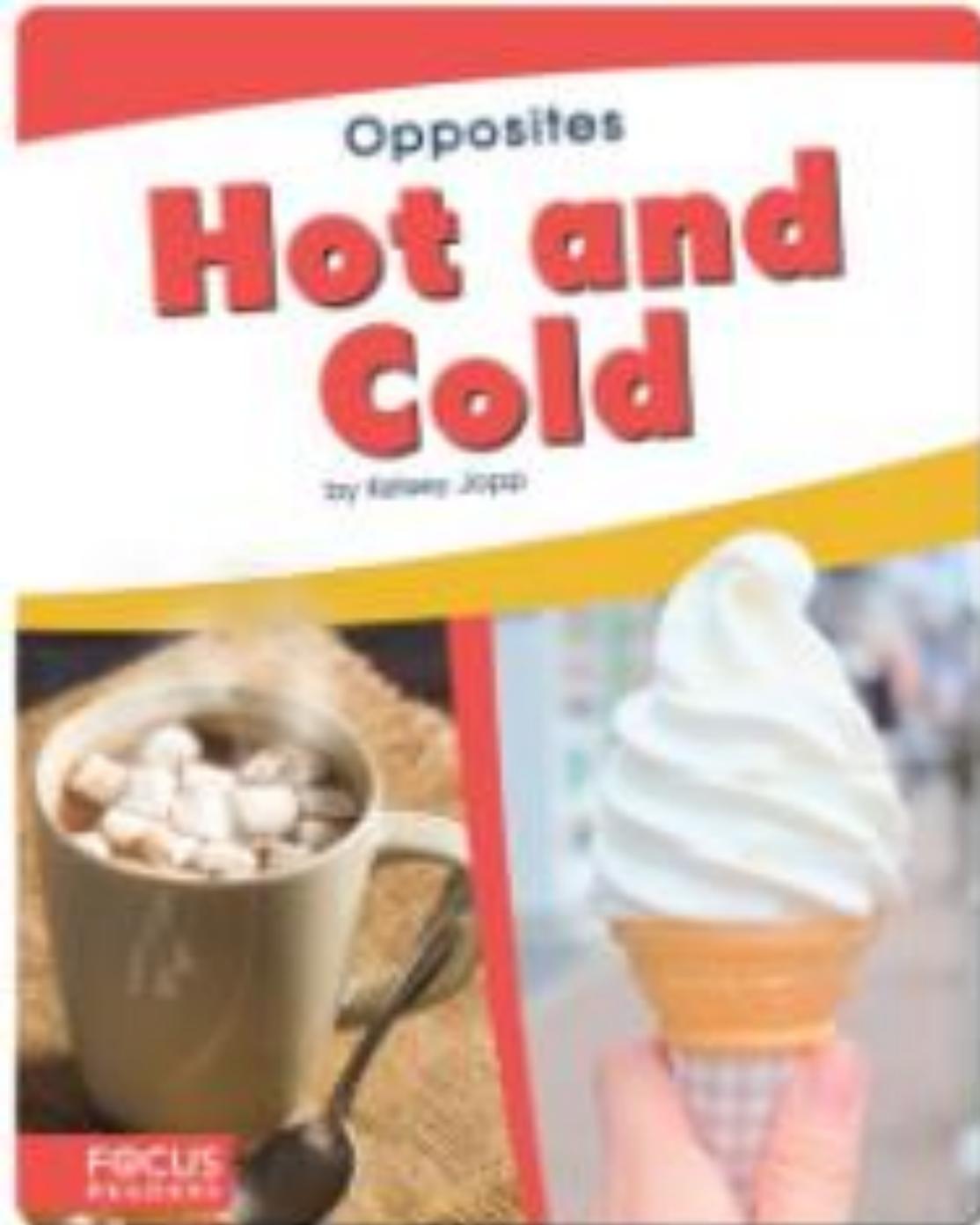


moving or capable of moving at high speed.



moving or operating, or designed to do so, only at a low speed; not quick or fast.

First, let's read  
a story.



A photograph of a bonfire made of sticks on a beach at sunset. The fire is bright orange and yellow, with flames rising into the air. The sky is a mix of blue and orange, and the ocean is visible in the background. A white arrow points from a white rounded rectangle containing the word 'fire' to the top of the fire.

fire

# Hot

Some things are hot.  
They feel warm.  
Fire is hot.

Ask, “How does first  
feel?”

# Cold

Some things are cold.

They feel frozen.

Ice is cold.

Ask, "How does an ice berg feel?"



# Hot and Cold

Hot and cold  
are opposites.

Soup is hot.

**Juice** is cold.

Ask, "How does the soap feel?"



Summer is hot.  
People sweat.  
They wear **shorts**.

Ask, “When do you where shorts?”



Winter is cold.  
People shiver.  
They wear coats.



coat

An **oven** is hot.  
A **fridge** is cold.  
Hot and cold  
are opposites.

Ask, "What do you put in  
the fridge?"  
"What do you put in the  
oven?"



The  
End

# ACTIVITY TIME!

The steps for today's activity are...

**1-Take two empty water bottles**

**2-Fill one with cold water.**

**3-Fill one with hot tap water.**

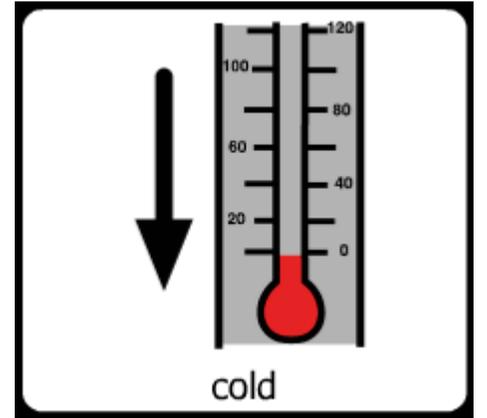
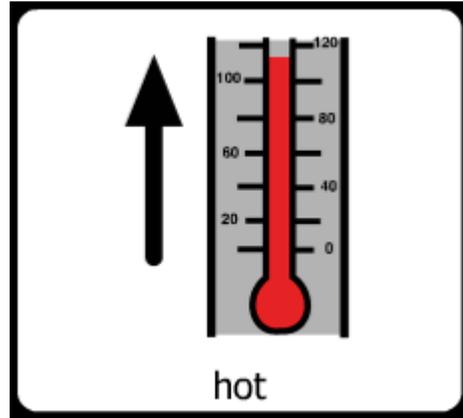
**4-Have students feel the outside of the bottles for the temperatures.**

**5-Place several drops of blue food coloring in the cold water and several drops of the red food coloring in the hot water. Squeeze the amount of drops into the bottles at the same time.**

**6-Time which color spreads faster. Watch closely.**

**7-Which color is moving slow? Which color is moving fast?**

Steps 1,2,3- Fill two bottles with water. One with hot and one with cold.



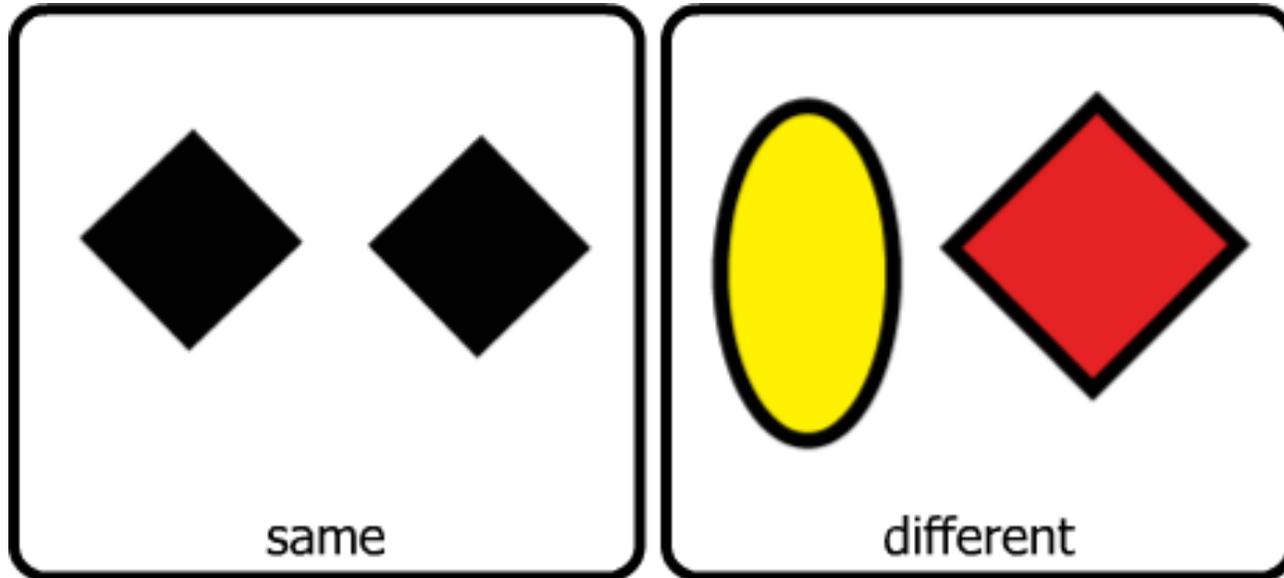
Step 4- Have students feel the temperature of the water in the bottles

Ask, “How does the water bottles feel?”

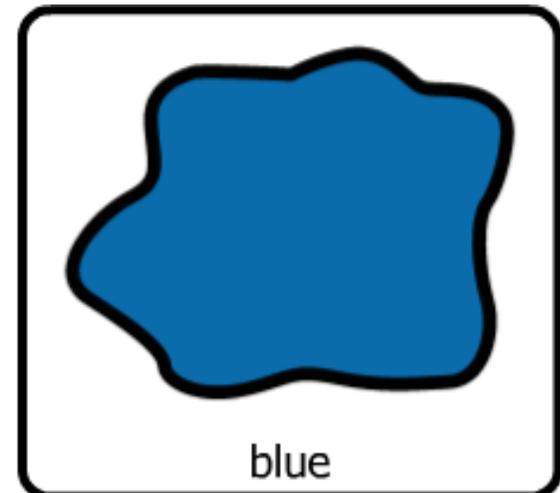
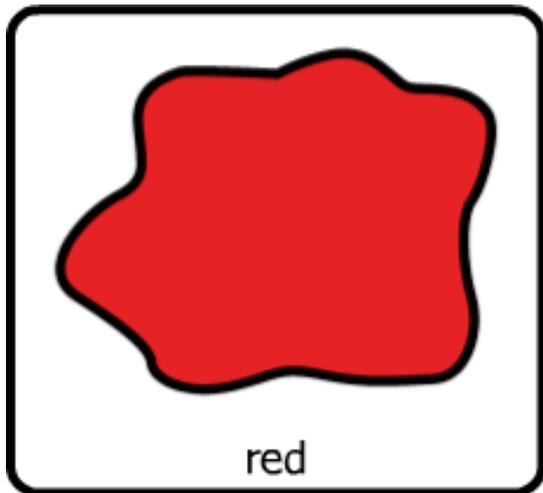
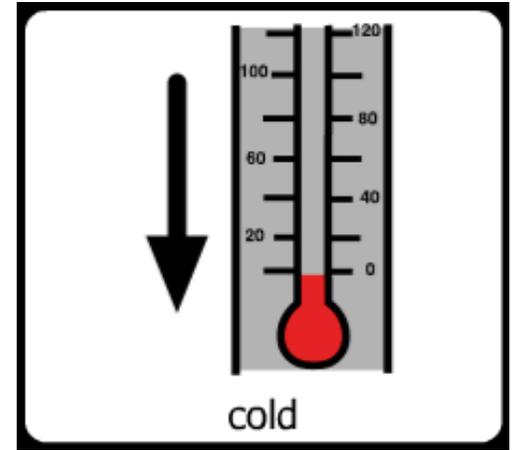
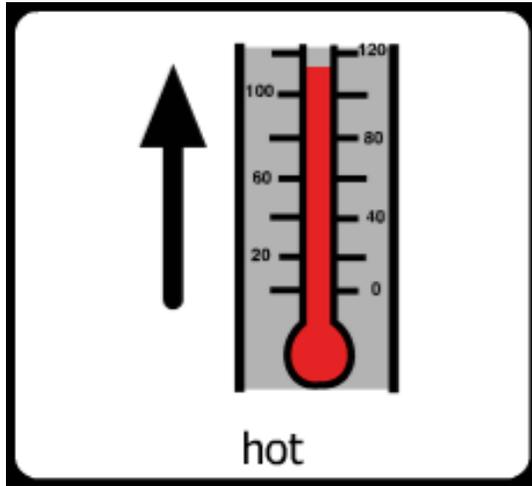


# Question?

Are the temperatures of the water the same or different?



Step 5-Add food coloring to both at the same time.

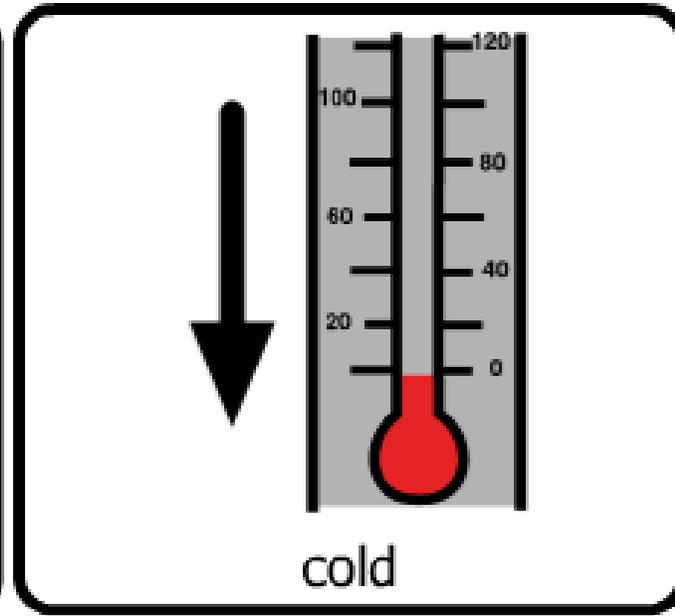
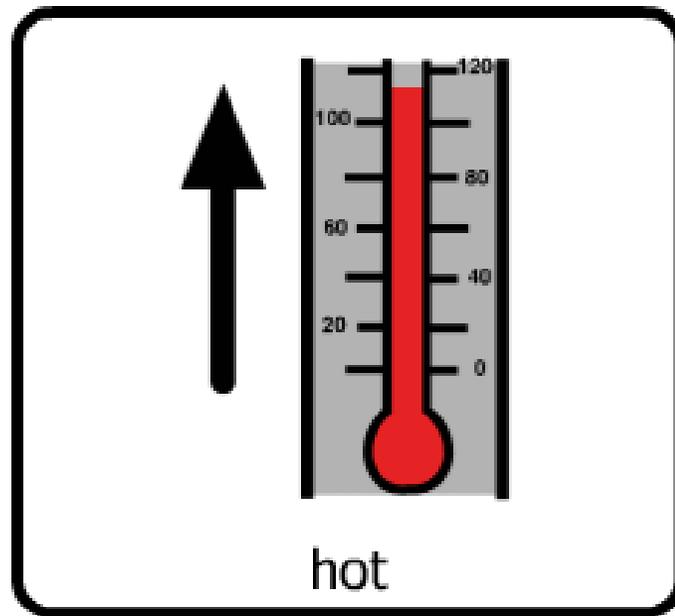


Step 6-Time which color distributes faster.



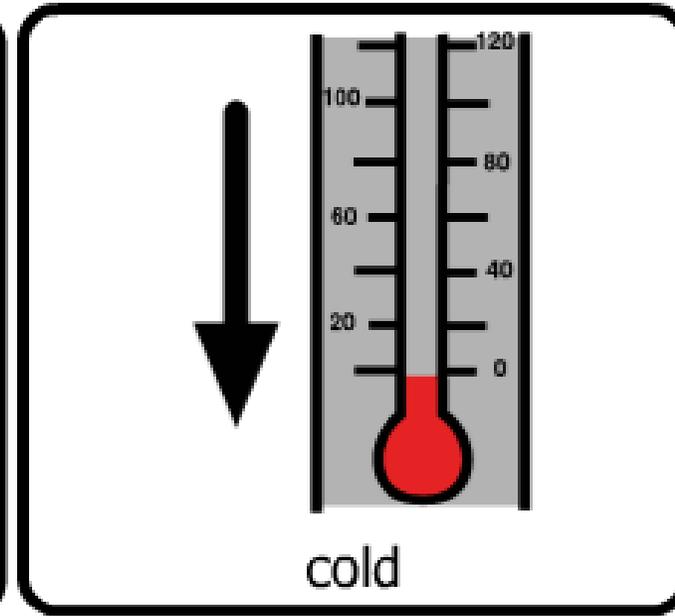
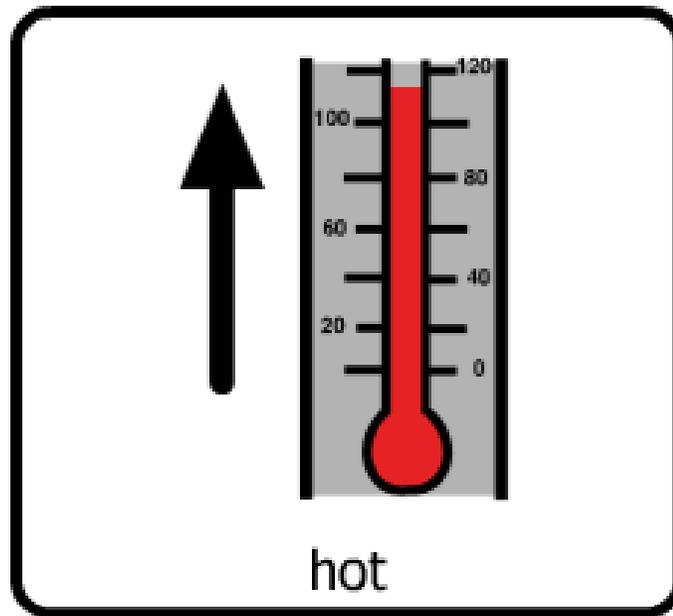
Question:

Was the blue water hot or cold?

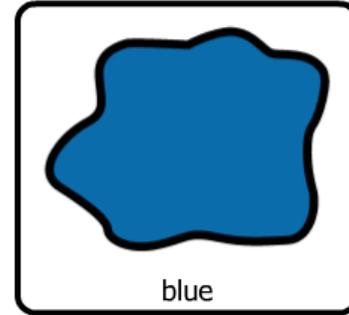


Question:

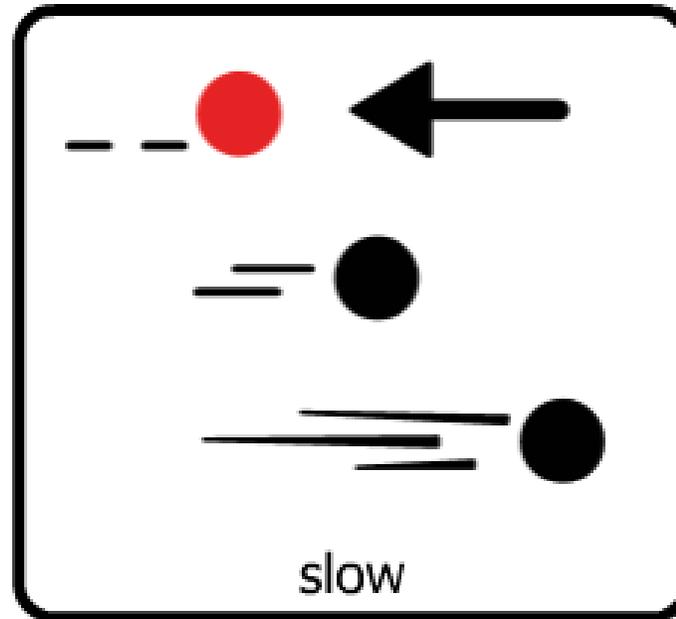
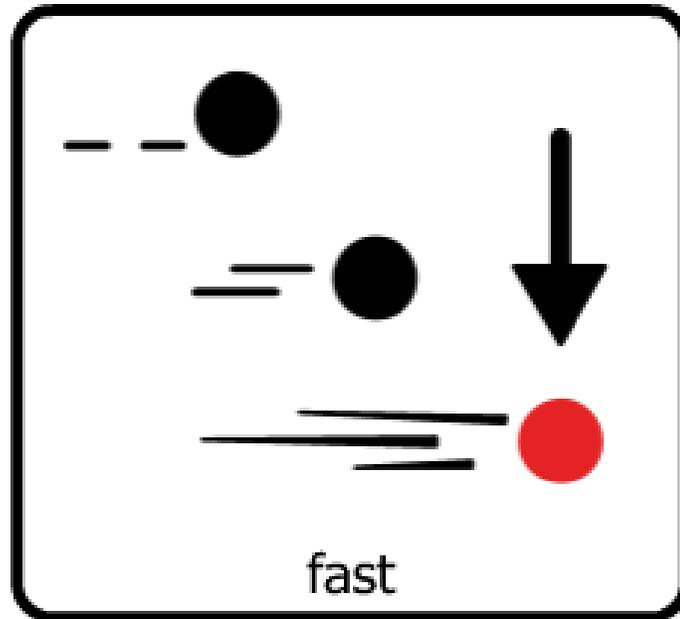
Was the red water hot or cold?



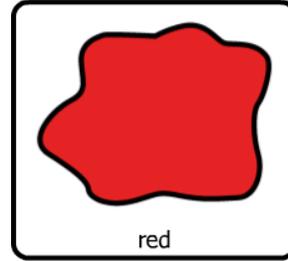
Describe the blue color.



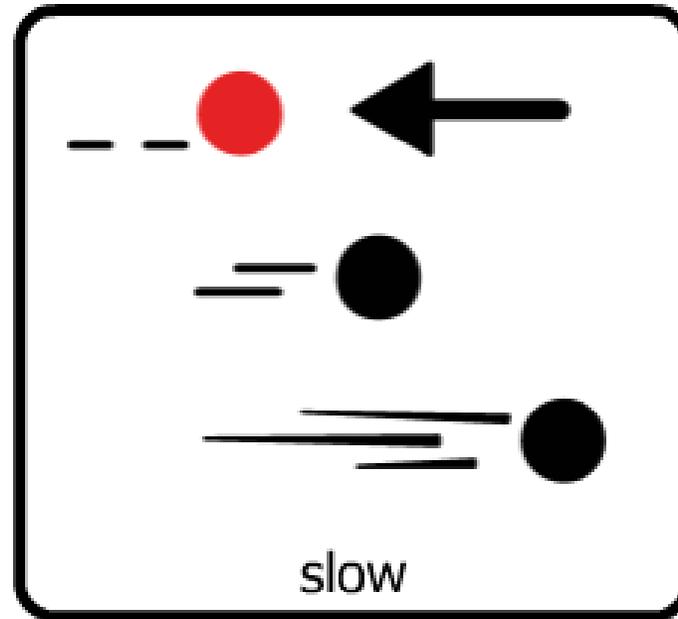
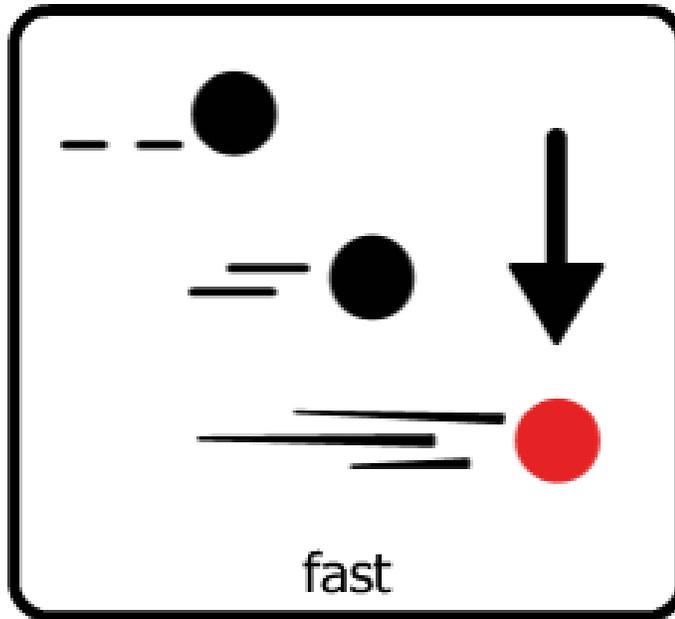
Was the blue moving fast or slow in the cold water?



Describe the red color.

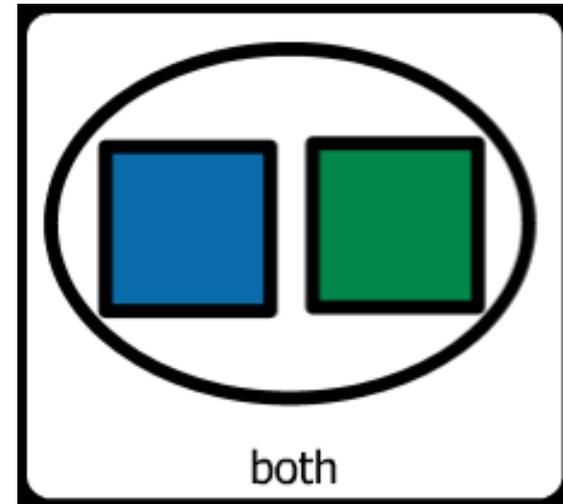
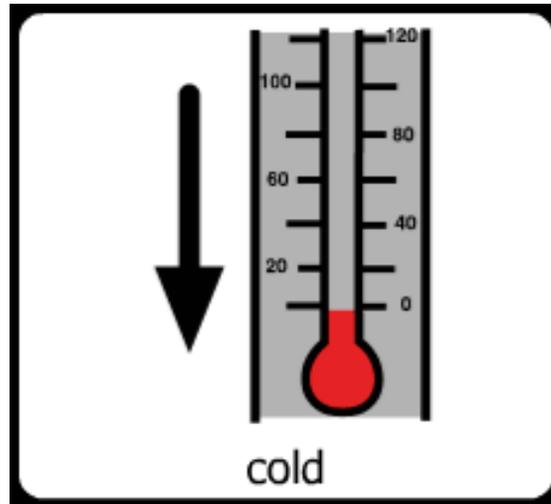
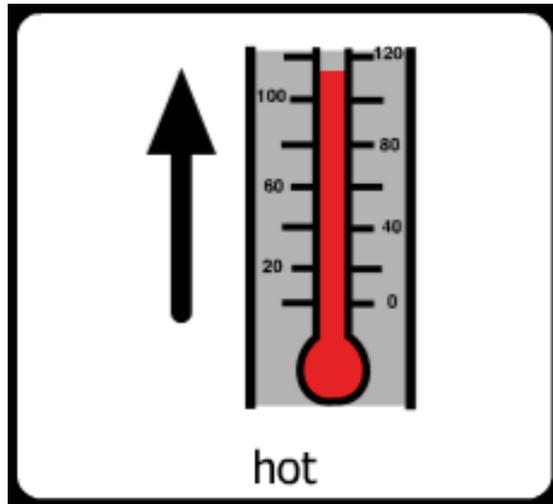


Was the red color moving fast or slow in the hot water?



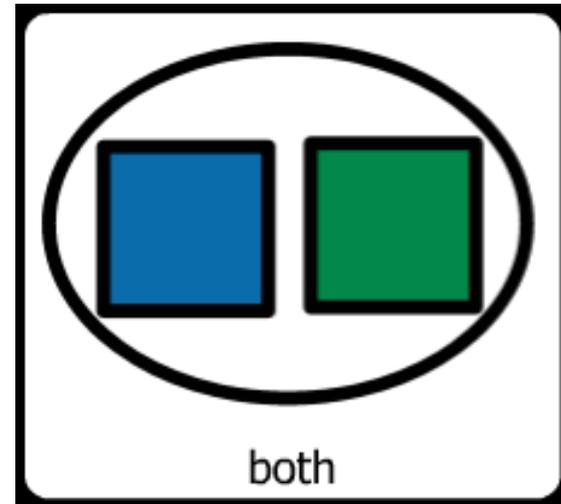
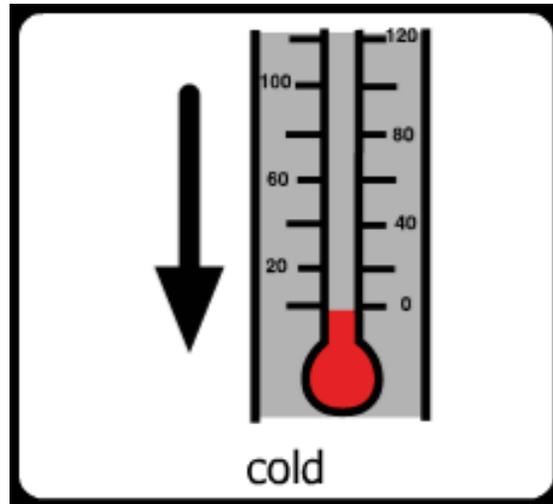
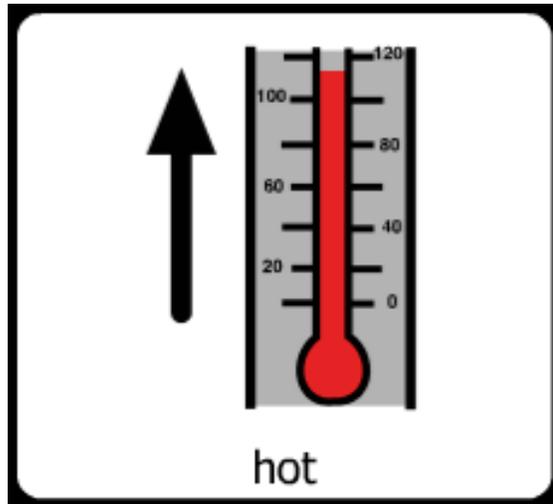
# Quiz Question:

Which water did the color move fast in?

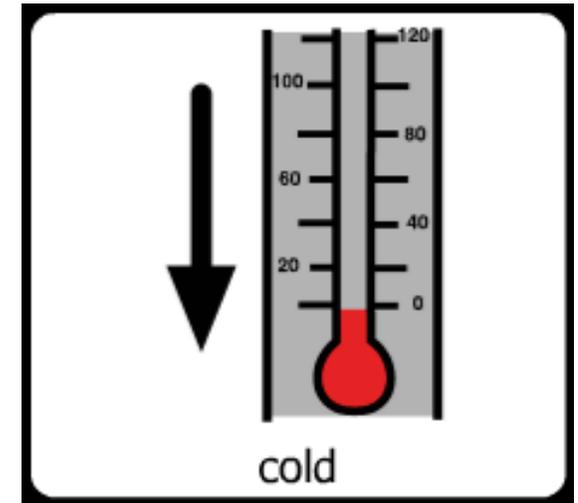
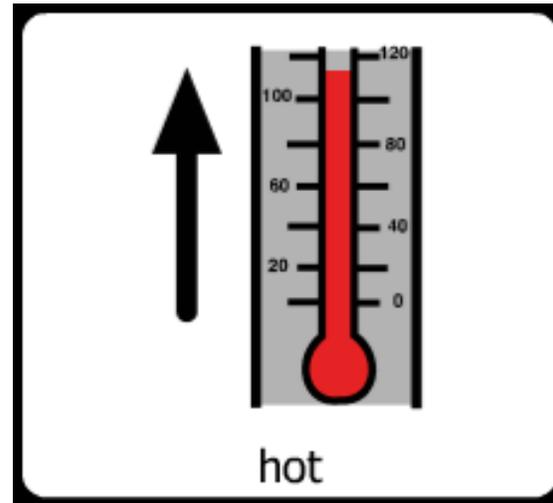


# Quiz Question:

Which water did the color move slow?



Today we learned about the distribution in hot and cold temperatures.



# We are ALL DONE!

- Teacher says “\_\_\_\_\_ is All Done! Time for \_\_\_\_\_!”
- Teacher says “Everyone check schedule!”
- Teacher changes the classroom schedule.
- Paras will assist individual students with checking schedules.

