

Mood Rings Science

Mood rings feature fake gemstones, usually made of either glass or quartz. The glass or quartz “stones” were usually hollow shells filled with liquid crystals. These special crystals are thermochromic, which means they would change color in response to changes in temperature.

Changes in temperature — either air temperature or body temperature — cause the liquid crystals to twist. When they twist, the liquid crystals reflect different wavelengths of light. This causes the color of the “stone” to change.

Materials

- Mood Ring
- Color Chart
- Thermometer
- Data Sheets for Experiments

MOOD RING *Color chart*

**RED:**

Intense, angry, passionate

**ROYAL BLUE:**

Passionate, love, romantic

**ORANGE:**

Aggressive, irritated, impatient

**DARK BLUE:**

Happiness, joy, optimistic

**YELLOW:**

Nervous, unsettled, distracted

**PURPLE:**

Balanced, tranquil, satisfied

**GREEN:**

Fresh, amused, active

**BLACK:**

Stressed, overworked, tired

**BLUE:**

Calm, peaceful, content

Experiment 1: Do Mood Rings Work?

Procedure

1. Identify a group of participants (recommend 5-10), repeat the steps below for each participant.
2. Ask each participant to identify their mood from the choices on the color chart. Record the response on the data sheet.
3. Place a ring on the participant's finger (for best results, use the same ring for each participant). After 30 seconds, record the resulting color/mood on the data sheet.
4. Measure the participant's temperature using a thermometer (for best results, use the same thermometer for each participant) and record the temperature on the data sheet.
5. Mark if the mood ring color/mood matched what the participant identified.

Experiment 1: Data Sheet

Participant Name	Participant's Mood	Ring Result (Mood / Color)	Participant Temperature	Mood Matched? (Yes or No)

Experiment 2: Can You Change Your Mood?

Procedure

1. Record the participant's hand temperature (or use yourself as the participant)
2. Place a ring on the participant's finger. After 30 seconds, record the resulting color/mood on the data sheet.
3. Remove the ring and increase the temperature of the participant's hands using warm water or rubbing hands together for 30 seconds. Record the participant's hand temperature on the data sheet.
4. Place the ring back on the participant's finger. After 30 seconds, record the resulting color/mood on the data sheet.
5. Remove the ring and decrease the temperature of the participant's hands using cold water or ice for 30 seconds. Record the participant's hand temperature on the data sheet.
6. Place the ring back on the participant's finger. After 30 seconds, record the resulting color/mood on the data sheet.
7. Mark if the mood ring color/mood changed by increasing or decreasing the temperature of the hand.

Experiment 2: Data Sheet

Participant Name	
Participant Temperature	
Ring Result (Mood / Color)	
Hand Temperature after Warming	
Ring Result after Warming	
Hand Temperature after Cooling	
Ring Result after Cooling	
Did warming or cooling affect the ring result?	