

Day 1: Animal Counting and Basic Operations

Objective:

To assess and reinforce understanding of basic arithmetic operations (addition, subtraction, multiplication, and division) through interactive and animal-themed activities, while also introducing more advanced Year 7 and Year 8 level questions.

Duration: 1 Hour

Lesson Plan

1. Warm-Up Activity: Animal Math Brain Teasers (10 mins)

- **Objective:** Engage your child in thinking about numbers and animals to warm up their math brain.
 - **Activity:**
 - Prepare a mix of quick, fun questions at various levels:
 - **Year 6 Level:** "If there are 3 cats, each with 4 paws, how many paws are there in total?"
 - **Year 7 Level:** "If each cat needs 1.25 kg of food per day, how much food do 3 cats need in total?"
 - **Year 8 Level:** "If the ratio of cats to dogs in a shelter is 3:2 and there are 12 dogs, how many cats are there?"
 - Encourage your child to solve them quickly in their head or with some simple drawings.
 - **Discussion:** Review answers together, praising correct answers and guiding them through any mistakes.
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2. Main Activity: Animal Shelter Math Relay (25 mins)

- **Objective:** Use a pretend animal shelter scenario to practice addition, subtraction, multiplication, and division, including more advanced problems.
- **Materials Needed:**
 - Printable or drawn animal cards (cats, dogs, rabbits, etc.)
 - Toy money or counters to represent items or food

- Paper and pencil for calculations
 - **Activity:**
 1. **Introduction (5 mins):** Explain that they are the manager of a new animal shelter, responsible for keeping track of all the animals and supplies.
 2. **Addition/Subtraction Game (10 mins):**
 - **Year 6 Level:** "You start with 10 dogs. Three dogs are adopted, but then 2 more are brought in. How many dogs are in the shelter now?"
 - **Year 7 Level:** "You receive a donation of £150 for the shelter. If you buy 5 dog beds at £18 each, how much money do you have left?"
 - **Year 8 Level:** "If the shelter had 25 animals and lost 12% of them due to adoption, how many animals are left in the shelter?"
 - Use the animal cards and toy money to represent these problems, allowing your child to physically manipulate the cards and money as they work through the problems.
 3. **Multiplication/Division Game (10 mins):**
 - **Year 6 Level:** "Each of the 5 dogs needs 3 toys. How many toys do we need in total?"
 - **Year 7 Level:** "You need to buy 8 bags of food, each costing £7.50. How much will it cost in total?"
 - **Year 8 Level:** "If the food is on sale at 20% off, what is the new cost of the 8 bags of food?"
 - Use counters or toy money to represent items. Let your child group and count them to find the answers.
 4. **Creative Challenge (5 mins):**
 - Ask your child to create their own animal shelter scenario and write a simple math problem for you to solve, at a level they feel comfortable with. This gives them a chance to apply what they've learned creatively.
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3. Game: Animal Parade Math (15 mins)

- **Objective:** Reinforce math operations through a fun and engaging game, including more advanced problems.
- **Materials Needed:**
 - Dice (for random number generation)
 - Animal tokens or figurines (or the cards from the earlier activity)

- A simple game board or just a piece of paper with a start and finish line drawn on it
- **Activity:**
 - **Game Setup:** Explain that the animals are having a parade, and they need to move along the path by solving math problems.
 - **Rules:**
 - Roll the dice to determine the number of steps an animal moves.
 - Before moving, your child must answer a math question related to the number rolled, with questions at different levels:
 - **Year 6 Level:** "If you roll a 4, how many legs do 4 cats have?"
 - **Year 7 Level:** "If you roll a 5, and each animal has 1.75 kg of food, how much food do you have in total?"
 - **Year 8 Level:** "If you roll a 6, find 30% of 120 (e.g., the total number of animals)."
 - If they get it right, they move the animal forward. If not, they stay in place and try again.
 - **Objective:** Get all animals to the finish line by solving as many problems as possible.
- **Variation:** Include challenges like, "Roll a 6, and you must solve a percentage problem to move!"

4. Cool Down and Reflection (10 mins)

- **Objective:** Reflect on what was learned and consolidate understanding.
- **Discussion:**
 - Ask your child what they enjoyed most about the activities and which problems they found easy or hard.
 - Review any mistakes together, turning them into learning opportunities, and especially discuss the more advanced questions to gauge their comfort level.
- **Wrap-Up Activity:**
 - End with a simple math puzzle or riddle related to animals at a higher level, like, "If the shelter has a total of 50 animals, and 40% are cats, how many cats are there?" This can be done orally to wind down the session.
- **Positive Reinforcement:**
 - Praise their efforts and remind them how mastering these skills will help them in their dream to work with animals.

Additional Notes:

- **Adaptations:** If your child finds the Year 7 and Year 8 questions too challenging, offer hints or break down the problem into smaller steps.
- **Fun Element:** Keep the atmosphere light and playful. If they get frustrated, take a short break or shift to a simpler task.

SAMPLE

Week-long Lesson Plan

Day 1: Animal Counting and Basic Operations

Objective: Assess and reinforce understanding of basic arithmetic operations (addition, subtraction, multiplication, and division) through animal-themed exercises.

- **Activity 1: Animal Shelter Arithmetic**
 - **Introduction (10 mins):** Discuss how animal shelters work and how they need to keep track of animals.
 - **Main Activity (30 mins):** Present a scenario where your child is managing an animal shelter. Give them problems like:
 - "If the shelter has 15 cats and receives 8 more, how many cats are there in total?"
 - "If the shelter needs to evenly distribute 24 bags of dog food among 4 dogs, how many bags does each dog get?"
 - **Wrap-Up (10 mins):** Review the solutions together, discussing any mistakes and ensuring understanding.
 - **Homework:** Create 5 animal-related arithmetic problems for practice.
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Day 2: Understanding Fractions with Animal Treats

Objective: Assess understanding of fractions and equivalent fractions using an animal treats scenario.

- **Activity 1: Feeding Time Fractions**
 - **Introduction (10 mins):** Talk about feeding time at a zoo or farm, where different animals require specific portions of food.
 - **Main Activity (30 mins):** Use visual aids (like pictures of animals) to create fraction problems. For example:
 - "A dog gets $\frac{1}{4}$ of a bone, and a cat gets $\frac{1}{3}$ of a fish. Who gets more, and how can we compare them?"
 - "If a horse eats $\frac{2}{3}$ of a bale of hay, how much is left?"
 - Use manipulatives (like paper pieces) to visualize and compare fractions.
 - **Wrap-Up (10 mins):** Discuss why fractions are important and how they relate to real-life scenarios, especially in animal care.
- **Homework:** Draw and color different fractions of animals or food items (like a half-filled bowl of kibble).

Day 3: Decimals and Percentages in Animal Weights

Objective: Assess understanding of decimals and percentages by relating them to animal weights and diets.

- **Activity 1: Animal Weights and Diet Plans**
 - **Introduction (10 mins):** Discuss the importance of knowing animal weights and the correct percentage of food they need.
 - **Main Activity (30 mins):** Create problems like:
 - "A cat weighs 4.5 kg, and a dog weighs 12.3 kg. What is their total weight?"
 - "If a rabbit needs to eat 10% of its body weight, and it weighs 2 kg, how much food does it need?"
 - **Wrap-Up (10 mins):** Go over the answers together, ensuring your child understands how to work with decimals and percentages.
- **Homework:** Create a diet plan for 3 different animals using percentages.

Day 4: Geometry and Animal Habitats

Objective: Assess understanding of basic geometry (shapes, area, and perimeter) by designing animal habitats.

- **Activity 1: Designing a Zoo**
 - **Introduction (10 mins):** Talk about how zoos and animal sanctuaries design enclosures that provide enough space for animals.
 - **Main Activity (30 mins):** Give your child graph paper and ask them to design a zoo or sanctuary.
 - "Design a rectangular habitat for a lion that has an area of 24 square meters."
 - "Draw a circular pond for ducks with a radius of 3 meters. What is its area?"
 - **Wrap-Up (10 mins):** Review their designs, checking their understanding of area and perimeter.
- **Homework:** Create a small booklet of different animal enclosures with labeled dimensions and areas.

Day 5: Word Problems and Animal Rescue Mission

Objective: Assess problem-solving skills through animal-related word problems.

- **Activity 1: Animal Rescue Mission**
 - **Introduction (10 mins):** Discuss the role of vets and animal rescuers, who often need to solve problems on the spot.
 - **Main Activity (30 mins):** Create a story-based rescue mission where your child has to solve various word problems to save animals.
 - Example: "You need to rescue 12 animals, but only have space for 4 at a time. How many trips will it take?"
 - "You found a litter of 8 puppies, but 3 were adopted. How many are left?"
 - **Wrap-Up (10 mins):** Go over the solutions, discussing different strategies to solve word problems.
 - **Homework:** Write their own animal-themed word problem and solve it.
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Additional Support:

- **Use of Technology:** Integrate educational apps or online games focused on math, particularly those with animal themes.
- **Regular Check-ins:** After each lesson, ask your child how they felt about the content and what they found challenging, so you can adjust future lessons accordingly.
- **Positive Reinforcement:** Celebrate small wins, and remind them how these skills will help them in their dream of becoming a vet.