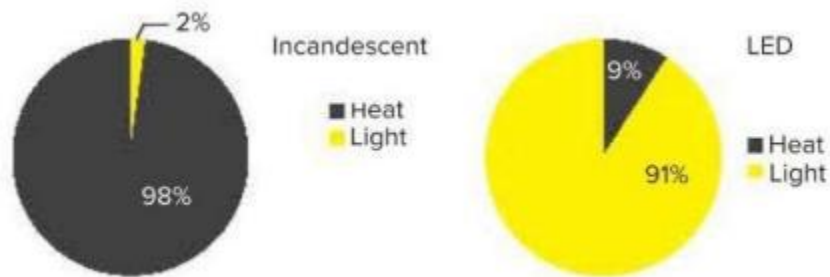
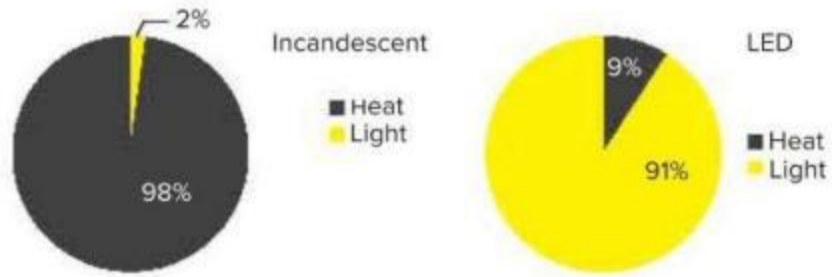


Name:			Grade:	4
Subject:	Science	Date:		
Lessons:	Heat			

- Which of the statements about thermal energy is **correct**?
 1. Thermal energy moves from a substance with a higher volume to a substance with a lower volume.
 2. Thermal energy moves from a substance with a higher mass to a substance with a lower mass.
 3. Thermal energy moves from a substance with a higher temperature to a substance with a lower temperature.
 4. Thermal energy moves from a substance with a lower temperature to a substance with a higher temperature.
- The pie chart compares the percentages of heat and light energy produced from LED and incandescent light bulbs.
What is the percentage of the **heat** that is produced from each of them?



1. LED 9% and incandescent 98%
 2. LED 9% and incandescent 2%
 3. LED 91% and incandescent 98%
 4. LED 91% and incandescent 2%
- The pie chart compares the percentages of heat and light energy produced from LED and incandescent light bulbs.
What is the percentage of the **light** that is produced from each of them?



5. LED 9% and incandescent 98%
6. LED 9% and incandescent 2%
7. LED 91% and incandescent 98%
8. LED 91% and incandescent 2%

- **Why most of the winter coats are puffy?**

1. They contain pockets of air that prevent heat from moving away from your body.
2. They contain pockets of air that allow heat from moving away from your body.
3. They lack pockets of air that prevent heat from moving away from your body.
4. They contain pockets that warm up your hands.

- **How does the matchstick catch fire?**

1. Sound energy is converted to thermal energy
2. Friction between the match and the box.
3. Friction between hand and the box.
4. None of the above

- **When you rub your hands together quickly what energy transfer is involved?**

1. Thermal energy

2. Sound energy
3. No energy transfers
4. Potential energy

- Look at the table above.

Thermal Conductivity	
Material	How Many Times Better Than Air It Conducts Heat
Oak wood	6
Water	23
Brick	25
Glass	42
Stainless steel	534
Aluminum	8,300
Copper	15,300
Silver	16,300

- i. Which are the three best conductors?
 1. stainless steel, aluminum, copper
 2. silver, copper, aluminum
 3. aluminum, copper, brick
 4. silver, copper, glass
- ii. Choose the best thermal insulator from the table.
 1. Water
 2. Brick
 3. Oak wood
 4. glass

- Thermal energy is transferred in three different ways.

Use the figure to identify the type of thermal energy transfer.



- Explain why when the hot block is placed beside the cold block the temperature of the hot block decreased and the temperature of the cold block increased.

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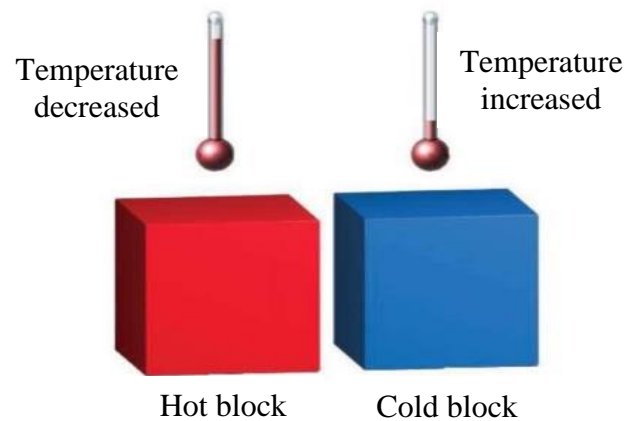
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- What will happen when the two blocks reach the same temperature?

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