CLASS-10

PHYSICAL SCIENCE

LESSON PLAN

CHAPTER: 01 – HEAT

PERIOD NUMBER	CONCEPTS / TEACHING POINTS	PAGES IN TEXT BOOK		TEACHING PROCEDURE	TEACHING LEARNING MATERIAL	EVALUATION
		FROM	TO			
1.	Transfer of heat	1	4	Activity	Wooden piece, metal piece, ice box, A cup of coffee, a cup of tea	What are the properties of Solids?
	Thermal equilibrium			Activity	A cup of hot water, a cup of cold , water, laboratory thermometer	If A and B substances have same temperatures, can we say that they are in thermal equilibrium?
	Heat – Temperature - Units			Conversation	AV-clip about transfer of heat and thermal equilibrium	What are the units of heat in CGS system?
2.	Temperature –Kinetic Energy	4	5	Activity	One bowl of hot water, One bowl of cold water, food colour	What happened to the KE of molecules of a substance, if provide heat?
	Transfer of heat - Activity			Activity	Glass jar, Hot water, coconut oil, lid, two lab thermometers	What happened until thermal equilibrium takes place?

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3.	Different substances have different specific heats	5	8	Activity	Big glass jar, water, test tubes-2, rubber corks-2, two lab thermometers, retort stands-2	Which takes more time to raise 1^{o}C ? either water or Ice ?
	Affecting factors of specific heat			Activity	Stove, Two beakers, water, 250 ml measuring jar, lab thermometer	What are the affecting factors of specific heat?
	Specific heat – formula - Units			Conversation	Chart	1 cal = …… Joules?
4.	Specific heat - applications	8	9	Activity	Watermelon/ apple and a potato, ice box, Samosa-2	A samosa appears cool out side. But it is hot inside. Why?
	Method of mixtures			Activity	Two beakers, large beaker, thermo meter, water, stove	20gm of water at 40^{o}C mixed with 20 gm of water at 60^{o}C. What is the final temperature?
	Law of thermal equilibrium			Conversation	AV-clip	What is the formula for finding final temperature in method of mixtures?
5.	Calorie meter – structure – working	*	*	Conversation	Calorimeter model and photos	What is called simple calorie meter?

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6.	Determination of specific heat of a solid	9	10	Lab Activity	Calorimeter, thermometer, water, hot water, solid shots (lead shots)	What is the specific heat of copper? What precautions can we take while finding the specific heat of solid in lab ?
7.	Evaporation - activities	10	12	Activity Conversation	Spirit, small dishes-2, lid-1, big plate, Match box	Is evaporation a cooling process? Or warming process? What is evaporation?
8.	Condensation	12	13	Activity	Glass tumbler, cold water	Give an example for condensation ?
	Humidity			Conversation	Chart	What is humidity?
	Dew , fog, mist			Activity	Glass tumbler, cold water, Long glass tumbler, Ice cubes	How fog is formed?
	Rain, snow…….			Activity	Steel tumbler, ice cubes, salt	Raining is condensation. Why?
9.	Boiling - activities	13	15	Activity Conversation	Beaker, stove, lab thermometer, chart	What is the difference between evaporation and boiling?
10.	Melting and freezing	15	17	Activity Conversation	Beaker, ice, stove, lab thermometer, Plastic bottle, water, ice box, Camphor, match box	What is freezing? What happened when a fulfilled glass water bottle kept in deep fridge?

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