

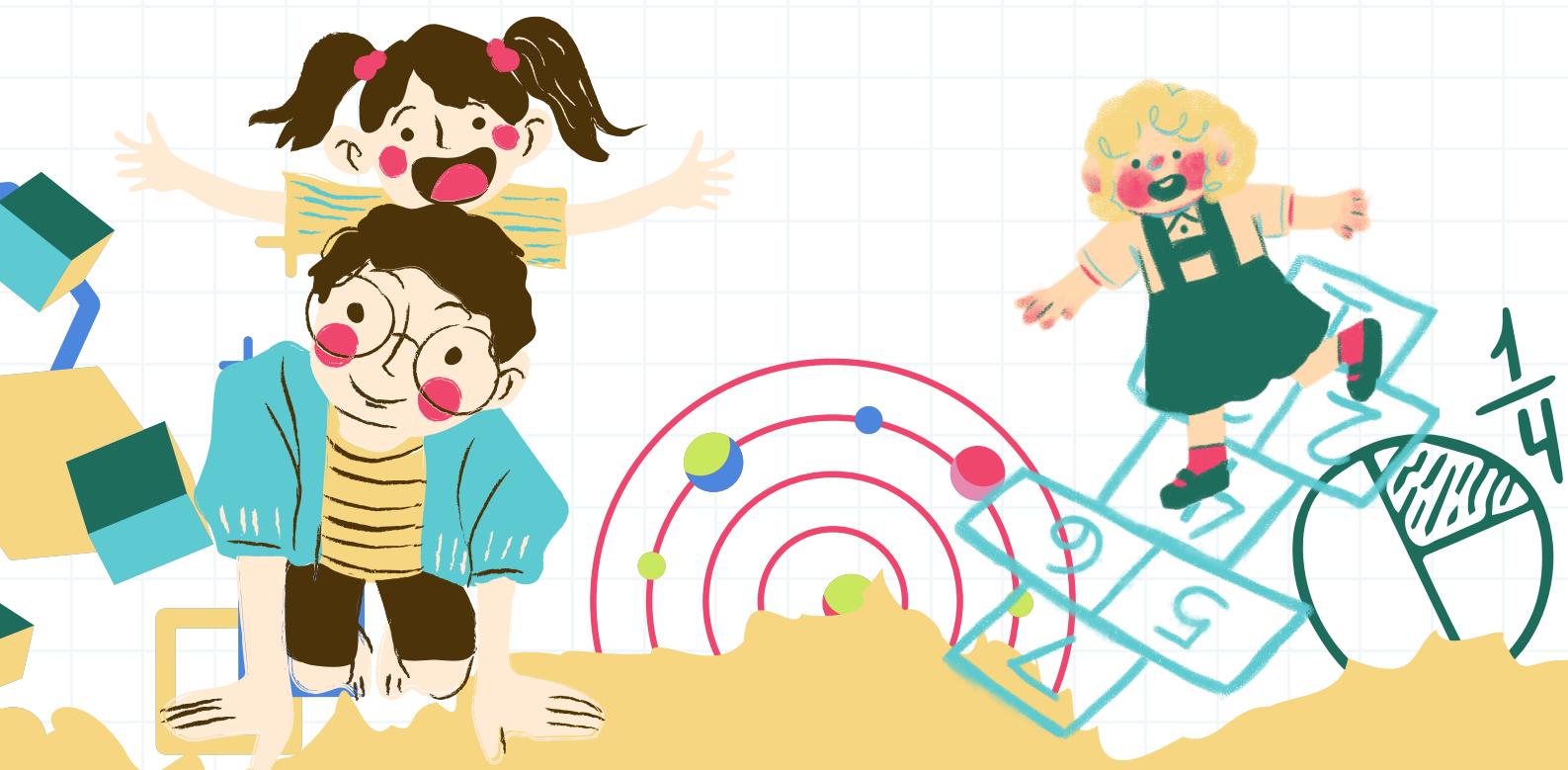


MATH&MOVE

LESSON

USING MOVEMENT TO

understand Venn diagrams



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This lesson focuses on introducing pupils to Venn diagrams by having them sort animals into categories based their similar or different eating habits.

At the end of this lesson, pupils should be able to:



- Grasp the notion of objects being categorised according to their similarities or differences
- Re-create a 2-circle Venn diagram and explain the purpose of its parts
- Make comparisons in the classroom and at home, understanding relationships between sets of things

TOPIC: Data evaluation and categorisation

DURATION: 30-45 mins

LEVEL: Ages 6-7

PARTICIPANTS: Entire class



LESSON

LESSON PREPARATION

Required skills

For this lesson, pupils should already know how to:

- Understand the concept of 'comparison' ie. what does it mean to have the same or different qualities from someone/something?

Required materials and set up

1 Chalk for drawing the 2-circled Venn diagram on the ground (alternatively, 1 pair of scissors and 1 ball of string/yarn if the teacher can't use chalk).

- The Venn diagram should be big enough to fit 10 pupils per section.
- Create the Venn diagram before the lesson begins, so that pupils can observe its shape and size.



Required materials and set up

2 3 cards with labels – “Eats meat”, “Eats plants/vegetables” and “Eats meat and plants/vegetables”.

- Place “Eats meat” and “Eats plants/vegetables” inside the two circles of the diagram and “Eats meat and plants/vegetables” where the circles of the diagram overlap.

3 Cards with names of animals on them (the number of cards should correspond to the number of pupils in your class).

- Prepare cards with the names of the animals that are herbivores, carnivores and omnivores and place them randomly inside the hat/box.

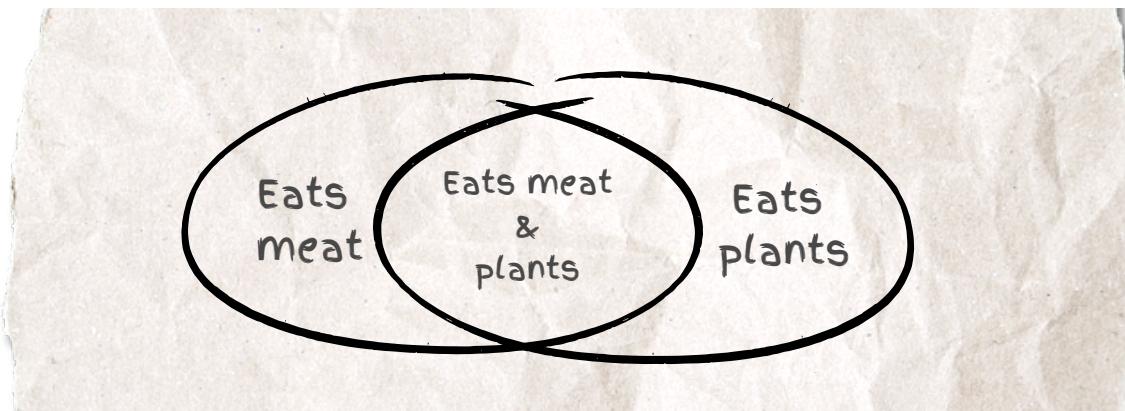
4 1 hat or box for placing the cards

Before they can start acting out animals, warm up the pupils with exercises such as: reaching their arms up high and then touching the ground, shaking out their arms and legs, moving their head 10 times to the left/right and then up/down, etc.

LESSON INSTRUCTIONS



- Once you've set up the classroom with the 2-circle Venn diagram, discuss the object with the class, reading the 3 labels to them. Discuss what the circles could be describing – helping children guess ‘animals’. Then, discuss the meaning of the part in which the two circles overlap – animals that eat both meat and plants.
- After introducing the lesson’s concepts, divide the class into two groups and explain that the first group will be acting as animals and the second group will be placing the animals in the right circle.



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- Have each player from the first group draw a paper from the hat/box with the name of the animal. Remind them that the name of their animal should be kept a secret!
- Then, have the group take turns acting out their animals – big, scary lions; slow, chewing cows, happy, energetic dogs, etc. They must only use their bodies to convey their animal's identity– no talking or making noises!
- Have the group of guessers deduce which animal is being acted out. If they're stumped, the teacher can give a hint about their size/colour/habitat, etc., but do not make mention of what it eats.



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- Once the animal has been guessed correctly, have the group of guessers instruct each 'actor' which circle they should occupy – Eats meat, Eats plants/vegetables, or Eats meat and plants/vegetables.
- Continue like this until the entire group of animal 'actors' has been sorted into 1 of the three categories of the Venn diagram.
- After, have the groups swap roles and do it all over again with new animals!

CONCLUSION

After each 'animal' has been sorted according to the categories in the Venn diagram, make an evaluation of the animals as a class – count how many animals eat meat, plants/vegetables and how many eat both.

TO GO FURTHER



Once the pupils are already assigned to a section of the Venn diagram, you can ask them to now rearrange themselves according to size – Big, Small and Medium (the overlapping section)

RECOMMENDATIONS FOR INCLUSION

How to adapt this lesson to older pupils

This activity can be adapted to pupils aged 8-9 years by having them create their own categorisations of the animals assigned to them. This activity would work best in pairs with the rest of the class awaiting their turn to act out their animals.

- Two pupils take turns acting out animals, perhaps even having the animals interact with one another – a dog chasing a cat, for example. Once their animals have been guessed correctly, they would then have the task of explaining how their animals are different – moving to the outermost circles – and how they are the same, joining together in the overlapping part of the circles. They should add 2 reasons explaining similarities and 2 reasons explaining differences. For example, “The dog is different than the cat because: it barks and the cat meows (1) and because it can fetch a ball and the cat can’t (2). The dog and the cat are similar because they can both be house pets (1) and because they both have fur (2).”

Accommodations for pupils with specific learning disorders

- Do not time the acting exercise, and instead allow pupils the freedom to think up appropriate movements and gestures at their own pace.
- Make sure the activity area is free from any objects/furniture, so that the pupils acting out the animals are not in danger of bumping into other things and pupils.
- Repeat the categorisation of the Venn diagrams a few times throughout the activity and distinguish the two circles with different colours (perhaps even colouring in the overlapping section with the colour made from the two other colours mixing), to ensure that pupils with difficulties in memorisation are reminded of how to carry out the task.

BIBLIOGRAPHY

Ask a Tech Teacher. “How to Teach Venn Diagrams to Elementary School Students,” July 26, 2022. <https://askatechteacher.com/venn-diagrams/>.

Bhatt, Pratiksha. “6 Gamified Activities To Teach Venn Diagrams.” Number Dyslexia (blog), February 5, 2022. <https://numberdyslexia.com/venn-diagram-activities/>.