MODULE 4 THE SENSES

OUTCOME	LEVEL	PHASES OF LEARNING
Life and Living Students understand their own biology and that of other living things, and recognize the interdependence of life.	**Life and Living** LL 1 **The student:** Understands that people are living things, have features and change over time. LL 2 **The student:** Understands that needs, features and functions of living things are related and change over time.	**Life and Living** **MIDDLE CHILDHOOD** **Structure and life processes** • an organism's structure or body system enables it to carry out life processes (eg senses can detect changes in the outside environment; muscles enable movement; lungs or gills enable breathing) • external and internal factors that can impact on living things (eg pollution, diet, diseases) • ways to identify parts of living things (eg magnifier, microscope) • all living things are made of cells
Investigating Students investigate to answer questions about the natural and technological world, using reflection and analysis to prepare a plan: to collect, process and interpret data: to communicate conclusions: and to evaluate their plan, procedures and findings	**Investigating** **The student:** When given a focus question and a familiar situation, contributes elementary ideas about variables and procedures, collects and makes limited records of data and can say whether what happened was expected. I 2.1 Identifies, given a focus question in a familiar context, some of the variables to be considered. I 2.2 Observes, classifies, describes and makes simple non-standard measurements and limited records of data; and uses independent variables that are usually discrete. I 2.3 Makes comparisons between objects or events observed. I 2.4 Comments on what happened and can say whether what happened was expected.	**Investigating** **MIDDLE CHILDHOOD** **The focus for learning in this phase is on:** • hands-on, discovery-driven or environmental investigations • summarising data and drawing conclusions **Conducting** • use of materials and equipment to observe or explore phenomena or characteristics of organisms, substances or objects in a consistent and safe manner, anticipating risks and taking action to control risk

Working Mathematically Students understand their own biology and that of other living things, and recognize the interdependence of life.	**Working Mathematically** WM 3.2 The Student: Poses mathematical questions prompted by similar or related questions and represents questions using objects, pictures, symbolic statements or mental images. WM 4.3 The Student: Uses alternative ways, when prompted, to check working and choice of method. WM 5.2 The Student: Responds to; What would happen if…? Type questions about numbers, shapes, data and measurements and tests ideas with a least a single trial.	**Working Mathematically** **MIDDLE CHILDHOOD** **The focus for learning in this phase is on:** • questioning skills from posing the question to clarifying the problem • differentiating between relevant and irrelevant information in solving a problem and defining key features • problem-solving strategies including isolating key information and guess, check and improve **Problem-solving** • a variety of ways to represent questions (eg using objects, drawings, symbolic statements, graphs, think boards, diagrams, tables, mental images or acting it out) • challenging mathematical problems may require refining an initial solution • there may be more than one solution to a problem • problems can be solved by working cooperatively with others
Measurement ….Make sensible direct and indirect estimates of quantities and are alert to the reasonableness of measurements and results…. ….Students have a good idea of the size of common standard units, make sensible estimates with them, and have the disposition and skills to judge the reasonableness of estimates and measurements… ….Students also reason from known and collected quantities to estimate quantities which cannot be found directly or conveniently:	**Measurement** M9a2 The Student: Distinguishes the attributes of length, area, capacity and mass when comparing things and chooses something that relates well to the attribute of interest to use as units. M10.2 Is working towards achieving level 3 M11.3 Makes sensible numerical estimates using units that can be seen or handled and uses language such as between to describe estimates.	**Measurement** **MIDDLE CHILDHOOD** **The focus for learning in this phase is on:** • techniques for estimating • estimating based on knowledge and experience rather than guessing • estimating using common standard units • estimating rather than measuring in appropriate situations **Estimation** • estimation of things by using a physical model (eg square metre, one litre, one kilogram) • familiar or known quantities can be used as benchmarks to make estimates (eg I'm 1.25 m

		tall, so I think the teacher is around 1.7 m tall.) • results from previous estimates can improve future estimations • language such as 'between' to describe estimates • various techniques for estimating (eg visualising, past results, eye judgements, use of physical models) • the characteristics of common standard units (eg millimetres, centimetres, metres; grams, kilograms; millilitres, litres) in order to make sensible **estimates**

CONTENT

Module 4 – The Senses

This Health module would explore how our different senses can be used to convey the same information. Sections within this module would include the use of hearing, touch and smell to identify objects in place of sight , the importance of mathematics in calculating distances without sight , and how out understanding of other senses as vision decreases.

Use of hearing , touch and smell to identify objects in place of sight and understanding of other senses as vision decreases

SOUND

- **Hiding Game** - Teacher demonstrates the sound made by a musical triangle. The teacher gives one child the triangle and instructs the child to hide. The other children are to find the hidden child by sourcing the sound. The child who finds the hidden child is the next one to hide.
- **Language Activity / A listening Game** – Describe sounds in children's environment. E.g.: `Who can show me what a car sounds like? ` Or, ` What sound does a dog make? ` The children listen to a tape of common sounds and make guesses to what they may be. Examples of sounds to record may be: toilet flushing, TV playing, tap running, hands clapping, someone singing, hammer banging. Worksheet- WHAT SOUND IS THIS? http://www.dramaticpublishing.com/FreeSoundEffects.cfm
- **Sound walk** - Take the children for a walk outside. Ask the children to tell you what kinds of sounds they think they may hear on their walk. The children work in pairs to write a list of observations of the different sounds they hear. Once the children are back in class, invite them to share what sounds they discovered. Encourage them to use describing words to help. E.g.: the truck made a **roaring** sound, the leaves made a **rustling** sound. Worksheet - SOUND WALK

TOUCH

- **Wet or Dry** - Have the children touch a variety of different fabrics that are wet (with water) and dry. Have the children guess whether they are wet or dry. Worksheet - WET OR DRY
- **What can you feel?** - Place objects such as sandpaper, plastic, felt, wood, a block, a sponge, a feather, a rock in a bag. Ask the children to feel inside the bag to guess each object.
- **Partner Walk** - Children form pairs. The first child is blindfolded and led by the second child around the room. The first child is invited by the second child to touch various objects and to make guesses to what the objects are. Swap pairs. Discuss experience with children describing what was difficult about the task.
- **Comparing and Classifying** – Have a collection of objects with various textures. Include a few samples that are similar to each other in texture so that the children will be able to compare them. Invite the children to touch each of the objects and use their words to describe what they are. Have a list of describing words on display for children to refer to. E.g.: bumpy, cold, crunchy, fluffy, lumpy, smooth, rough, cold, sticky, squishy etc. Once the children have become familiar with each object ask them to place the same textures into groups. Ask children to explain their reasons for putting certain objects into a pile. Worksheet – COMPARING AND CLASSIFYING Descriptive Words list
- **Feel and Mould**- Children while blindfolded select an object from a pile (random blocks, shapes, toys) and try to recreate it with play dough

SMELL

- **What Smell Is This?**- Collect pairs of items that have distinct smells. Place them in containers that cannot be seen through. (Film canisters are good. Label the items under the lids) Place some holes in the lids. Mix the containers up and encourage children to match the same smells together. E.g. of smells: vanilla, chocolate, coffee, garlic, aniseed, mint, rosemary, potpourri, lavender oil Worksheet – WHAT SMELL IS THIS?
- **Smell and taste test**- Children pair up. One partner is blindfolded and holds their nose while the second child gives different foods to taste. They try to identify the food they taste eg. Apple, potato, grape, onion. Children swap turns. Worksheet –WHATS THAT TASTE?

The importance of mathematics in calculating distances without sight

- **Can you remember?** The children are to create a mind map of their house by reproducing all the rooms and furniture on graph paper. They are to create a scale or form of measurement- e.g.: paces, steps etc so: its 10 steps to the bathroom from the kitchen. Once they have drawn their map they are to explain to a partner what is in their map using directional instruction left, right, up, down, over , under, through, above, around etc. Worksheet- CAN YOU REMEMBER? Extension- - A 3D map can be created to scale using art materials such as card.
- **How far is it?** Estimating distances between objects and then using a form of measurement to check. Worksheet – HOW BIG IS IT?
- **Can you hear me?** Game- Child sits on a chair blindfolded. Under the chair there is a bell. Children who are not blindfolded take turns to try and `steal ` the bell away from underneath the chair without getting caught by the blindfolded person.
- **Obstacle course**- Set up an obstacle course in the playground. Include item that require children to go under, over, through, left, right, around. Children explore obstacle course with a partner with their sight. One partner is then blindfolded and is led by the second partner around the obstacle course in any given order. Partner two uses verbal directions such as over, under etc. Discuss experience.
- Using Cuisenaire rods children order rods from shortest to tallest. Activities to measure length using rods – e.g.: which rod was used to measure a ruler, a rubber, a dice, a spoon, a toy
- **What can you build?** Using 2 D shapes, children make a representation of their bedroom from a birds eye view. They need to select the most appropriate shape to represent the different objects in their room WORKSHEET – What can you build?
- **Listen to me…** Children are put into pairs and one partner is given a list of instructions to read out e.g.: Take 5 steps forward and step over the broom. Auditory instructions without advice (worksheet of instructions)

External information links

GENERAL

Web link: Animals And Their Amazing Senses(Animals and their amazing senses)
Web link: Experiments To Try Your 5 Senses (Experiments to try 5 senses)) (kids)
Web link: http://esvc000766.wic015u.server-web.com/bb_site_intro/stage1_Modules/Senses/the_5_senses.htm (facts on the 5 senses kids site)
Web link: http://www.kidshealth.org/kid/body/mybody_SW.html (Explore my body kids site)

TOUCH

Web link: http://library.thinkquest.org/28457/touch.shtml (diagram of the skin)
Web link: http://faculty.washington.edu/chudler/chtouch.html (neuroscience experiments for kids)
Web link: http://www.sedl.org/scimath/pasopartners/senses/lesson4.html (Size Texture and Shape of things)
Web Link: http://www.kidshealth.org/kid/closet/experiments/experiment_head.html (Experiment – sensitivity to touch) (for kids)

SMELL

Web Link: http://www.sedl.org/scimath/pasopartners/senses/lesson5.html (Sense of smell)
Web link: http://kidshealth.org/kid/body/nose_noSW.html (What's that smell? Facts for kids)
Web link: http://www.newtonsapple.tv/video.php?id=1176 (Science video on taste and smell and how they are related)
Web link: http://sln.fi.edu/qa97/me11/me11.html (Activities and experiments that link to the sense of smell)