

**PWLO2, BWLO3, NOS 1, NOS 3**

**Biological World and the Physical World through the Nature of Science**

**Learning Outcome: PWLO2, BWLO3, NOS 1, NOS 3**

The number of bones in a vertebrate varies from one species to another. Many birds have about 120 bones in their bodies. Humans have just over 200. Dogs have over 300!

What animals do you have at home or in your local area?


How do you think the bones of animals compare?

	Vs.	
	Vs.	
	Vs.	
	Vs.	

Choose the most interesting comparison or the one you are least sure of. Write your thoughts on a show me board. When the teacher rings the buzzer, move around the room and discuss your thoughts with

another student for 30 seconds. Change partners every time the bell rings. The teacher may give you the responsibility of ringing the bell (remember - it's every 30 seconds!) Repeat this for 6 different students. Return to your desk and review your thoughts and reasoning on your whiteboard.

Partner up with a student who had a similar comparison to you.

**The purpose of the investigation is to demonstrate that you can apply the scientific method to prior knowledge and interests to deepen your learning on density, mass and volume.**

1. Design and investigation to compare the densities of chicken bones and mammal bones.
2. Create a table for your data and observations.
3. Record and edit a video of the learning process. We will use this video on Open Night to show the Sixth Class students the learning journey we experience in junior cycle science in our school.

<p><b>Observations from the initial activity:</b></p>          <p><b>Hypothesis: (A statement or question)</b></p>	<p><b>I am a scientist and these are my working notes, thoughts, misconceptions, errors, reviews, comments....</b></p>
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**Procedure**

**Result and Review**  
**Procedure 2**

**Result and Review**

**Conclusions and Learning**

**Labelled diagrams and labelled working sketches**

**Evaluate**, with a diagram if you wish, how the difference in densities might be considered a physical adaptation for birds. Think, pair and share. Review your thinking in a different colour pen after the 'pair' and again after the 'share'.



**Reflecting on My Learning**

What did I learn by: 1. Designing an investigation, 2. Creating a video for 6<sup>th</sup> class?

Teacher Comment:

Student response with an action: