Lesson 1

Living and Non-living Things

Warm-up

When we look outside, we see many things. Some things breathe and can move. Other things cannot move or breathe by itself. Circle the things that breathe and move. Draw an ✓ out the things that do not breathe or move.

Cat

Rock

Fish

Soil

Vocabulary

Look at the pictures. Fill in the missing vowels.

ch___ng___

change

br___th___

breathe

r___pr___d___c___

reproduce

Learning

Categorization of Living Things and Non-Living Things

In the table below, write yes or no.

Example	Characteristic				
	Does it move all by itself?	Does it grow and **change**?	Does it **breathe**?	Does it need food to survive?	Does it **reproduce**?
 Living					
 Non-living					

Application

- What did you learn? Write down the name of a living and the non-living thing.

Did you know?
Plants are also living things. They breathe and make food.

Living thing: _____ Non-living thing: _____

Learning

Characteristics of Living and Non-Living Things

Think about it...
What are some things that you can do?

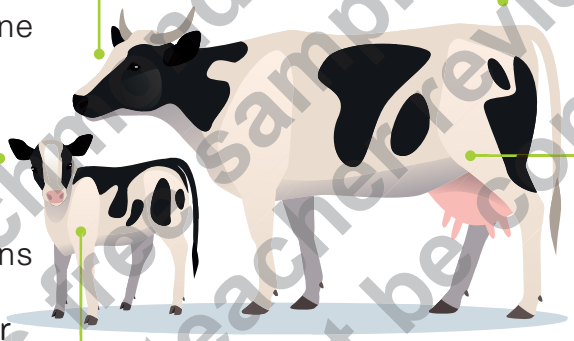
Living beings, such as animals, plants, and humans, have several characteristics in common. One is that they have a life cycle. Also, they can breathe, grow, reproduce, and die.

Can Move

Living things can move by themselves. They do not need help from something or someone else to move.

Need Food and Water

All living things need food and water to grow. Without food and water, they will not survive.



Can Reproduce

Living things can reproduce. This means that they can have their own offspring or babies.

Can Grow

Living things grow and change from small to big. They go through many changes called a life cycle.

Can Breathe

Living things can breathe. This means that they have a system where they inhale and exhale gasses from the air.

Critical Thinking

Can rocks and water do the same things that living things can do? Why? Why not?

Application

- Draw 5 things that living things can do. Then, color your pictures.

Breathe	Reproduce	Eat Food	Move	Grow

Learning

Think about it...
What does a plant need to grow?

Life Cycle of Living Things

All living things have a life cycle. This shows how they are born, how they grow and develop, and how they die. The two most important life cycles of living things are for plants and animals.

Application

- Number the stages of the life cycle of a plant in order.

	Seed		Sprout
	Adult plant		Seedling
	Flower/fruit		

- Draw a picture of the life cycle of a bean plant.

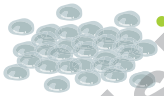
Learning

Animals also have a life cycle. All animal life cycles starts with a cell that grows, reproduces, and finally dies.

Think about it...
What is an animal life cycle?

A frog's life cycle starts with eggs. The eggs germinate with the help of heat from the sun.

1



2

Little tadpoles hatch from the eggs and swim in rivers or lakes.

3

Each tadpole grows legs.

4

When it grows more, the tadpole gets arms, too. Now it is called a froglet.

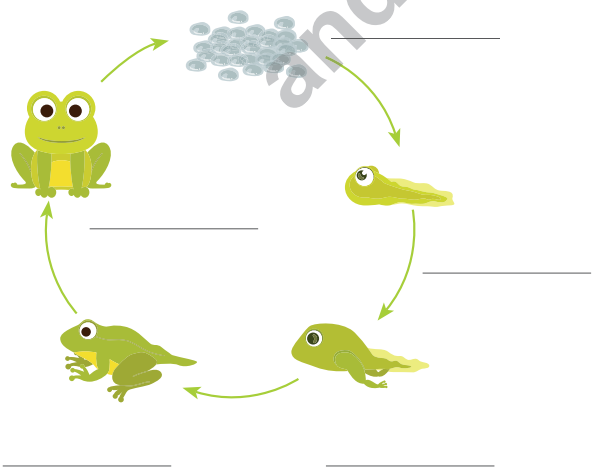
5

Before the adult frog dies, it lays eggs to produce more tadpoles.

Application

- Choose a word from the box to complete each part of a frog's life cycle.

Eggs / Tadpole with legs / Tadpole / Adult frog / Froglet



Hands On!

You will need

White paper plate / green, white, and black playdough / googly eyes / green paper / black markers

Instructions

1. With the marker, divide your plate into four quarters. Label them eggs, tadpole, froglet, adult frog.

2. With the playdough, paper and googly eyes, build the eggs, tadpole, froglet, and adult frog as shown on the pictures.

3. Then put your models in the correct category.

4. Observe the changes in each stage.

The Vital Functions of Living Things

Warm-up

Living things can move, breathe, consume (eat and drink), grow, and reproduce. Why are you a living being?

- Reproduce
- Consume
- Move
- Grow
- Breathe

Vocabulary

Look at the pictures. Fill in the missing vowels.

__ffspr __ng

offspring

n__tr__t____n

nutrition

r__sp__r__t____n

respiration

Did you know?
Animals that eat other animals are called carnivores.

Learning

Animal and Plant Nutrition

Nutrition is how living things like plants and animals get food to grow healthy and strong.

Food gives plants and animals the energy they need.

Plants make their own food for energy in their leaves and stems by a process called photosynthesis.

Plants need sunlight, water, and carbon dioxide to produce food.

Animals eat plants and/or other animals to get energy.

Animals need to hunt or graze for their food.

Application

- Draw something that each living thing needs as a food source. Color your pictures.

Giraffe	Lion	Tree	Snake	Frog

Learning

Animal and Plant Reproduction

Living things like plants and animals make more of themselves by reproducing. Animals make babies, and plants make seeds. These are called **offspring**.

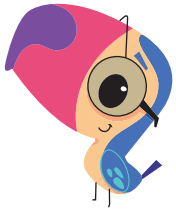
Animals can reproduce by giving birth to their offspring or by laying eggs.

Plants can reproduce from seeds or reproduce from cuttings or shoots.

Critical Thinking

Do you think a human is also a mammal? Give some reasons for your answer.

Think About It...
How do plants grow?



Animals that grow inside their mother are mammals.

Mammals give birth to their babies.

Some animals grow inside eggs.

Birds, fish, amphibians, reptiles, and insects hatch from eggs.

Seeds are the embryo (or baby) of a plant.

When seeds in the ground germinate, a new plant starts to grow.

Some plants are produced by vegetative structures, such as roots and stems.

These include plants like dahlias and daffodils.

Application

- Match each living things and its offspring.

- Read the sentence and write **T** for true and **F** for false.

1. Some plants grow inside eggs. _____
2. Animals that grow inside their mothers are called mammals. _____
3. Seeds are the babies of a plant. _____
4. Plants can reproduce from cuttings or shoots. _____

Think about it...
How do plants and animals help each other when they breathe?

Learning

Animal and Plant Respiration

All living things have to breathe gases in and out. This is called **respiration**.

Animals and humans breathe in oxygen from the air around them.

Plants take in carbon dioxide from the air around them.

Animals use a respiratory organ, like lungs or gills, to breathe.

A plant uses its leaves to take in air. Leaves are a non-respiratory organ.

Learning

Animal and Plant Relationships

Living things live together in an ecosystem. They have different relationships in that ecosystem.

Ecosystems make it possible for plants and animals to change and grow.

Without relationships in an ecosystem, plants and animals would die.

Ecosystem Relationship Examples

Mutualism	Commensalism	Parasitism
		
Both living things benefit.	One living thing benefits, and the other one is not influenced.	One living thing benefits, and the other one is harmed.

Application

- Draw a picture of two living things that share a mutualistic relationship.

- Draw a picture of two living things that share a parasitic relationship.

Be a Scientist

You will need

A small sealable plastic bag, marker, paper towel, 10 beans, water

Steps

1. Draw a frame with ten boxes on the bag.
2. Fold the paper towel to fit into the bag.
3. Gently wet the paper towel and place into the bag.
4. Place one bean in each section of the ten frame.
5. Carefully put the bag on a flat surface in a sunny area.
6. Observe the beans over the next couple of days.
7. Do all of the beans germinate? Why or why not?