

TOPIC 2.5:	Living Things (Learning outcomes by syllabus reference: OB38, OB39 and OB40)
HOW MANY LESSONS?	4 – 5 lessons

KEYWORDS / TERMS TO BE TAUGHT			
Organisms	Respiration	Sensitivity	Stimuli
Excretion	Reproduction	Growth	Movement
Vertebrates	Invertebrates	Mammals	Characteristic
Key	Photosynthesis		

KEY CONCEPTS IN THE LESSON (OBJECTIVES)		
<i>What students must know or be able to do</i>	<i>What students should know or be able to do</i>	<i>What students could know or be able to do</i>
To be able to investigate the variety of living things by direct observation To be able to classify living things as plants or animals using a key	To be able to identify the characteristics of all living things To be able to classify animals as vertebrates or invertebrates	To be able to describe a variety of organisms in terms of characteristics

SEQUENCE OF LESSON
<ol style="list-style-type: none"> 1. Introduce the concept of life. Collect samples of living things outdoors and identify a range of organisms using keys. 2. Students record results and write up experiment using text and/or pictures. 3. Review – whole class discussion/dissemination of ideas/extra information. Possibility of using <i>Living Things Quiz PowerPoint</i> to facilitate student understanding 4. Further class work/homework – see <i>Living Things Worksheet</i>. Devise extension activities as required.

1. DIFFERENTIATE BY CONTENT (In what ways can I vary the content of what I am teaching?)

<i>(A) Complexity of content: (concrete, symbolic, abstract)</i>		
<i>Concrete</i>	<i>Symbolic</i>	<i>Abstract</i>
Real materials associated with collecting and identifying living things as well as the organisms themselves	Keys and the images or descriptions of organisms that they contain	The identification of organisms using keys The description of organisms using the characteristics of living things
<i>(B) Variety of resources</i>		
As listed above. Also potential use of the Internet and/or school or community library for further exploration of material related to organisms		
<i>(C) Variety of learning environments</i>		
Classroom, school laboratory, computer room/library in school, local field, stream etc. (as indicated above)		

2. DIFFERENTIATE BY PROCESS (How will I teach the lesson?)
<p>Sequence of lesson as laid out above</p> <ul style="list-style-type: none"> ➤ Introduction – using concrete material or a general class discussion ➤ Divide class into groups. Assist the students, as required, to plan, carry out the experiment, record results and draw conclusions as appropriate. Enable students to extend their thinking and language use. For resources, guidance and support related to facilitating student investigations, see www.juniorscience.ie ➤ Possible use of <i>Living Things Quiz</i> PowerPoint to facilitate discussion and understanding

3. DIFFERENTIATE BY OUTCOME / PRODUCT (How will the student demonstrate understanding?)
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See *Worksheets*, *Classroom Activities* and *Experiments* sections of this resource pack.

- Students may use a template from the *Experiments* section to assist them with the write-up.
- Whole class review work completed at end of class
- Homework: *Living Things Worksheet* if not used for class work. Specify time to be allocated to this work at home.

FINALLY - ANY OTHER POSSIBILITIES FOR THIS LESSON?

See *Differentiation in Action* located in the *Toolkit* section of this resource pack – apply various steps to the learning environment in your classroom. For instance, allow students to show what they have learned in different ways by using any of the following ideas:

- Collage of scenes showing living things
- Dramatisation, e.g. possible use of role play to highlight the characteristics of living things
- Other written activities, e.g. a log of the different organisms encountered by students in one day
- Internet search for material on living things

Suggested Internet links include www.juniorscience.ie, www.bbc.co.uk/schools, www.scoilnet.ie, www.skool.ie and <http://classroom.jc-schools.net/sci-units/living-things.htm>

- For advice on enhancing curricular access through the use of mobile ICT, see www.laptopsinitiative.ie