LIVING/NON-LIVING

Material

Assortment of objects gathered by the children or by the adult of both living organisms and non-living things.

Assortment of pictures collected by the children or by the adult representing living organisms and non-living things.

Presentation (This is usually a group presentation.)

1. Say, “I would like to talk about things that are living and things that are not living.”

2. Place the objects in front of the children on a table or rug.

3. Say, “I would like for you to tell me what you see.”

4. The children name or describe the objects.

5. Say, “There are many ways I could group these objects. I could group the objects by color. I could group the objects by size. However, today I am going to group the objects by if they are living or if they are not living.”

6. Select one living object. (worm)

7. Name the object. “This is a worm.”

8. Name an attribute that makes it living. “The worm is living because it moves on its own.”

9. Place the worm to the left on the table or rug.

10. Select a non-living object. (rock)

11. Name the object. “This is a rock.”

12. Name an attribute that makes it non-living. “The rock is non-living because it cannot move on its own.”

13. Place the rock to the right on the table or rug.
14. Continue with each object in this manner until all the objects have been organized into a group of living organisms and a group of non-living things.

15. The children may create a third category for objects that once were living but are no longer living.

16. Say, “All the living organisms are in this group. All these living organisms can move on their own. Is there anything else which makes these living?” The children may respond with criteria of respiration, reproduction, etc. These are more sophisticated responses that are to be encouraged.

17. Say, “All the non-living things are in this group. All these non-living things cannot move on their own. Is there anything else that they cannot do that makes them non-living?”

18. If the children can read, pass out the 'living' and the 'non-living' labels to match to the groups of objects.

19. Say, “The objects will sit on the tray and it will be placed on the plant shelf for you to sort into living and non-living.”

Presentation 2 (This is usually a group presentation.)

1. Say, “I would like to talk about these pictures of things that are living and things that are not living.”

2. Place the pictures in front of the children on a table or rug.

3. Say, “I would like for you to tell me what you see in the pictures.”

4. The children name or describe what they see in the pictures.

5. Say, “There are many ways I could group these pictures. I could group the pictures by color. Today, I am going to group the pictures by if they represent something living or not living.”

6. Select a picture of a living organism. (monkey)

7. Name the picture. “This is a monkey.”
8. Name an attribute that makes it living. “The monkey is living because it moves on its own.”
9. Place the picture of the monkey to the left on the table or rug.
10. Select a picture of a non-living thing. (house)
11. Name the picture. “This is a house.”
12. Name an attribute that makes it non-living. “The house is non-living because it cannot move on its own.”
13. Place the picture of the house to the right on the table or rug.
14. Continue with each picture in this manner until all the pictures have been organized into a group of pictures of living organisms and a group of pictures of non-living things.
15. The children may create a third category for pictures of objects that once were living but are no longer living.
16. Say, “All the pictures of living organisms are in this group. All these living organisms in the pictures can move on their own. Is there anything else that makes these organisms living?” The children may respond with criteria of respiration, reproduction, etc. These are more sophisticated responses that are to be encouraged.
17. Say, “All the pictures of non-living things are in a group. All these non-living things in the pictures cannot move on their own. Is there anything else that they cannot do that makes them non-living?”
18. If the children can read, pass out the 'living' and the 'non-living' labels to match to the groups of objects.
19. Say, “The pictures will sit on the tray and it will be placed on the plant shelf for you to sort into living and non-living.”
Language

Living
Non-living

Point of Interest

Different ways living organisms move.

Aim

Direct:
Development of an appreciation for living and non-living.

Indirect:
Development of intellectual criteria for judging if something is living or not living.

Control of Error

The teacher or other children for the objects.
The backs of the cards may have a living and non-living label as a control of error.
There are an equal number of living and non-living objects and/or pictures.

Age

5 years.
Material
Assortment of living objects gathered by the children or by the adult of both plants and animals
Assortment of pictures collected by the children or by the adult representing plants and animals

Presentation (This is usually a group presentation.)
1. Say, “I would like to talk about things that are plants and things that are animals.”
2. Place the objects in front of the children on a table or rug.
3. Say, “I would like for you to tell me what you see.”
4. The children name or describe the objects.
5. Say, “There are many ways I could group these objects. I could group the objects by color. I could group the objects by size. However, today I am going to group the objects by if they are plant or if they are animal.”
6. Select a plant. (little potted plant)
7. Name the plant. “This is a plant called a fern.”
8. Name an attribute that makes it a plant. “The fern has roots and it makes its own food. It does not have a mouth or opening to take in food.”
9. Place the plant to the left on the table or rug.
10. Select an animal. (snail)
11. Name the animal. “This is a snail.”
12. Name an attribute that makes it an animal. “The snail does not have roots and it cannot make its own food. It eats plants that gives it the nourishment it needs.”
13. Place the snail to the right on the table or rug.
14. Continue with each plant or animal in this manner until all the objects have been organized into a group of plants and a group of animals.
15. Say, “All the plants are in this group. All the plants have roots and they make their own food.”
16. Say, “All the animals are in this group. None of the animals have roots and they all eat plants or other animals for food.”
17. If the children can read, pass out the 'Plant' and the 'Animal' labels to match to the plants and animals.
18. Say, “The plants and animals will sit on the tray and it will be placed on the plant shelf for you to sort into plant and animal.”

Presentation 2 (This is usually a group presentation.)
1. Say, “I would like to talk about these pictures of plants and animals.”
2. Place the pictures in front of the children on a table or rug.
3. Say, “I would like for you to tell me what you see in the pictures.”
4. The children name or describe what they see in the pictures.
5. Say, “There are many ways I could group these pictures. I could group the pictures by color. Today, I am going to group the pictures by if they represent a plant or an animal.”
6. Select a picture of a plant. (cactus)
7. Name the picture. “This is a cactus.”
8. Name an attribute that makes it a plant. “The cactus is a plant because it has roots and it makes its own food. It does not have a mouth or opening to take in food.”
9. Place the picture of the cactus to the left on the table or rug.
10. Select a picture of an animal. (cat)
11. Name the picture. “This is a cat.”

12. Name an attribute that makes it an animal. “The cat is an animal because it does not have roots and it cannot make its own food. It eats plants and meat which lives it the nourishment it needs.”

13. Place the picture of the cat to the right on the table or rug.

14. Continue with each plant or animal picture in this manner until all the living organisms have been organized into a group of plants and a group of animals.

15. Say, “All the plants are in this group. All the plants have roots and they make their own food.”

16. Say, “All the pictures of animals are in this group. None of the animals have roots and they all eat plants or other animals for food.”

17. If the children can read, pass out the 'Plant' and the 'Animal' labels to match to the plants and animals.

18. Say, “The pictures of the plants and animals will sit on the tray and it will be placed on the plant shelf for you to sort into pictures of plants and pictures of animals.”

Language

Plant

Animal

Point of Interest

Different ways plants are nourished and animals are nourished.

Aim

Direct:

Development of an appreciation for plants and animals.
Indirect:

Development of intellectual criteria for judging if something is a plant or an animal.

Control of Error

The teacher or other children for the living organisms.

The backs of the cards may have a plant or animal label as a control of error.

Age

5 years.
FISH:
CARE OF THE ANIMAL

Material

One goldfish
5 or 10 gallon aquarium tank
Goldfish food (dried, live, paste, and frozen)
Fish food ring
Animal care chart
Names of each child in the class and two small baskets
Vallisneria plant
Baster
Fish net
Bucket, label, and bowl

Presentation

1. Place the goldfish in its aquarium in front of the children.
2. Say, “Today I’d like to observe and talk about fish.”
3. Ask, “What do you observe?”
4. Encourage the children to describe what they see.
5. Restate the observations in clearer language when necessary.
7. Introduce the fish food and the fish food ring.
8. Say, “I’m going to put some food, just a little, in the food ring and I want you to observe what happens.”
10. Say, “Yes, the fish opens its mouth wide to take in food.”
11. Ask, “Does anyone know now often we should feed a fish?”
12. Say, “Yes, we feed a fish once a day.”

13. Ask, “Does anyone know how much we should feed a fish?”

14. Say, “Yes, it is just a pinch. It is the amount of food a fish consumes in about five minutes.”

15. Ask, “Does anyone know what happens to the food if we give the fish too much?”

16. Say, “Yes, the food will rot in the water and the water becomes filthy from the rotting food.” Say, “Even though you may feel like feeding the fish a lot because you don’t want the fish to go hungry, be careful because extra food will only rot in the water.”

17. With the baster, remove any food not consumed in five minutes.

18. Bring out the Animal Care Chart. (See page 3)

19. Say, “This is a chart on which we can record what we do to meet the needs of the fish.”

20. Say, “Let’s look at the chart. It says ‘feed’. Do we have to feed a fish?”

21. Say, “Yes, we have special food and we have already seen how much we need to feed the fish. We need to feed the fish every day. You can see on the chart that each day of the week is listed because we need to feed the fish each day.”

22. Place the basket of name labels in front of the children.

23. Say, “This is a basket that has every child’s name. Each day we will choose a label and that person will be responsible for feeding the fish. In time, all of you will have a turn.”

Note: During group time each day select a name label, have the child feed the fish, record on the chart with a check mark, or the child’s name, that the feeding has occurred, and place the child’s name label in the second basket.

Use different types of food for variety for the fish.
Presentation 2 (Introducing a plant on Friday)

1. Complete the process of feeding the fish.
2. Ask, “Tomorrow is Saturday and then Sunday. Who will feed the fish on those two days when we are not at school?”
3. Allow the children to discuss this.
4. Place the plant in front of the children.
5. Say, “This is a special plant that lives in water. Let’s place this plant in the aquarium and the fish can nibble on the plant when it gets hungry.”
6. Select a name from the basket for the child to place the plant in the fish tank.

Presentation 3 (Watering)

1. After the child has fed the fish, refer to the Animal Care Chart. (See page 3)
2. Say, “We have been doing very well in our care of the fish in terms of feeding. Let’s see if there are other things we are suppose to be taking care of.”
3. Indicate the word ‘water’.
4. Ask, “The Chart says ‘water’. Do we need to provide water for the fish?”
5. Say, “Yes, the fish lives in water so it needs fresh water each day.”
6. Add a cup of aged water each day.

Presentation 4

1. Indicate the word 'clean' on the Animal Care Chart. (See page 3)
2. Ask, “The Chart says ‘clean’. Do you know what that means?”
3. Say, “Yes, the water gets dirty and it needs cleaning. Why does the water get dirty?”
4. Say, “Yes, a little bit of the food may not be eaten by the fish and it will rot and soil the water. Is there any other reason?”
5. Say, “Remember that the fish eats. Food goes into its mouth. The food is digested and used by the body of the fish to live and to grow. But some of the food that
the fish eats cannot be used. It is left over; it is waste. The fish gets rid of the waste out of a hole called the anus. This hole is at the other end of the body from the mouth. The waste that comes out of the anus is sometimes called excrement.”

6. Ask, “So what do you think this chart means when it says ‘clean’?”
7. Say, “Yes, each day we will use the baster to remove any waste we see in the tank.”
8. Demonstrate how to use the baster.
9. Say, “Sometimes we need to change the water. The water from the faucet may have chemicals in it that are harmful to fish. So, we are going to fill this clean bucket with water and allow it to sit for two days. The harmful chemicals will no longer be harmful in two days.”
10. Select a name from the basket for a child to fill the bucket with water.

Presentation 5 (Cleaning: Changing the Water)
1. Say, “The water from the faucet has sat in the bucket for two days. There is no longer a danger of harmful chemicals for the fish.”
2. Place the bucket of water before the children. Place the tank with the goldfish before the children. Place a small, empty bowl and the fish net next to the fish tank. With a small ladle or pitcher, dip into the aged water and pour several inches of water into the empty bowl.
3. Say, “I now have clean water to put the goldfish in while I clean the tank.”
4. Pick up the fish net. Place the fish net in the fish tank. Don’t allow the net to move. Allow the fish to move into the net and draw the fish to the surface of the tank. Pause. In a single, smooth movement transfer the net from the tank to the bowl. Lower the fish net gently to allow the fish to escape the net.
5. Using the baster, transfer the soiled tank water into an empty bucket.
6. Ladle several cups of water into the tank. Slush the water around and then
empty the water into the dirty-water bucket.

7. Ladle several cups of water into the tank. With a paper towel, rub the bottom and sides of the tank. Squeeze the towel and place it in the waste basket.

8. Pour the dirty water into the dirty-water bucket.

9. Ladle several cups of water into the tank. Slush the water around and then empty the water into the dirty-water bucket.

10. From the aged water bucket, ladle water into the clean tank two inches from the top.

11. Gently pour the bowl of water containing the fish into the clean tank.

12. Empty the dirty-water bucket in the sink or toilet.

13. Rinse the bucket out and dry it.

14. Save any remaining aged water from the other bucket.

15. Replace all bowls, buckets, and fish net.

16. Wash hands thoroughly with soap.

Presentation 6 (Optional Using an Aquarium)

1. Say, “Every week we change the water of the fish to get rid of any rotten food particles and to remove the fish excrement. There are filters and pumps that can keep the water clean for the fish all the time.”

2. Place the fish tank before the children.

3. Place the water pump and the filter before the children.

4. Say, “This is a water pump. The water pump sucks water through this tube and into the filter. The filter is like a very small screen that catches all the dirt from the fish tank. Then, the clean water is pushed through the tube and back into the tank.”

5. Slowly lower the pump and filter into the water.

6. Say, “The pump has to be plugged into an electrical outlet to work.”

7. Move the tank to its permanent location near an electrical outlet.
Language

Anus
Excrement
Aquarium
Pump
Filter

Point of Interest:

The needs of the fish are similar to ours.

In catching the fish in the net, slow movements are important.

Aim

Direct:

Development of an appreciation for animal life.

Indirect:

Learn to care for the basic needs of a fish.

Control of Error

Fish food not eaten after five minutes.

Cloudy water means the water is not clean.

Age

3 years.

Note: The size of a tank is calculated by estimating the length of the fish (excluding the tail) and for each inch a gallon of water is required. Further, goldfish require a lot of oxygen. Therefore, 30 square inches of water surface is required for one inch of fish.