**D. Differentiate between:**

**1. Hot and cold**

|  |  |
| --- | --- |
| **Hot** | **Cold** |
| It has high temperature. | It has low temperature. |
| It contains more heat energy. | It contains less heat energy. |

**2. Absorption and reflection**

|  |  |
| --- | --- |
| **Absorption** | **Reflection** |
| When something takes in light or heat energy,it is called absorption | Whensomething bounce back light or heat energy,it is called reflection |
| A dark colored cloth absorb heat. | A light colored cloth reflects heat. |

**E. Give reasons:**

**1. We wear black clothes in the winter.**

**- because it absorbs more heat as it is darker in color.**

**2. The washed clothes are spread to dry up in the sun shine.**

**- because large surface absorb more heat and dries up fast.**

**3. We stay near fire in the winter season.**

**-because fire gives us heat and makes our body warm.**

**G. Short answer type questions.**

**1. What are the uses of heat in our daily life?**

**-The uses of heat in our daily life are as follows:-**

**1. Cook food**

**2. Keeping us warm**

**3. Heating water**

**4. Drying clothes**

**2. What is the effect of heat?**

**-The effects of heat is to change in temperature and to change the state of matter.**

**3. What would be the temperature if hot water is mixed to cold water?**

**-If hot water is mixed to cold water, the temperature will start to increase depending on the amount of hot water mixed.**

**H. Long answer type questions**

**1.What is absorption of heat? On what factors does the absorption of heat depend?**

**-Absorption of heat is the process by which a body takes in heat energy from its surroundings.**

**The absorption of heat depend upon:-**

1. **Surface of area**
   * **More surface absorbs more heat and vice versa.**
2. **Color of objects**

**- Dark color absorbs more heat and light color absorbs less heat.**

**2.The absorption of heat increases on increasing the surface area. Explain this fact with a suitable example.**

**- The statement can be explained by the given example:-**

**1.If you keep two metal plates of the same material and thickness in the sunlight, one large and one small, the larger plate becomes hotter because it has a greater surface area to absorb heat rays from the sun.**

**2. When we spread wet clothes to dry, we spread them wide because a larger surface area allows them to absorb more heat from the sun and dry faster.**

**So,this explains that When the surface area increases, more heat rays can fall on it, resulting in greater absorption of heat.**

**3.What colored clothes are appropriate to wear in summer and winter season? Why?**

**- In summer, it is advisable to wear light-colored clothes such as white or light blue. Light-colored clothes reflect most of the heat from the sun and absorb very little, keeping our body cool.**

**- In winter, we should wear dark-colored clothes such as black, brown, or dark blue. Dark-colored clothes absorb more heat from the surroundings and sunlight, helping to keep our body warm.**

**3.How does the absorption capacity of heat depend on exposed area and the color of substance?**

**- The absorption capacity of heat depend on exposed area and the color of substance by :-**

**1.Exposed Surface Area:**

**The greater the surface area, the more heat is absorbed.**

**Example: A thin, wide metal sheet gets heated faster than a thick, small one under the same conditions.**

**2.Color of the Substance:**

**Dark-colored substances absorb more heat compared to light-colored ones.**

**For example, a black cloth absorbs almost all the heat rays that fall on it, while a white cloth reflects most of them.**