Every child is a National Asset

2020 REVISED CURRICULUM AND ASSESSMENT PLANS

GRADE 7-9

Implementation: January 2021

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

Read to Lead

Presentation Outline

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Introduction

COVID 19 led to losses in teaching and learning time due to:

- the lockdown period and phased reopening of schools,
- Alternating time tabling models and
- the related health and safety protocols.

Furthermore, the revision of the school calendar and intermittent closure of many schools negatively impacted the ability of teachers to implement the revised 2020 ATPs as envisioned.

To mediate the impact and support teachers in managing teaching, assessment and learning within the reduced time, the DBE in 2020 implemented:

- Circular S3 that outlined and guided teachers to conduct context specific subject trimming, in consultation with subject advisors.
- National Assessment Circular 02 and Circular E 11 to guide school-based assessment in phases and subjects

Principles

1. Use of the 2020 Curriculum Recovery Framework as the base document
2. Learning losses inform the Three Year Recovery Plans for School –based Assessment
3. Management of the learning losses and the School Based Recovery Plans
4. Create opportunities through adjusted ATPs to strengthen pre-knowledge, consolidation, revision, and deeper learning
5. Entrench Assessment for Learning as a Pedagogical Approach to address the learning losses

Principles

6. The 2021 Recovery ATPs maintains the use of current LTSM and resources already available in the system.

7. Content topics removed in 2020 were not automatically returned in the 2021 Recovery ATPs.

8. Fundamental and core topics were retained in the Recovery ATPs

9. To guide and support effective teaching and learning

Underpinning Assumptions

1

ASSUMPTION 1

All learners will return to school from day 1 of the 2021 academic year and norm-times as stipulated in the CAPS will be adhered to for the entire school year;

2

ASSUMPTION 2

Learning losses due to COVID-19 across grades and subjects will vary from school to school, class to class and even within classes.

3

ASSUMPTION 3

Each Teacher will have a record of learning losses and Departmental Heads and Subject Advisors will monitor progress in learning loss recovery;

Underpinning Assumptions

4

5

6

ASSUMPTION 4

All schools will develop & implement school-based support programmes for all grades/years with particular **focus on all the exit grades/years** (3, 6, 9 and 12) **throughout the three-year period.**

ASSUMPTION 5

All Circulars related to the 2020 ATPs including SBA to be withdrawn and revised to align to the 2021 ATPs.

ASSUMPTION 6

Schools have systems in place to manage the possibility of a second wave of the pandemic in Q1 and Q3 of the 2021

The Development of the 2021 Recovery ATPs

The Recovery ATPs are aligned to the:

- 2021 School calendar
- Abridged S4 of CAPS
- Curriculum and assessment principles as prescribed in the CAPS policy for Technology

Purpose

- To mediate the amendments of the 2021 Recovery Annual Teaching Plan including School Based Assessment for Technology, **Grade 7-9 for implementation in January 2021 as stipulated in Circular S11 of 2020.**
- **To ensure teaching proceeds as per the 2021 school calendar.** To assist teachers with **guided pacing and sequencing** of curriculum content and assessment.

Purpose (continued)

- To enable teachers to **cover the essential core content /skills including the fundamentals** within the available, **amended** time.
- To assist teachers with **planning** for the different forms of **assessment**.
- To ensure learners are **adequately prepared** for the **subsequent year/s** in terms of content, skills, knowledge, attitudes and values

2. Amendments to the Content Overview for the Phase

Summary: Content Overview for the Phase

GRADE 7	GRADE 8	GRADE 9
STRUCTURES		
Purpose of structures: Natural and man-made structures. **Types of structures** **Strengthening** structures Frame structures: roof trusses, towers. **Task**: cell phone tower (link: electronic communications). Frame structures: cranes.	**Reinforcing**: struts, ties. Stabilising: base size, base angles, centre of gravity, ground anchors. **Strengthening structures** using folding, tubing, triangular webs and internal cross-bracing. Pylons (link: electrical systems, the national grid). **Components** of frame structures: arch, beam, cantilever, column. **Task**: frame structure using mechanisms	**Strength** of materials under the action of forces: compression, tension, torsion, and shear. **Properties of construction materials**: mass, density, hardness, stiffness, flexibility, corrosion. **Suitability of materials** (fitness-for-purpose) in terms of properties, safety and cost effectiveness. **Task**: identify and solve problems related to community on the far side of a river.

Summary: Content Overview for the Phase

GRADE 7	GRADE 8	GRADE 9
MECHANICAL SYSTEMS AND COTROL		
• **Simple mechanisms** First, second and third class levers (mechanical advantage) Practical investigation on levers and linkages: • simple linked first-class levers • simple linked second-class levers • more complex linkages • Hydraulic and pneumatic systems to obtain MA • Force transfer between syringes Pneumatics and hydraulics used to increase human strength.	**Linked lever systems**. • Gears spur, bevel, rack and pinion, worm Gears – driver, idler, driven;velocity ratio/force multiplication	Hydraulic/pneumatic systems Gear systems Mechanical control mechanisms • Belt-drive systems

Summary: Content Overview for the Phase

GRADE 7	GRADE 8	GRADE 9
MECHANICAL SYSTEMS AND CONTROL continue		
Task: hydraulic powered rescue equipment. More **simple mechanisms** – wheel and axle, cranks and pulleys, gears.– wedge, gear ratios, cams. • Mechanical **systems that change the magnitude** of forces involved: gear ratios. • Mechanical **systems that change the rotary** to linear motion: crank, cam.	Belt drive and chain drive systems – Hydraulic/ pneumatic systems **Mechanical advantage** – including simple calculations Systems diagrams **Task**: mine shaft headgear	**Pulley systems**. • Systems where mechanical, electrical or pneumatic systems are combined. **Task**: identify and solve problems that can be solved by mechanical systems integrated with either electrical/ electronic or hydraulic or pneumatic.

Summary: Content Overview for the Phase

GRADE 7	GRADE 8	GRADE 9
ELECTRICAL /ELECTRONIC SYSTEMS AND CONTROL		
Electrical circuit basics: • Basic circuit components: • **Simple circuit** diagrams showing various component arrangements. Magnetism and magnetic metals: • **Introduction to electromagnetism**: • Recycling metals.	• **Circuit diagrams**, conventions and component symbols. • **Input devices**, control devices, output devices. • Circuit design (simple) and circuit interpretation. • Circuits with more than one input or control device. Electrical energy sources • Sources of direct current: electrochemical cells; photovoltaic cells.	Electronic systems and control – how simple electronic circuits and devices are used to make an output respond to an input. Learners should be able to read a ***given*** electronic circuit diagram and assemble the components into a working circuit. • Input components: electrochemical cells, photovoltaic cells. • Storage components: electrochemical cells, capacitors.

Summary: Content Overview for the Phase

GRADE 7	GRADE 8	GRADE 9
ELECTRICAL /ELECTRONIC SYSTEMS AND CONTROL continue		
Task: design and make a crane to carry an electromagnet to sort scrap metals for recycling.	• Sources of alternating current: generating • Distributing a.c electricity: the national grid, transformers (an application of electromagnetism). Ohm's Law: *qualitative* treatment. Logic conditions: **Task**: dual switch system like an alarm circuit with at least two panic buttons in different rooms, or similar concept using either AND or OR logic conditions.	• Control components: switches, resistors, diodes, light emitting diodes (LED), transistors. • Sensor components: thermistors, light dependent resistors (LDR). • Output components: lamp, buzzer/bell, light emitting diodes (LED).

Summary: Content Overview for the Phase

GRADE 7	GRADE 8	GRADE 9
ELECTRICAL /ELECTRONIC SYSTEMS AND CONTROL continue		
		• Resistor codes. • Ohm's Law: *quantitative* treatment with graphs and calculations. **Task**: identify a problem that can be solved by an electronic circuit. Assemble a given electronic circuit and design a device which can utilise the circuit to solve the problem.

Summary: Content Overview for the Phase (TERM 1)

GRADE 7	GRADE 8	GRADE 9
Processing		
Recycling scrap metals – sorting ferrous and non-ferrous metals. Improving properties of materials. • Improving the properties of wood: waterproofing. • Improving the properties of textiles: waterproofing, fire-resistance.	Positive and negative impacts of technological products on the environment and/or society. Improving properties of materials to adapt them to suit particular purposes: • Withstand forces – tension/compression/bending/torsion/shear • Recycling: paper. • Adapt material for packaging of a product.	Extending lifespan: • Metal – paint, galvanise, and electroplate**: Practical** – preserving metal by electroplating. • Food – freeze, pickle, dry, salt: **Practical** – preserving food by drying/salting. Types of plastics and their uses. Recycling plastics to provide raw material for manufacture of new plastic products.

Summary: Content Overview for the Phase (TERM 1)

GRADE 7	GRADE 8	GRADE 9
Processing/ continue		
Task: emergency shelter for refugees.	**Task**: design a product that will solve or reduce the negative impact of the technology studied earlier	**Task**: identify a problem in a given scenario where cutting, joining, bending or moulding plastics can be used to make a product that will satisfy a need, want or opportunity

3. Amendments to the Annual Teaching Plan

Grade 7 - Annual Teaching Plan

- Annual Teaching Plan

Microsoft Word Document

- Jaarlikse Onderrigprogram

Microsoft Word Document

Grade 8 - Annual Teaching Plan

- Annual Teaching Plan

Microsoft Word Document

- Jaarlikse Onderrigprogram

Microsoft Word Document

Grade 9 - Annual Teaching Plan

- Annual Teaching Plan

Microsoft Word Document

- Jaarlikse Onderrigprogram

Microsoft Word Document

Summary: Amended Content/Topics/ skills

Content/Topics skills	Term 1	Amendment
Make	Make was removed due to the Covid-19 regulations.	Make is an informal activity and can be done by learners at home for **practising the skill of making**. No assessment for MAKE.
Demonstrations	No demonstrations to be done by learners.	Demonstrations and handling of resources to be done exclusively by the teacher.

Summary: Content/Topics Amended Grade 7

Content/Topics	Term / Week	Amendment
Introduction to design process skills	1/ 1	• Moved to week 2 to allow for proper introduction to what technology is; definition and scope and the introduction of the "IDMEC."
Make: "Jaws-of- life"	1/9 &10	• Removed
Consolidation of term 1 work	1/ 10	Replaced the practical work through revision on: • Class exercise on drawings • Class exercise on different classes of levers • Revision on pneumatics and hydraulics to give mechanical advantage.

Summary: Content/Topics Amended: Grade 7

Content/Topics	Term /week	Amendment
Making Skills Build the model: Teams build the model according to the Design Brief, using safe working practices.	2/7	Removed
Evaluating Skills Teams develop a rubric they will use to evaluate the presentations of the other teams.	2/8	Removed
Presentation ≈ 5 minutes per team: • Teams *plan* a joint strategy to present their model and plans. • Teams *present* their design sketches, modifications, plans and models to the class.	2/9	Removed

Summary: Content/Topics Amended: Grade 7

continue

Content/Topics	Term /week	Amendment
During the team presentations, *each* team uses their rubric to assess presentations of at least two teams.	2/9	• Removed

Summary: Content/Topics Amended: Grade 7

Content/Topics	Term /week	Amendment
Experiment: Which ***metals*** are attracted by a magnet, and which are not? Learners test metal samples made of iron, steel (an iron alloy), nickel – which will stick. Learners test metal samples made of copper, lead, aluminum brass – which do not stick. Each learner completes a table of the results	3/1	Demonstration by Teacher
Recycling scheme for your school: Learners tabulate a record of the waste produced by the school, e.g. empty cans, paper, plastic, etc. Learners suggest a viable strategy to raise funds by recycling	3/2	Removed
Practical: Learners work in groups to make a simple circuit as demonstrated.	3/3	Removed

Summary: Content/Topics Amended: Grade 7

Content/Topics	Term	Amendment
Electromagnet: Using an electrochemical cell, a switch, a light bulb, a 'soft' iron core and a ***long*** length of insulated copper wire, the teams of learners make an electromagnet. • **Crane**: Learners work safely in teams using simple materials to make a model crane with a crank and pulley system which will carry the electromagnet that will sort the ferrous metals (iron and steel) from the non-ferrous metals (copper, aluminium, lead, brass, etc.)	3/7&8	• Removed

Summary: Content/Topics Amended: Grade 7

Content/Topics	Term	Amendment
Each learner develops a rubric to evaluate the models of other teams. • Each team uses the rubric to evaluate the models of other teams. Assess each learner's objectivity, fairness and the validity of their comments. • Teams plan a joint strategy to present their model and plans to the class. All team members must explain their ideas and roles they played when they present.	3/9	• Removed

Summary: Content/Topics Amended: Grade 7

Content/Topics	Term	Amendment
Each team presents the design sketches, working drawings and functioning model to the class. They demonstrate how strong their electromagnet is and show that it releases the load when switched off. Each learner explains the role s/he played and shares the role of spokesperson. They explain the principles involved with the magnetic sorting and how their electromagnet could be made stronger. They comment on the value of recycling and explain how sorting the metals into types, improves their scrap value. They enhance their presentation using posters giving an artist's impression of their completed crane and electromagnet in use.	3/9	Removed

Summary: Content/ Topics Amended Grade 7

Content/Topics	Term /week	Amendment
Make: Learners make a model of an emergency shelter made of a material that they have waterproofed and that is suitable for housing refugees for a period of at least a month. It should be easy to transport, easy to assemble, and easy to pack away after use.	4/10	Removed

Summary: Content/Topics Amended Grade 8

Content/Topics	Term /week	Amendment
Definition of frame structures and the case study	1/1	Moved to week 2 to allow for revision and a baseline test to be administered in week 1.
PAT 1: MAKE	1/ 8 to 10	Removed

Summary: Content/Topics Amended Grade 8

Content/Topics	Term / Week	Amendment
Design skills	2/3	• Make packaging for a purpose • Learners make and assemble [Removed]
Making skills	2/3	• No practical activity done in term 2 [Removed]
Evaluation skills	2/7	Evaluation of solution removed
Communication skills	2/8	Presentation of plans, model and evaluation was removed

Summary: Content/Topics Amended Grade 8

Content/Topics	Term/week	Amendment
Revision on mechanical systems and control	3/1	Removed- to be incorporated in the content of term 3 (levers and gears)
Investigating skills	3/4	Learners work in teams to investigate was amended to work individually. Removed
Evaluation and making skills	3/7&8	Teams to evaluate individual sketches and build of working model was removed.
Communication skills	3/9	Team presentation to the “tender board” was removed.

Summary: Content/Topics Amended Grade 8

Content/Topics	Term /week	Amendment
Electrical systems and control	4/3	Removed- practical –make your own batteries
Design skills/ making and communication skills	4/7	Moved to be completed during the term and not towards the end of the term. Sufficient practise was provided during the term on these concepts.

Summary: Content/Topics Amended: Grade 9

Content/Topics7	Term /week	Amendment
Making skills • Model of a viable solution: It must be built neatly to scale, showing intelligent use of materials. Learners must use safe working practices.	1 /7	• Removed
Evaluate: teams collaborate to produce an evaluation instrument. Each learner uses the instrument to evaluate their team's solution and that of another team. This can be done during the other team's presentation.	1 /8	• Removed
Team presentations	1 /9	• Removed

Summary: Content/Topics Amended: Grade 9

Content/Topics	Term/ week	Amendment
Evaluate: learners examine various items using mechanisms found in the modern kitchen and/or home, workshop/garage.	2/4	Removed
Make: prototype/working model Learners use safe working practices. Building: the model must showcase a viable solution to the problem. It should be to scale and neat, and show intelligent use of available materials	2/8	Removed
Team presentations: Each team is given five minutes to present their solution in the form of sketches, artistic impressions of the solution, working drawings/plans, costing and their model.	2/9	Removed

Summary: Content/Topics Amended: Grade 9

Content/Topics	Term/ week	Amendment
Make: device /prototype/working model • The model must showcase a viable solution to the problem. It should be to scale and neat, and show intelligent use of available materials	3/6	Removed
Team presentations: Each team is given five minutes to present their solution in the form of sketches, artistic impressions of the solution, working drawings/plans, costing and their model.	3/7	Removed
Each learner compiles a record of his/her own individual contribution to the task. This should be reflected in each learner's **workbook**	3/8	Removed

Summary: Content/Topics Amended: Grade 9

Content/Topics	Term	Amendment
Skills development: learners practise the skills needed to manufacture their plastic item – measure, mark out, cut, bend and join. Moulding is an optional extra.	4/6	Removed
Practical sessions: working safely, learners measure, mark out, cut and bend the materials for their plastic item, and then assemble the product.	4/7	Removed
• Each learner compiles a record of his/her term's work including extending the lifespan of metals and food, properties and uses of various plastics, the plastics recycling strategy, the case studies, and the sketches and plans for the plastic item	4/8	Removed

4. Amendments School Based Assessment (SBA)

4.1 Formal assessment

- **Note:** Formal assessment tasks must be conducted in the presence of the teacher. Any formal task done at home will constitute an assessment irregularity.

- **Two formal assessment tasks [TESTS]** to be written during the cause of the year:

1. a **“Mid-year test”** and

2. an **“End-of-year test”** to be administered.

4.2 Forms of assessment in Technology

1. **AN ASSIGNMENT:** Practical Assessment Task (PAT 1)

- In Technology an ASSIGNMENT, PAT 1, covers the following design process skills: **Investigate, Design and Make.**
- *[Due to Covid-19, no MAKE is planned in Term 1 for 2021]*

2. **A PROJECT:** Practical Assessment Task (PAT 2)

- In Technology a PROJECT, PAT 2, makes up the main formal assessment of the skills and knowledge application during the allocated term. It covers the following design process skills: **Investigate, Design, Make, Evaluate and Communicate.**

4.2 Summary: Weighting of Revised Programme of Assessment: Gr 7-9

	Term 1	Term 2	Term 3	Term 4
Form of Ass	PAT 1 Assignment: **Investigate & Design**	Mid-year Exam	PAT 2 Project **(I, D, M, E & C)**	End-of-year Exam
Grade 7	70 marks	60	100 marks	60
Grade 8		80		80
Grade 9		100		100
Term Weighting (%)	100%	100%	100%	100%
SBA	10%	10%	20%	60% End –of-year Exam
Promotion mark	40% SBA per year			
	100%			

5. Conclusion

Contact Details

Name	Prov.	E-mail
Mrs. N. Sikelelwa	EC	nelisasikelelwa5@gmail.com
Mr. D. Cornelissen	FS	donavonc847@gmail.com
Ms M. Mokhatla	FS	riamokhatla9@gmail.com
Mr. C. Jones	Gauteng	Christo.jones@gauteng.gov.za
Mr. S. Manyoni	KZN	siphobds@gmail.com
Mr. W. Kekana	Limpopo	mpapi1@yahoo.com
Mrs. M. Letsoalo	Mpumalanga	mantsiletsoalo@yahoo.com
Mr. B.Matroos	NC	bevmatroos@gmail.com
Mr. N. Mbizeni	NW	Nkosiyabombizeni1@gmail.com
Mr. J. Freese	WC	Jonathan.Freese@westerncape.gov.za

Contact Details

Name: CES: Subjects

Department of Basic Education

Tel:

Email: