Introduction: What Makes Animals Tick? (10 mins)

Start with a discussion: "Since you're interested in being a veterinarian, what do you think vets need to know about animals' bodies to keep them healthy? What are animals made of?" Guide the discussion towards the idea of tiny building blocks called cells and larger systems that work together (like bones and muscles). Briefly explain that understanding these is crucial for diagnosing and treating animals.

Activity 1: Build an Animal Cell! (25 mins)

Option A (Drawing): On a large paper/whiteboard, draw a large circle representing the cell membrane. Discuss its function (controls what enters/leaves). Inside, draw the nucleus (the 'control center') and fill the rest with cytoplasm ('cell jelly'). Draw mitochondria ('powerhouses'). Label each part and discuss its function simply.

Option B (Edible/3D Model): If using craft supplies/food: Use a clear bag/container as the cell membrane. Fill with jello/gel (cytoplasm). Embed a distinct item for the nucleus (e.g., a plum, large gumdrop), and smaller items for mitochondria (e.g., raisins, jellybeans). Discuss the function of each part as it's added. The student should sketch and label their model in their notebook.

Focus: Emphasize that all parts of an animal's body are made of specialized cells.

Activity 2: Mighty Muscles & Strong Skeletons (20 mins)

Discuss: "What helps animals move? What gives their bodies shape and protects their insides?" Introduce the skeletal and muscular systems.

Activity:
1. If available, examine toy animal skeletons or online diagrams of animal skeletons (e.g., dog, cat, horse). Point out major bones (skull, spine, ribs, leg bones). Discuss the skeleton's functions: support, protection, movement anchor.
2. Discuss muscles: Explain they work in pairs (like biceps/triceps) to pull on bones, allowing movement. Ask the student to flex their own arm to feel muscles working.
3. Compare: Ask the student to list two ways the skeletal and muscular systems work together in animals (e.g., skeleton provides structure for muscles to attach; muscles pull on bones to cause movement). Record answers in the notebook.

Activity 3: Meet the Vet! (15 mins)

Research: Using pre-approved websites (like kids' science sites or veterinary association pages), have the student research: "What does a veterinarian do daily? What kinds of problems do they solve?"
Discussion: Discuss findings. Talk about how vets need to know about cells (e.g., looking at blood cells under a microscope) and systems (e.g., diagnosing a broken bone or pulled muscle). Briefly mention different types of vets (small animal, large animal, exotic).

Activity 4: Vet Case File Challenge (15 mins)

Scenario: Present a simple fictional 'Case File': "'*Fluffy*' *the cat jumped from a high fence and is now limping, not putting weight on her back leg. She cries when you gently touch the leg.*"
Questions: Ask the student:
1. "Which body systems might be involved in Fluffy's problem?" (Skeletal, muscular, nervous - for pain)
2. "Why would a vet need to know about bones and muscles to help Fluffy?" (To figure out if it's a break, sprain, etc.)
3. "What part of the cell provides energy for Fluffy's muscles to work (when she's healthy)?" (Mitochondria)
Discussion: Discuss the student's reasoning. This isn't about getting the 'right' diagnosis, but applying the learned concepts.

Conclusion & Recap (5 mins)

Review the main points: Animals are made of cells with specific parts (nucleus, membrane, cytoplasm, mitochondria). Body systems like skeletal and muscular work together. Vets use this knowledge to help animals. Ask the student what they found most interesting and what else they'd like to learn about animal bodies.