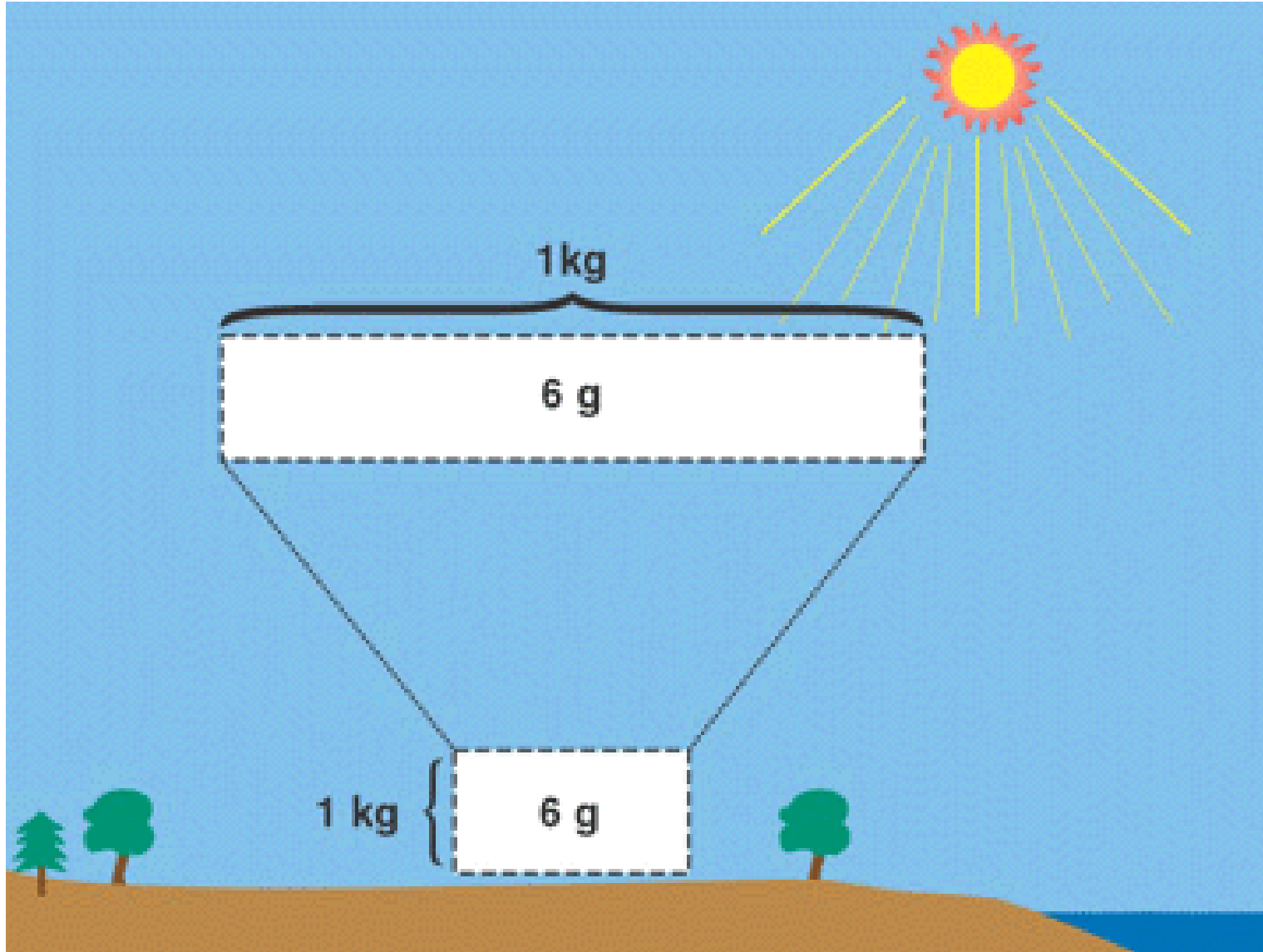


Relative Humidity



6 grams of water vapor molecules at the surface are more compacted than 6 grams of water vapor higher in the atmosphere

Measuring Humidity

- **Psychrometer: an instrument used to measure relative humidity**
- Psychrometers have 2 thermometers. One is **wet** and the other is **dry**.
- After swinging the psychrometer, evaporation of water from the wet bulb will lower the temperature. **(Evaporation causes cooling)**
- The temperature change will depend on how humid the air is.



High R.H. vs. Low R.H.

- If relative humidity is high:
 - the water on the wet-bulb will evaporate slowly
 - the wet-bulb temperature will not change much.
 - There is a greater chance for precipitation
- When the relative humidity is low:
 - The water on the wet-bulb will evaporate quickly
 - there is a lower chance for precipitation.

Let's practice measuring R.H.

Air Temp.



Relative Humidity (%)

Dry-Bulb Temperature (°C)	Difference Between Wet-Bulb and Dry-Bulb Temperatures (C°)															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
-20	100	28														
-18	100	40														
-16	100	48														
-14	100	55	11													
-12	100	61	23													
-10	100	66	33													
-8	100	71	41	13												
-6	100	73	48	20												
-4	100	77	54	32	11											
-2	100	79	58	37	20	1										
0	100	81	63	45	28	11										
2	100	83	67	51	36	20	6									
4	100	85	70	56	42	27	14									
6	100	86	72	59	46	35	22	10								
8	100	87	74	62	51	39	28	17	6							
10	100	88	76	65	54	43	33	24	13	4						
12	100	88	78	67	57	48	38	28	19	10	2					
14	100	89	79	69	60	50	41	33	25	16	8	1				
16	100	90	80	71	62	54	45	37	29	21	14	7	1			
18	100	91	81	72	64	56	48	40	33	26	19	12	6			
20	100	91	82	74	66	58	51	44	36	30	23	17	11	5		
22	100	92	83	75	68	60	53	46	40	33	27	21	15	10	4	
24	100	92	84	76	69	62	55	49	42	36	30	25	20	14	9	4
26	100	92	85	77	70	64	57	51	45	39	34	28	23	18	13	9
28	100	93	86	78	71	65	59	53	47	42	36	31	26	21	17	12
30	100	93	86	79	72	66	61	55	49	44	39	34	29	25	20	16

- 1. Monday

- dry bulb is 14 degrees
- wet bulb is 10 degrees
- relative humidity is :

- 2. Tuesday

- dry bulb is 16 degrees
- wet bulb is 16 degrees
- relative humidity is :

- 3. Wednesday

- dry bulb is 28 degrees
- wet bulb is 20 degrees
- relative humidity is :

- 4. Thursday

- dry bulb is 16 degrees
- wet bulb is 6 degrees
- relative humidity is :