



Edenglen Primary School

Lesson Plan

Subject: Natural Sciences and Technology

Grade	:	5
Lesson duration	:	Term 2 14 x 30 minutes
Content Area	:	Matter and Material
Topic	:	Metals and Non-metals

List of concepts/skills/content to be taught

Properties of metals

- metals are used to make things because they have certain properties
- some properties of metals -shiny -hard -strong -can be hammered, shaped (malleable) and made into thin wires without breaking (ductile) -melt at high temperatures
- metals are mined from the Earth

Properties of non-metals

- non-metals are used to make things because they have certain properties
- some properties of solid non-metals -dull -can break easily (brittle)

Resources

Textbook	✓	Platinum Grade 5 Thunderbolt Kids	Games/Puzzles		Puppets	
Power Point Presentation	✓	Plants and animals on Earth	Flashcards		Model	
Worksheet	✓	Notes: NS & Tech Grade 5	Dictionary/Thesaurus		Music	
Magazine			Audiovisual recording	✓	Recipe	
Newspaper			Instruction manual		Poem	
Science Apparatus			Play		Globe	
Craft material			Picture/Diagram		Transparency	
Reference book			Poster/Chart		Advert	
Other			Black/White board	✓		
Video Clips	✓		Reader/reading sheet		Map	

Teaching and Learning Strategies/Approaches

<u>Introduction</u> (Describe in detail how the concepts will be introduced.)		
		<u>SLIDE</u>
Period 1	Previous Learning: Plants and Animals on Earth	
	• Quote: Einstein	2
	• Terminology: Matter (children to copy definition into workbooks)	3
	• Terminology: Solid, Liquid, Gas (children to copy definition into workbooks)	4
	• Terminology: Property (children to copy definition into workbooks)	5

Development

(Describe in detail how the main concepts will be taught, aids used, description of games played, activities used, use of co-operative, cognitively guided, problem solving project-based learning, etc.)

Period 2-3	<ul style="list-style-type: none"> Terminology: Solid (Children to copy definitions into their workbooks) Liquid Gas Examples of Solids, Liquids, Gas Comparing solids, liquids, gas 	6 7 8 9-12 13
Period 4-5	<ul style="list-style-type: none"> Changes in states of matter Case Study – states of matter 	14-15 16-26
Period 6-7	<ul style="list-style-type: none"> Evaporation Melting and solidifying substances Temperature States of matter in the water cycle 	27 28-31 32-33 34
Period 8	<ul style="list-style-type: none"> Terminology Choosing a material 	35 36-38
Period 9	<ul style="list-style-type: none"> Useful properties of metals 	39-41
Period 10	<ul style="list-style-type: none"> Metals and their properties Case Study Alloys; Written work in White Book p 21 Activity 2 Coating Metals 	42-43 44-46 47-48
Period 11	<ul style="list-style-type: none"> Scientific Method Scientific Investigation : Properties of metals; White book Activity 1 page 20-21 Scientific investigation: Cleaning metals 	50-53 54-58 59-66

Period 12	<ul style="list-style-type: none"> Scientific Investigation A fair test Planning an investigation Scientific Investigation : Flexibility White book Activity 4 p 23-24 	67-69 70 71 72-79
Period 13	<ul style="list-style-type: none"> Brittle Properties of non-metals White book Activity 5 p 24 Differences between metals and non-metals Activity 6 p 25 Examples of non-metals 	80 81-82 83 84

Conclusion (Activities to end off the lesson, type of written activity, etc.)

Period 14	<p>Learn & Remember</p> <ul style="list-style-type: none"> Metals are useful because of their properties. Metals are shiny, strong & usually hard. Metals are malleable & ductile and they melt at high temperatures. Things that are not made of metal are non-metals. Non-metals have different properties from metals. Non-metals are dull and brittle. 	88-89
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Intervention (Activities of support for Learners @ Risk)

Topic Revision Platinum Grade 5 p 72

Flip the Classroom (Optional Activities for extension)

Assessment

Assessment Strategies						Assessment Activities			
Purpose	Method		Forms		Tools				
Baseline	Self-Assessment	✓	Written work		Memorandum	✓	INFORMAL	✓	FORMAL
Diagnostic	Peer Assessment		Test / Exam		Oral Answers	✓			
Formative	Group Assessment	✓	Design & Construction		Observation Sheet				
Summative	Educator Assessment	✓	Research		Rating Sheet	✓			
	Parent Assessment		Practical Demonstration		Checklist	✓			
	Teacher monitoring	✓	Projects		Rubric				