

SALWAN PUBLIC SCHOOL, RAJENDRA NAGAR
CLASS – X
LESSON PLAN
CHAPTER-7: Control and Coordination

TOPIC	DAY ONE :Control And Coordination ; Introduction
Pre- Requisite for the course	This topic requires Basic knowledge of basic terms like Sense organs, Neuron, Brain, Spinal Cord, Endocrine System etc.
Assessment of qualifying knowledge	Oral interaction on the topic.
Objective	• To make students realize the need of control and coordination. • To explain students structure of neurons. • To make students understand travelling of nervous impulse.
Learning Outcomes	<u>KNOWLEDGE-</u> • Students will understand the process of control and coordination. • Will be able to draw neuron and neuro muscular junction. <u>SKILLS and COMPETENCIES</u> • Students would be able to Reason effectively and critically the need of control and coordination in plants and human beings. • Students will be able to draw and label neuron and neuro muscular junction.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	<u>Strategies used- Lecture cum Discussion</u> Transaction would proceed in the following manner- Anticipatory Set: 30 <u>min</u> The facilitator introduces the chapter by Brain Storming (Critical, Collaboration) Q1. What do you mean by the term Coordination? Q2. How different organs of our body are able to work in a coordinated manner? Q3. Do you have any idea that different plant organs also show some sort of coordination? • Teacher will draw and explain the diagram of neuron & neuromuscular junction. • Teacher will explain that how information acquired at the end of dendritic tip of nerve cell sets off a chemical reaction that creates an electrical impulse. • Teacher will explain the meaning of term Synapse. • <u>Recapitulation of sub topics taught duration 05 min</u> • Closure: <u>5 min</u> • A short oral test would be taken to check proper assimilation of the topic discussed.

	Following questions will be asked- Q1. What is the function of receptors in our body? Think of situations where receptors don't work properly. What problems are likely to arise.
Self-Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks. Q1. Draw the structure of neuron and explain its function.
Assessments	Oral Test (5 minutes)

TOPIC	DAY TWO
	Sub topics ;Reflex Action, Reflex arc
Objective	- To make students understand how reflex actions happens spontaneously without the intervention of brain. - To make students understand the passage of reflex arc .
Learning Outcomes	<u>KNOWLEDGE</u>- Students will be able to comprehend the process of reflex action. <u>SKILLS and COMPETENCIES</u>- Students will be able to draw reflex arc.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Think pair share. Transaction would proceed in the following manner- - Recapitulation: <u>5 min</u> - Brainstorming on the previously taught concept would be done by asking some Questions like: Q1. Name the unit of nervous system. Q2. Where are the receptors located? Q3. What happens at the tip of dendritic tip of nerve cell? Q4. What is synapse? Discussion of topic through Collaborative Learning: <u>20 min</u> (Critical Thinking, Collaboration) - An oral quiz will be taken and students will be asked to identify and cite few examples from real world situations depicting reflex action. - Students will be able to realize the need of reflex action and how reflex actions help our body against damage. - Teacher will draw reflex arc on the blackboard and explain its various components. Guided practice: 10 min - The students will be asked to draw and label reflex arc. While drawing the reflex arc students will get clear idea that during reflex action intervention of brain comes later after completion of the reflex action. - Would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Closure and Assessment; 5 min- A short oral test would be taken to check proper assimilation of the topic discussed.
Self-Study, Home Work, Assignments	Independent Practice: Students would do the following questions in their H.W. notebooks. Q1. Which signals will get disrupted in case of a spinal cord injury? Q2. How are involuntary actions and reflex actions different from each other.

TOPIC	DAY THREE Subtopic Central nervous system peripheral nervous system, Parts of human brain and functions of different parts of the brain.
Pre- Requisite for the course	Knowledge of parts of nervous system.
Objective	- To make students know the constituents of Central Nervous System and Peripheral Nervous system. - To make students understand the structure of Human Brain & its function.
Learning Outcomes	<u>KNOWLEDGE-</u> - Students will understand the role of central nervous system and peripheral nervous system in the process of control and coordination. - Students will be able to know the functions of different parts of human brain. <u>SKILLS and COMPETENCIES-</u> - Students will be able to draw and label human brain.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Evidence based -active learning -instructional strategies Transaction would proceed in the following manner- - Recapitulation: <u>5 mins</u> - Oral test on the previous concept would be taken up. - Discussion of topic through Collaborative Learning: <u>20 mins</u> (Critical thinking) - Teacher will explain the function of Central Nervous System and Peripheral Nervous System. - Will draw and explain diagram of Human Brain. - Will discuss the function of different parts of brain viz, forebrain, midbrain & hind brain. Guided Practice: <u>10 min</u>- The students will draw & label the diagram of human brain. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Closure: <u>5 min</u>- A short oral test would be taken to check proper assimilation of the topic discussed.
Self-Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks. Q1. What are the different components of central nervous system & peripheral nervous system? Q2. Write the functions of different parts of Human brain.
Assessments	Students are encouraged to think and give examples falling in the domain of fore brain, mid brain and hind brain.

TOPIC	DAY FOUR Sub topics: Protection of brain tissue, how does the nervous tissue cause action? Introduction to coordination in plants.
Assessment of qualifying knowledge	Oral interaction on the topics based on the example of the real life
Objective	• To make students understand how brain tissues are protected • To make students understand that the final action is performed by muscle tissues. • To make students realize that plants don't have any nervous tissue and brain. • To make students understand that plant movement is Growth Dependent (Tropic movement) and Growth independent (Nastic movement)
Learning Outcomes	KNOWLEDGE- • Students will be able to know how brain tissues remain protected against external shocks. • Students will understand that how nervous impulse is passed on to finally muscle cells to perform action. • Students will understand the dropping movement of leaves of <i>Mimosa pudica</i>. (Growth independent) • Students will come to know the movement of pea plant tendril. (Growth dependent). • Students will be able understand different topic movements viz, phototropic, geotropic, chemotropic & hydrotropic movements.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Think pair share & lecture cum discussion Transaction would proceed in the following manner- • Recapitulation: <u>5 min</u> • Quick revision on the previous concept would be taken up. Discussion of topic through Collaborative Learning: <u>30 min</u> • Teacher will explain the importance of cerebrospinal fluid and cranium. • Will explain that movements in animals is caused due to the presence of special proteins which contract and relax muscles to bring out movement and perform action. • Will explain that movement in plants occur due to change in the shape of plant cell. • Plant cells change shape by changing the amount of water. • Teacher will explain nastic movement & tropic movements in plants. • Closure and Assessment <u>5 min</u> • Recapitulation of the concept taught in the form of quiz.
Self-Study, Home Work, Assignments	Independent Practice: Students would do the given following questions in their H.W. notebooks. Q1. What is the difference between the manner in which movement takes place in a sensitive plant and the movement in our legs? Q2. Explain all the tropic movements in plants.

TOPIC	DAY FIVE Sub topics-HORMONES IN PLANTS AND HORMONE IN ANIMALS
Pre- Requisite for the course	This topic requires knowledge of Hormones and endocrine glands present in human beings.
Assessment of qualifying knowledge	Students are encouraged to think and present their opinion loudly with confidence in front of whole class.
Objective	- To make students know different plant hormones(Phytohormones) - To make students understand and comprehend the function of different phytohormones. - To make students know function of different endocrine glands and their secretions. - To make students realize the importance of feedback effect of hormone.
Learning Outcomes	<u>KNOWLEDGE-</u> - Students will be able to comprehend the role of phytohormones. - Students will be able to relate the function of different endocrine glands with control and coordination of human body. - Students will be able to understand the importance of feedback mechanism in regulation of hormones in human body. <u>SKILLS and COMPETENCIES-</u> - Students will be able to know the location of different endocrine glands in human body.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Evidence based active learning strategies: Transaction would proceed in the following manner- - Recapitulation: <u>5 min</u> - Brainstorming on the previously taught concept would be done by asking some Questions. - Discussion of topic through Collaborative Learning: <u>25 min</u> (Critical Thinking, Collaboration) - Teacher will discuss the role of various phytohormones viz Auxins, Gibberellins, cytokinins & abscisic acid. - Teacher will deliberate on the location of different endocrine glands in human being and their respective roles in human body viz hypothalamus, pituitary, thyroid, adrenal, pancreas, testis, ovary. - Teacher will explain the role of feedback mechanism in regulation of hormones in human body. Guided practice: <u>05 min-</u> Students will be given a handout depicting male and female endocrine glands and they will be asked to label the same. - Teacher would ensure that each student tries to be independent at the work as well as be under the teacher's guidance. Closure & assessment : <u>5 min-</u> A short oral test would be taken to check proper assimilation of the topic discussed.
Self-Study, Home Work, Assignments	Independent Practice: Students would do the following questions in their H.W. notebooks. Q1. How does our body respond when adrenaline is secreted into the blood? Q2. Why is the use of iodized salt advisable? Q3. Compare and contrast nervous and hormonal mechanisms for control and coordination in animals.