LESSONPLAN

CLASS: 9th SUBJECT: Biological Science Name of theTeacher:T.Lokeswararao Name of the School:ZPHS,Borubhadra,Srikakulam

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific Information
			From	To	
Animal Behaviour	Introduction	1			
	Instinct , Imprinting	1			
	Conditioning	1			Ivan Pavlov experiment
	Imitation , Human Behaviour	1			
	Lab Activity	1			
	Investigating Behaviour, Tagging	1			Nobel Prize winners
	Activity 1	1			Of this lesson
	Experiments towards animal intelligence	1			
	Activity 2	1			

Prior Concept/Skills:(Essential concepts and skills to be checked/bridged before teaching the current concept.)
Different types of Animals, Animals and their food habits, Birds and their nests,Pet animals and their behaviour,Human behaviour and emotions.

Learning Outcomes:*(Select from SCERTAcademic Calendar and Textbook)*	**No.of Periods:**
Pupils will be able to ● Understand the different types of animal behaviour. ● Give examples of some of animal behaviour. ● Differenciate between Conditional and Instinct behaviour. ● Give reasons for animal behaviour in different situations ● Explain how animal behaviour is different from human behaviour. ● Protect some birds nests. ● Make efforts to protect animals by understanding their behaviour. ● Appreciate the Scientists work on Animal behaviour ● Appreciate the engineering skill of birds nests. ● Show concern towards biodiversity	**9**

TEACHING LEARNING PROCESS

Induction /Introduction *(Generating interest,informing students about the outcomes and expectations for the lesson)*

Ask some questions showing these pictures .

- How can butterfly get to know about nectar ?
- How ants search their food and give information to other ants ?
- Who does teach a bird to make a nest ?
- Who teaches swimming to fish ?

Experience and Reflection *(Task/question that helps students explore the concept and connect with their life)*

- Observe the pets behaviour in your surroundings
- Why some elephants and other wild animals entering our areas?
- Observe the bird migration
- Why do the Govt declare holiday for fishing for some months?
- Do the animals have feelings like we have ?

Explicit Teaching/Teacher Modelling*(IDo)*	**Group Work (We Do)**	**IndependentWork(YouDo)**	

Pose some questions on the behaviour of animals

- What will happen if you take away a puppy from a dog ?
- How do the behaviour help the animals?
- Have you observed the cat behaviour if you offer it milk in a bowl ?
- What do you mean by animal behaviour?
- Do the animals have families as we have?
- If you make a big sound near a tree what do the birds do which are taking rest on the tree?
- Discussion with children and explain the content.
- Do you ride a bicycle?
- Do all of you ride bicycle?
- Can everyone ride a bicycle?

What is your response when you touch a hot object ?

INSTINCT

- Let us discuss the types of behaviour of animals
- What is going on in this pictures?
- Do you think it is natural or learned from some other ?

What do you observe in this picture ?

- What is the behaviour of the ducklings?
- Does it continue for a long time ?

- Observe the pictures and participate in the discussion

Observe the chart

Fill in the table

Action	By birth/Learned
Reading	
Writing	
Swimming	
Child Cry on hunger	
Fish swimming	
Birds fly	

Write some other actions that are learned .
Write some other actions that come by birth.
Give two examples of reflex arc?

IMPRINTING

- Let us discuss

CONDITION

- What do you observe in this picture ?
- Are they all marching at a time?
- How do they perform this behaviour?
- Is this action learned or any other?

- Is there any connection to the bell and your action ?
- How does it linked?

How the grazing animals conditioned not to Touch the fence?

IVAN PAVLOV EXPERIMENT ON DOG

Identify the Russian Scientist.

Explaining the Experiment of Pavlov.

- The behaviour of the ducklings is known as Imprinting.

Ducklings think of hen as their mother.
After some days the hen identify the ducklings

Give some other examples of Imprinting.

Police Parade
It is a learned action.

Fill in this table basing on your school timings

Time	School Bell rings	What do you do?
9:00 AM	First bell	Assemble for prayer
9:15 AM	Second bell	
12:20 PM		
4:00 PM	Long bell	

Grazing animals get an unpleasant electric shock when they touch an electric fence. They eventually avoid the fence, even when it is turned off.

IMITATION

Have you remembered the story The hat merchant and monkeys

- How did the merchant recover his hats?
- What did the monkeys do in respond to the merchant's action ?
- Is it same behaviour as you learned earlier ?

- Some animals copy the actions of other animals to learn new skills.

Human behaviour

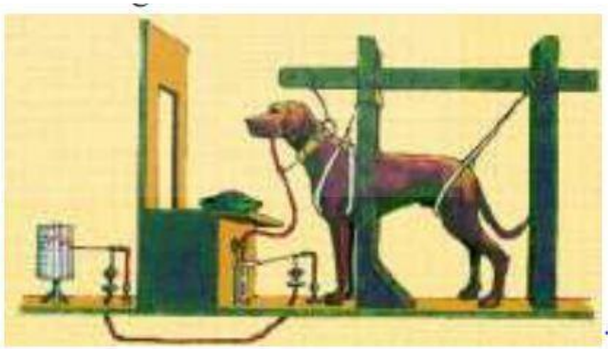
You are giving birthday party to your friends.One of your friends ordered Chicken biryani. Remaining friends ordered fried rice.The server brought fried rice and asked you to wait for 5 mnts for chicken biryani.All of you are feeling very hungry .

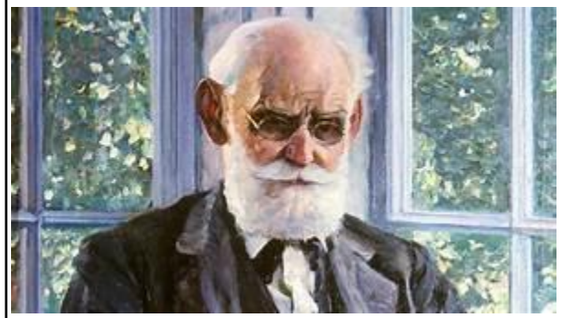
1.Do you wait for 5 mnts or Start eating your dish ?

CONDITIONING

How do the Companies introduce their products ?

- Observe the picture





Give some examples in your daily life on condition.

The monkeys did the same action as the merchant did.

They copy the action of the Hat seller.

Give some examples of imitating behaviour of animals.

Do you like the adds in the T.V s ?
Which add you like the most ?
Is it a type of conditioning our behaviour?

Investigating behaviour
Investigating in the fields
Discussion on how scientists work .

1.Which action is harmful to you copying or imitating good habits or bad habits of others?

2 Read and Put a tick mark in the following table

Action	Useful	Harmful
Combined Study		
Imitating Heroes Style of Smoking		
Imitating Elders in studies		
Copying the good hand writing of your friends and Teachers		

Tagging

Birds and Animals can be tagged to track their movement.

Let's discuss

1.Which food item you watch in the add ?
2.Is the add affected you to buy the item ?

Lab Activity

1.What do you observe in this pictures?

Conducting
Study the behaviour of Cockroach

Follow the process given in the text book.

2.Is there any difference to investigate the behaviour of animals and the behaviour of Human beings?
3.What are the uses of observing animal behaviour ?

Activity 2
Understanding different types of animal behaviour .Discussion on some animal behaviour we see around us.

Observe the picture.
Do you know what what this animal is doing ?

1.Why do birds migrate to other places ?
2.Do the animals migrate ?
3.What is the reason for animals migration ?
4. How do the scientists track the animals or birds ?

Wasp making nest
How do the wasp select suitable mud for building its nest ?

Experiments on animal intelligence
1.Scrubjay bird
2.Squirrel

Let's know about these

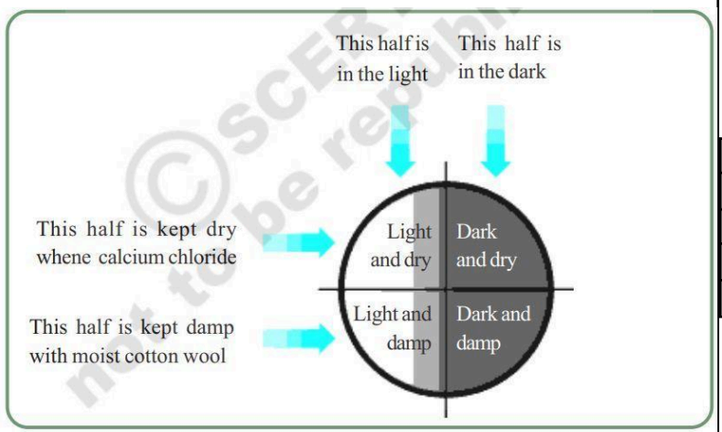
3.Dolphins
4. African Grey Parrot

Activity 2
Animals express feelings through their behaviour.

Select One animal in your locality and observe its behaviour.

Ethology: Study of animal behaviour

Why should we understand the behaviour of animals ?
These 3 scientists got Nobel prize for their work on animal behaviour in 1973



Do the activity in 4 groups and make a note what you observe.

Animal behaviour is based on different bio chemical reactions

Prepare a choice box by following the steps given in the text.

Sl.No	Type of chamber	No.of cockroaches
1	Light and dry	
2	Light and humid	
3	Dark and dry	
4	Dark and humid	

In which chamber the number of Cockroaches is highest ?
Write a short note on the behaviour of cockroaches.

1.Ants follow in a line ---
2.Pet dog barks on strangers only ----
3.Mosquitoes,Cockroaches come at night ---
4.Bats, Owls move only at night ---
5.Birds collect suitable material for nests—
6.Birds migrate to long distance without missing the way---
7.Bullocks carry the cart in the same rout---

It is trying to build dams across the water using trees cutting with its sharp teeth.
It constructs nearly 4 feet wall with trees, stones mud
It lives in the stagnated water.

Observe in your surroundings.
1.Where do the wasps make their nests?
2.Where do they collect mud from ?

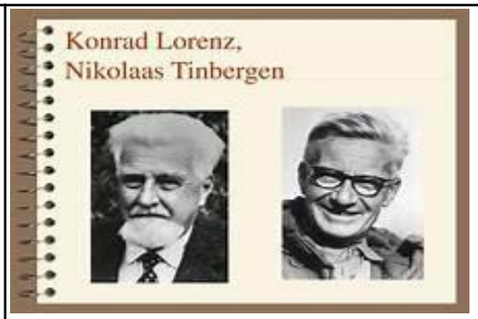
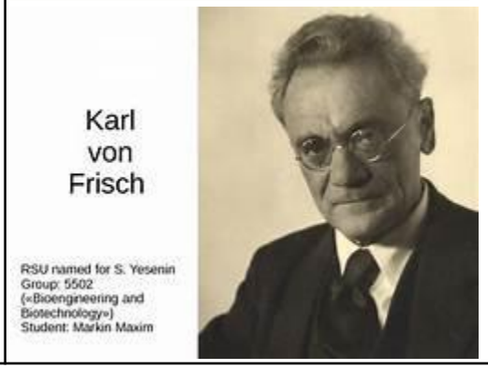
These hide their food and misguide others

Dolphins are logical thinking animals
Alex was very creative

- In what way a cow shows her love towards her calf ?
- How animals try to protect themselves from predators?

It licks her calf.

Snake –
Dog –
Tasmanian Devil—

	 	1.Name of the animal 2.Place of living 3.How it build its place 4.Way of collecting food 5.External Characters 6.Expressions 7.Group Behaviour To conserve bio diversity we should understand the animal behaviour	

Check For Understanding Questions

- **Factual:**
- **Describe the four kinds of animal behaviour with examples.**
- What is the difference between Instinct and Conditioning?
- How do the children learn things?
- Give examples for animal intelligence
- **Open Ended/Critical Thinking:**
- What will happen if deforestation continues?
- How does the animal behaviour help them ?
- If a snake forgets hissing what will happen ?
- Why should we protect the animals and their habitats ?
- Why Elephants and other animals enter into cities and near by villages of forests?

Student Practice Questions&Activities*(Exercises from workbook/textbooks/blackboard)*

- Observe the pet animals behaviour
- Collect some birds nests .
- Make a nest observing a birds nest.
- Practice on text book questions

TLMs*(Digital+Print)*

Resources:

- **Charts**
- **Live work sheet for assessment**
- **Text book**

Useful Diksha Links

- *https://youtu.be/fsFKUPLXQtY*
- *https://youtu.be/cP5ICIeK-PM*
- *https://youtu.be/FyRkEKCKiw4*

Assessment*(Think of what children SAY,DO and MAKE* while learning that can form the evidence of learning to be used for assessment).*

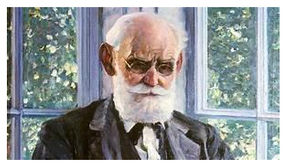
- *What are the types of animal behaviour?*
- *Differentiate Imitation and Imprinting?*
- *How behaviour of human is different from behaviour of other animals?*
- *What is advantage of reflex action?*
- *Name the persons who got Nobel prize for their work on animal behaviour?*
- *Understanding of animal behavour creates positive attitude towards animals." How do you suppot this statement? Explain with suitable examples.*

1.Ducklings show _____ behaviour

2._____ builds dams across water streams

3.The worst smelling animal is _____

4. Identify the scientist



Signature of the Teacher **Signature of the visiting officer** **Signature of the headmaster**