

**Weekly planner** **Week-12**

**Subject: Physics (0625) Name of the faculty: S.M Tanvir
Grade-8**

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| **Day: Wednesday****Date: 18/04/24** | **Learning objectives and Outcomes**: * Understand the principles and applications of Light Dependent Resistors (LDRs), thermistors, and relays.
* Describe how these components work in various circuits. Apply knowledge to solve basic problems related to these components.
 | **Tools and resources** | ***Special remarks*** |
| **18/04/24****Day-01**  | **Ice breaking- (5 minutes)**What everyday devices do you think use sensors to detect light or temperature? Can you think of any situations where it's important for a device to automatically turn on or off based on light or temperature?**Development activities- (30 minutes)****Activity 1: Understanding Light Dependent Resistors (LDRs) (10 minutes):** Show students an LDR and explain how its resistance changes with light intensity. Demonstrate a simple circuit with an LDR, resistor, and LED connected to a power supply. Ask students to predict what will happen to the LED brightness as you cover the LDR with your hand and then expose it to light. Have students measure the resistance of the LDR using a multimeter (optional).**Activity 2: Exploring Thermistors (10 minutes):** Show students a thermistor and explain how its resistance changes with temperature. Set up a circuit with a thermistor, resistor, and LED connected to a power supply. Use a heat source (e.g., hair dryer) to demonstrate how heating the thermistor affects the LED brightness. Discuss practical applications of thermistors, such as in temperature-controlled systems.**Activity 3: Experimenting with Relays (10 minutes):** Introduce relays as electromechanical switches controlled by an electrical signal. Set up a circuit with a relay, battery, and LED, and explain how the relay can be used to control a higher voltage circuit. Show how the relay can be activated by connecting it to the output of the LDR or thermistor circuits from previous activities. Discuss real-world applications of relays in automation and control systems.**Closing activities- (5 minutes)**Recap the key points about LDRs, thermistors, and relays. Encourage students to think about other ways these components can be used in electronic circuits. Invite questions from students. | Text BookMarkerBoardVideo clips Worksheets |  |

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| **Differentiation:** By content / Process/ Product/Environment/Class performance. | **Home work:**  | **Assessment tools & strategies:** Formative assessment**Reflection (if any):** |