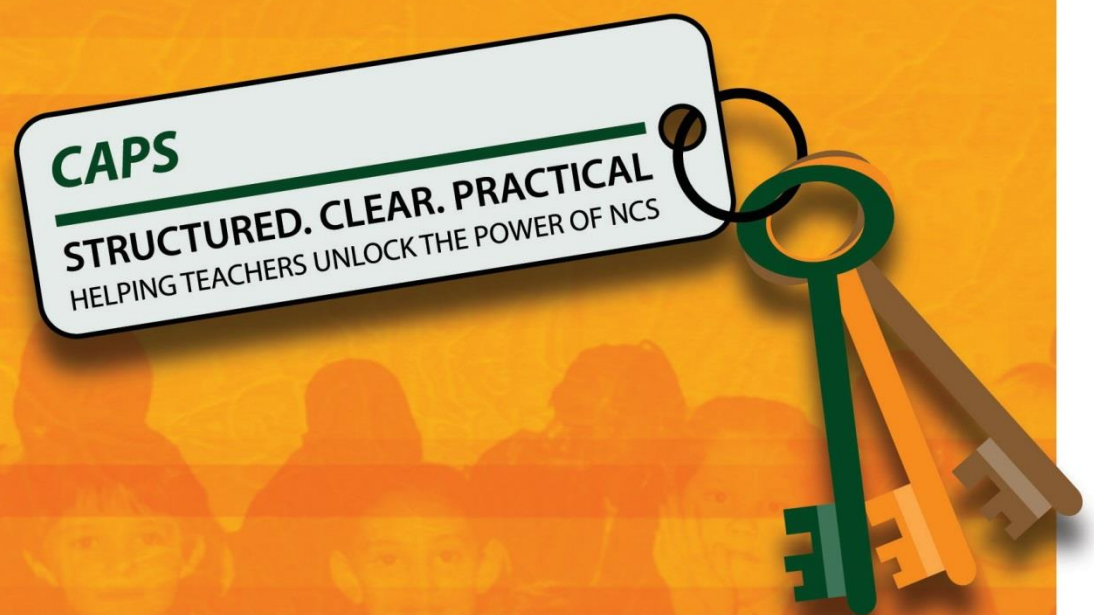


National Curriculum Statement (NCS)

Curriculum and Assessment Policy Statement



Further Education and Training Phase Grades 10 – 12





basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

CURRICULUM AND ASSESSMENT POLICY STATEMENT GRADES 10 – 12



MARITIME ECONOMICS

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SECTION 1

INTRODUCTION TO THE CURRICULUM AND ASSESSMENT POLICY STATEMENTS FOR MARITIME ECONOMICS GRADES 10 – 12

1.1 Background

The *National Curriculum Statement Grades R – 12 (NCS)* stipulates policy on curriculum and assessment in the schooling sector.

To improve implementation, the National Curriculum Statement was amended, with the amendments coming into effect in January 2012. A single comprehensive Curriculum and Assessment Policy document was developed for each subject to replace Subject Statements, Learning Programme Guidelines and Subject Assessment Guidelines in Grades R – 12.

1.2 Overview

- (a) The *National Curriculum Statement Grades R – 12 (January 2012)* represents a policy statement for learning and teaching in South African schools and comprises the following:
- (i) *Curriculum and Assessment Policy Statements for each approved school subject;*
 - (ii) *The policy document, National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12; and*
 - (iii) *The policy document, National Protocol for Assessment Grades R – 12 (January 2012).*
- (b) The *National Curriculum Statement Grades R – 12 (January 2012)* replaces the two current national curricula statements, namely the
- (i) *Revised National Curriculum Statement Grades R – 9, Government Gazette No. 23406 of 31 May 2002, and*
 - (ii) *National Curriculum Statement Grades 10 – 12 Government Gazettes, No. 25545 of 6 October 2003 and No. 27594 of 17 May 2005.*
- (c) The national curriculum statements contemplated in subparagraphs b(i) and (ii) comprise the following policy documents which will be incrementally repealed by the *National Curriculum Statement Grades R – 12 (January 2012)* during the period 2012 – 2014:
- (i) *The Learning Area/Subject Statements, Learning Programme Guidelines and Subject Assessment Guidelines for Grades R – 9 and Grades 10 – 12;*
 - (ii) *The policy document, National Policy on assessment and qualifications for schools in the General Education and Training Band d, promulgated in Government Notice No. 124 in Government Gazette No. 29626 of 12 February 2007;*
 - (iii) *The policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), promulgated in Government Gazette No.27819 of 20 July 2005;*

- (iv) *The policy document, An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding learners with special needs, published in Government Gazette, No.29466 of 11 December 2006, is incorporated in the policy document, National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12; and*
- (v) *The policy document, An addendum to the policy document, the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF), regarding the National Protocol for Assessment (Grades R – 12), promulgated in Government Notice No.1267 in Government Gazette No. 29467 of 11 December 2006.*
- (d) The policy document, *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12*, and the sections on the Curriculum and Assessment Policy as contemplated in Chapters 2, 3 and 4 of this document constitute the norms and standards of the *National Curriculum Statement Grades R – 12*. It will therefore, in terms of *section 6A of the South African Schools Act, 1996 (Act No. 84 of 1996)*, form the basis for the Minister of Basic Education to determine minimum outcomes and standards, as well as the processes and procedures for the assessment of learner achievement to be applicable to public and independent schools.

1.3 General aims of the South African Curriculum

- (a) The *National Curriculum Statement Grades R – 12* gives expression to the knowledge, skills and values worth learning in South African schools. This curriculum aims to ensure that children acquire and apply knowledge and skills in ways that are meaningful to their own lives. In this regard, the curriculum promotes knowledge in local contexts, while being sensitive to global imperatives.
- (b) The National Curriculum Statement Grades R – 12 serves the purposes of:
- equipping learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with the knowledge, skills and values necessary for self-fulfilment, and meaningful participation in society as citizens of a free country;
 - providing access to higher education;
 - facilitating the transition of learners from education institutions to the workplace; and
 - providing employers with a sufficient profile of a learner's competences.
- (c) The National Curriculum Statement Grades R – 12 is based on the following principles:
- Social transformation: ensuring that the educational imbalances of the past are redressed, and that equal educational opportunities are provided for all sections of the population;
 - Active and critical learning: encouraging an active and critical approach to learning, rather than rote and uncritical learning of given truths;
 - High knowledge and high skills: the minimum standards of knowledge and skills to be achieved at each grade are specified and set high, achievable standards in all subjects;
 - Progression: content and context of each grade shows progression from simple to complex;

MARITIME ECONOMICS GRADES 10 – 12

- Human rights, inclusivity, environmental and social justice: infusing the principles and practices of social and environmental justice and human rights as defined in the Constitution of the Republic of South Africa. The National Curriculum Statement Grades R – 12 is sensitive to issues of diversity such as poverty, inequality, race, gender, language, age, disability and other factors;
 - Valuing indigenous knowledge systems: acknowledging the rich history and heritage of this country as important contributors to nurturing the values contained in the Constitution; and
 - Credibility, quality and efficiency: providing an education that is comparable in quality, breadth and depth to those of other countries.
- (d) The National Curriculum Statement Grades R – 12 aims to produce learners that are able to:
- identify and solve problems and make decisions using critical and creative thinking;
 - work effectively as individuals and with others as members of a team;
 - organise and manage themselves and their activities responsibly and effectively;
 - collect, analyse, organise and critically evaluate information;
 - communicate effectively using visual, symbolic and/or language skills in various modes;
 - use science and technology effectively and critically showing responsibility towards the environment and the health of others; and
 - demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.
- (e) Inclusivity should become a central part of the organisation, planning and teaching at each school. This can only happen if all teachers have a sound understanding of how to recognise and address barriers to learning, and how to plan for diversity.

The key to managing inclusivity is ensuring that barriers are identified and addressed by all the relevant support structures within the school community, including teachers, District-Based Support Teams, Institutional-Level Support Teams, parents and Special Schools as Resource Centres. To address barriers in the classroom, teachers should use various curriculum differentiation strategies such as those included in the Department of Basic Education's *Guidelines for Inclusive Teaching and Learning* (2010).

1.4 Time Allocation

1.4.1 Foundation Phase

(a) The instructional time in the Foundation Phase is as follows:

SUBJECT	GRADE R (HOURS)	GRADES 1 – 2 (HOURS)	GRADE 3 (HOURS)
Home Language	10	8/7	8/7
First Additional Language		2/3	3/4
Mathematics	7	7	7
Life Skills	6	6	7
• Beginning Knowledge	(1)	(1)	(2)
• Creative Arts	(2)	(2)	(2)
• Physical Education	(2)	(2)	(2)
• Personal and Social Well-being	(1)	(1)	(1)
TOTAL	23	23	25

(b) Instructional time for Grades R, 1 and 2 is 23 hours and for Grade 3 is 25 hours.

(c) Ten hours are allocated for languages in Grades R – 2 and 11 hours in Grade 3. A maximum of 8 hours and a minimum of 7 hours are allocated for Home Language and a minimum of 2 hours and a maximum of 3 hours for Additional Language in Grades 1 – 2. In Grade 3 a maximum of 8 hours and a minimum of 7 hours are allocated for Home Language and a minimum of 3 hours and a maximum of 4 hours for First Additional Language.

(d) In Life Skills Beginning Knowledge is allocated 1 hour in Grades R – 2 and 2 hours as indicated by the hours in brackets for Grade 3.

1.4.2 Intermediate Phase

(a) The instructional time in the Intermediate Phase is as follows:

SUBJECT	HOURS
Home Language	6
First Additional Language	5
Mathematics	6
Natural Sciences and Technology	3,5
Social Sciences	3
Life Skills	4
• Creative Arts	(1,5)
• Physical Education	(1)
• Personal and Social Well-being	(1,5)
TOTAL	27,5

1.4.3 Senior Phase

(a) The instructional time in the Senior Phase is as follows:

SUBJECT	HOURS
Home Language	5
First Additional Language	4
Mathematics	4,5
Natural Sciences	3
Social Sciences	3
Technology	2
Economic Management Sciences	2
Life Orientation	2
Creative Arts	2
TOTAL	27,5

1.4.4 Grades 10 – 12

(a) The instructional time in Grades 10 – 12 is as follows:

SUBJECT	TIME ALLOCATION PER WEEK (HOURS)
Home Language	4.5
First Additional Language	4.5
Mathematics	4.5
Life Orientation	2
A minimum of any three subjects selected from Group B Annexure B, Tables B1 – B8 of the policy document, <i>National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12</i> , subject to the provisos stipulated in paragraph 28 of the said policy document.	12 (3 x 4h)
total	27,5

The allocated time per week may be utilised only for the minimum required NCS subjects as specified above, and may not be used for any additional subjects added to the list of minimum subjects. Should a learner wish to offer additional subjects, additional time must be allocated for the offering of these subjects.

SECTION 2

INTRODUCTION TO MARITIME ECONOMICS

Maritime Economics involves the introduction of learners to shipping and maritime trade and examines major aspects of the shoreside operation of ships and harbours. It also provides insight to current trends in the global shipping industry, to issues of the environmental impact of shipping and to issues of fair trade.

2.1 THE MAIN TOPICS OF MARITIME ECONOMICS

Topic 1: Maritime World

The learner is able to source, analyse, use and communicate information regarding the shipping industry.

This topic focuses on providing the background information that is essential for learning within the Maritime field. It enables learners to find and use information from different types of sources, to understand and apply correct maritime terminology, towards preparing learners for careers in this field.

Topic 2: Shipping Operations

The learner is able to analyse, classify, calculate and explain major aspects of shipping operations

This topic develops learners knowledge and understanding of the components of shipping operations including the working of harbours, transport systems, cargo logistics, general shipping practices and the application of the knowledge in authentic simulations including voyage costing.

Topic 3: International Trade

The learner is able to demonstrate an understanding of international trade and the international structures within which shipping operates

This topic introduces learners to broad issues pertaining to maritime trade including the principles, processes, role players, trading nations, major commodities and the broad legal framework within which the international maritime industry operates.

Topic 4: Maritime Environmental Challenges

The learner is able to evaluate and recommend solutions and strategies for dealing responsibly with the environmental issues and other challenges faced by the Maritime Industries

This topic explores issues relating to the maritime environment including maritime meteorology, marine ecosystems, the effects of shipping on the marine environment, marine resource extraction and management, human rights and principles of fair trade.

MARITIME ECONOMICS GRADES 10 – 12

2.2 THE SPECIFIC AIMS OF MARITIME ECONOMICS ARE TO TEACH AND PREPARE LEARNERS TO:

- Provide an appropriate body of knowledge and exposure to skills surrounding this unique and highly specialised sector of the economy.
- Contribute to the pool of maritime knowledge and skills within the country through interrogation, interpretation, analysis and making judgments on information gathered presented.
- Develop an awareness of the maritime industry and its importance to the economy of South Africa.
- Foster an understanding of the importance of the security of our national waters and maritime assets, as well as ensuring safe maritime practices.
- Promote responsible attitudes towards the marine environment.
- Demonstrate an understanding of the interrelatedness of international systems through an understanding of processes and practices within maritime trade.
- Broaden access to this subject to learners from a wide diversity of backgrounds.
- Stimulate an interest in maritime activities, especially with respect to career choices that could contribute to the development of the shipping industry.
- Prepare learners for the existing maritime courses available in tertiary education.
- It encourages learners to begin identifying entrepreneurial opportunities for themselves.

2.3 MARITIME ECONOMICS CAREER OPPRTUNITIES

Maritime Economics provides a number of opportunities for both HET and additional education and training. Career links include:

Sea-Going Careers including Navigation or Engineering (Merchant Navy or S.A. Navy)	Ship-Broking, Ship chartering and Ship Management	Ships' Agency Operations	Harbour Operations
Maritime Environmental Conservation	Oceanography or Hydrography	Maritime Economics	Maritime-Related Tourism
Marine Surveying	Liner Trading	Bunker Trade	Cargo Forwarding and Clearing
Cargo Planning and Handling	Maritime Training or Education	Maritime Land-Use Advisers	Fisheries Patrol Services.
Salvage	Maritime Law	Marine Insurance	Port State Control and Flag State Control
Ship Chandling	Naval Architecture	Ship Repair and Maintenance	Fishing Industry

SECTION 3**3.1 OVERVIEW OF TOPICS****TOPIC 1: Maritime World****GRADE 10**

- Define and use terminology used by the shipping industry e.g.
 - various ship types,
 - parts of ships and equipment aboard ships
 - units of measurement
 - relative position aboard ships, or positions relative to one's own ship.
- Use map-reading skills to identify important continents, water masses, canals, sea currents and major.
- Display a working knowledge of
 - International time zones
 - International Date Line as they affect shipping.
- Investigate and present the careers related to Maritime Economics.

GRADE 11

- Interpret and use information contained in Lloyd's Register of Shipping and assess the suitability of ships for particular cargoes and trades.
- Use maps to interpret trade routes, port location.
- Apply knowledge of international time zones and the International Date Line to shipping operations.
- Investigate and explain the training, education and experience needed to pursue the various maritime related careers.

GRADE 12

- Differentiate between the main types of marine propulsion systems.
- Analyse and use graphic displays of information and text from a variety of sources.
- Analyse the issues pertaining to the international employment of seafarers.

MARITIME ECONOMICS GRADES 10 – 12

Topic 2: Shipping Operations

GRADE 10

- Comment on factors relating to port location, construction, operations changes to harbour land use and the effect of rejuvenation of derelict zones within a harbour area.
- Describe major shipping companies that operate to and in South Africa.
- Classify cargo handling techniques used in shipping e.g.
 - bulk
 - break-bulk
 - containers
 - liquids
 - refrigerated cargoes
 - vehicle cargoes
- Explain the basic principles of marine salvage.
- Calculate voyage duration, given appropriate information.

GRADE 11

- Discuss the role of a harbour as the interface between sea transport and other modes of transport.
- Investigate, and evaluate the role of ship operations.
- Explain cargo work, with special reference to:
 - stowage plans,
 - time,
 - labour requirement
 - costs.
- Effectively use information relating to salvage operations in order to analyse case studies.
- Calculate voyage costs with given parameters.

GRADE 12

- Analyse and evaluate intermodal transport systems.
- Explain and discuss issues relating to the registration of ships and the role of classification societies.
- Apply the correct INCOTERMS to case studies in cargo logistics, especially in the context of container shipping.
- Use information effectively relating to marine insurance to discuss case studies involving various aspects of maritime risk, including general average.
- Apply knowledge relating to ship chartering in lay time calculations.

TOPIC 3: International Trade**GRADE 10**

The learner is able to demonstrate an understanding of international trade and the international structures within which shipping operates.

- Investigate African maritime indigenous knowledge systems and investigate and present major elements of and milestones in the history of the South African maritime trade.
- Identify and describe the locations and inter-relationships of the world's leading trading nations
- Describe containerisation with special reference to its advantages.
- Investigate the extent of transgressions of maritime law.

GRADE 11

- Analyse and explain the principles governing transport and trade.
- Analyse international trade routes involving major commodities past and present.
- Examine and report on procedures pertaining to shipping containers.
- Interpret the role of territorial waters and economic exclusion zones as these affect littoral states, and routing of shipping.

**GRADE 12**

- Critically interrogate the notion of fair trade with special reference to human rights issues.
- Evaluate the strategic importance of convergence zones in the historical context and in current global politics.
- Discuss the conference line system, with reference to examples of advantages and disadvantages of this system.
- Discuss elementary aspects of South African Maritime law and how it conforms to international law, conventions and regulations.

TOPIC 4: Maritime Environmental Challenges**GRADE 10**

- Display a working knowledge of
 - Tides
 - Ocean Currents
- Describe meteorological factors that impact on shipping operations, in port and at sea.
- Explain the fragility of marine ecosystems and the need to safeguard such systems.
- Describe the processes involved in the extraction of marine resources with special reference to fishing, minerals (diamond dredging) from the ocean floor and oil and gas from beneath the ocean floor.

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GRADE 11

- Express reasoned opinions regarding environmental aspects which could affect maritime operations.
- Analyse the influence of depressions, tropical cyclones, and monsoons to explain their influence on shipping operations.
- Discuss aspects of the fishing industry and the need for careful conservation of marine resources.
- Evaluate the environmental impact of the extraction of marine resources and minerals from the ocean floor, and oil and gas from beneath the ocean floor.

GRADE 12

- Recommend solutions regarding environmental aspects which could be affected by maritime operations e.g. oil pollution, waste disposal, ballast water discharge
- Apply meteorological knowledge to maritime weather forecasting, shipping routing and other operations.
- Investigate and suggest solutions regarding human rights and fair trade issues around the fishing industry and the import-export industry.
- Promote responsible attitudes towards the marine environment.

**3.2 EXAMINABLE CONTENT****Topic 1: Maritime World****Grade 10****Proposed Content****Define and use terminology used by the shipping industry e.g.**

- **parts of ships and equipment aboard ships**

Naming and explaining the particular characteristics and uses of:

Bow, Stern, Hull, Keel, Superstructure, Forecastle, Bridge, Wheelhouse, Mast, Derrick, Crane, Foredeck, Afterdeck, Hatch, Hatchcover, Hatch Coaming, Hold, Tweendeck, Lower Hold, Tank Tops, Deep Tanks, Topside Tanks, Engine room, Galley, Cabin, Deck, Bulkhead, Deckhead, Alley, Ladder, Porthole, Load Line, Anchor, Propeller, Rudder.

- **various ship types**

Naming and explaining the particular characteristics and uses of:

Containerships, Multipurpose ships, Bulk Carriers (various classes of bulk carriers), Tankers (various classes of tankers), Gas carriers, Passenger ships, Refrigerated vessels, Ro-ro ships, Ferries, Fishing vessels, Tugs, Vessels associated with oil & gas exploration, Dredgers, Warships (various classes of warships)

General terminology relating to ship types, including Liner, Trampship, Panamax, post-Panamax, Coaster, Near-sea trader, Geared ship, Gearless ship, Bulk cargo, Break-bulk cargo, Neo-bulk cargo, Palletised cargo

• **units of measurement**

Naming and explaining terms such as:
gross registered tons, deadweight, nett registered tons, knot (speed)

• **relative position aboard ships, or positions relative to one's own ship**

Naming and explaining terms such as:
bow, stern, port, starboard, port bow, starboard bow, port quarter, starboard quarter, midships, thwartships, forward, aft, aloft, atop, ahead, astern, abeam

Use map reading skills to identify continents, water masses, canals, sea currents and major ports:

Using map reading including map orientation (position, types of grid reference), different types of scales, direction and true bearing to identify:

- **Continents:** Asia, Africa, Europe, North America, South America, Australasia
- **Water Masses:**
 - **Oceans** e.g.: Atlantic, Indian, Pacific, Arctic and Southern Oceans
 - **Seas:** e.g. Mediterranean, Black, Adriatic, North, Baltic, Red, Arabian, South China, East China, Japan, Tasman, Bering, Caribbean Seas
 - **Gulfs:** e.g. Gulf of Aden, Arabian (Persian) Gulf, Bay of Bengal, Bay of Biscay, Gulf of Mexico (US Gulf), Hudson Bay
 - **Canals:** e.g.- Suez Canal, Panama Canal. Kiel Canal, St Lawrence Seaway
 - **Navigable Rivers:** Amazon, Rhine, Mississippi, Congo, Two navigable Asian Rivers

Display a working knowledge, as they affect shipping, of

- **International time zones**
- **International date line**

Performing simple calculations taking into account the 24 hours nature of shipping, maps, and gaining or repeating time depending on direction of travel.

Investigate and presenting the careers related to Maritime Economics

Investigating and describing maritime careers such as:

Sea-Going Careers including Navigation or Engineering (Merchant Navy or S.A. Navy)	Ship-Broking, Ship Chartering and Ship Management
Ships' Agency Operations	Harbour Operations
Maritime Environmental Conservation	Oceanography or Hydrography
Maritime Economics	Maritime-Related Tourism
Marine Surveying	Liner Services
Bunker Trade	Cargo Forwarding and Clearing
Cargo Planning and Handling	Maritime Training or Education
Maritime Land-Use Advisers	Fisheries Patrol Services.
Salvage	Maritime Law
Marine Insurance	Port State Control and Flag State Control
Ship Chandling	Ship Repair and Maintenance
Naval architecture	Fishing Industries

MARITIME ECONOMICS GRADES 10 – 12

Grade 11**Content****Interpret and use information contained in Lloyd's Register of Shipping and assess the suitability of ships for particular cargoes and trades**

Using data from extracts from Lloyd's Register of Shipping to solve problems and make decisions relating to the suitability of ships to move cargo taking into consideration type of ship, size of ship, cargo capacity, draught, cargo gear, speed and fuel consumption.

Use maps to interpret trade routes, port location.

Reading and analysing maps to obtain data on local, regional and global ports and trade routes including:

- South African Ports: Richards Bay, Durban, East London, Port Elizabeth, Ngqura, Cape Town, Saldanha Bay
- Other African Ports: Maputo, Mombasa, Luanda, Walvis Bay, Abidjan, Dakar, Port Said.
- Major Foreign Ports: Rotterdam, Antwerp, Hamburg, London, Felixstowe, New York, San Francisco, Los Angeles (Long Beach), Vancouver, Singapore, Hong Kong, Shanghai, Yokohama, Sydney

Apply knowledge of international time zones and the international date line to shipping operations

Performing calculations involving realistic voyages across time zones and the International Date Line

**Investigate and explain the training, education and experience needed to pursue the various maritime related careers**

Conducting research to find out about:

- Formal tertiary education and training, on-the-job training, industry related courses (including the location of training institutions and broad content of training and entry requirements).
- Rank structure of seafarers and promotion requirements.
- Broad job descriptions of the major maritime-related careers

Grade 12**Proposed Content****Differentiate between the main types of marine propulsion systems.**

- Tracing the effects on shipping operations of the change from sail to steam, and from steam to motorships
- Explaining the operation of a marine engine commonly used in modern merchant ships

Analyse and use graphic displays of information and text from a variety of sources.

- Exploring the various sources of information such as maps, graphs, tables, Internet websites, newspaper, magazine, journal, television and radio reports relevant to shipping.
- Extracting relevant information and data from the sources and organising it logically for presentation.

Analyse the issues pertaining to the international employment of seafarers.

Investigating and debating seafaring employment issues such as:

- STCW 95 Convention
- Contract seafaring
- The major sources of the world's seafarers (e.g. Philippines, China, Eastern Europe); Reasons for the decline in previously major seafaring nations
- Incentives for countries to promote seafaring (e.g. tonnage tax, cabotage, training incentives)

Topic 2: Shipping Operations**Grade 10****Content****Comment on factors relating to port location, construction, operations changes to harbour land use and the effect of rejuvenation of derelict zones within a harbour area.**

Investigating and discussing information pertaining to:

- Factors relating to port location: sustainable cargo flows, shelter from prevailing wind and swell, depth of water, flat land, services (water, electricity), labour, access (road and rail links) finance, ancillary services
- Port management structures, including the rank structure of the marine operations personnel.
- Procedures, personnel and vessels involved in ships' movements in harbours and dry-dock and locks.
- Rejuvenation of derelict zones – reasons for dereliction, reasons for rejuvenation e.g. Cape Town Waterfront and Durban Point Area

Describe major shipping companies that operate to and in South Africa.

- Naming of major shipping companies and spheres of operation – what types of ships they operate, where they trade.
- Conducting research on the history of one company.

Classify cargo handling techniques used in shipping

- bulk
- break-bulk
- containers
- liquids
- refrigerated cargoes
- vehicle cargoes

Describing the different cargo handling techniques of the various commodities

Explain the basic principles of marine salvage

Finding information, defining concepts and developing terminology to discuss

- Marine salvage
- Lloyd's Open Form
- SCOPIC (salvage costs to P&I club)

Calculate voyage duration, given appropriate information including speed and distance.

Performing simple calculations to find voyage duration and time of arrival of ships.

MARITIME ECONOMICS GRADES 10 – 12

Grade 11**Content****Discuss the role of a harbour as the interface between sea transport and other modes of transport**

- Identifying terms relating to ports: hinterland, break-of-bulk point, entrepot (hub port), trans shipment, feeder service, free trade area.
- Investigating the link between sea transport and road or rail e.g. case studies involving point-to-point transport.

Investigate, and evaluate the role of ship operations

Engaging with a broad range of roles within the shipping industry:

- ship owning (brief reference to ship financing, operations, including cargo bookings, legal requirements, ship registration, maintenance, safety, insurance.
- ship management – the role of specialized ship management companies
- ship broking – the role of shipbrokers in chartering, the sale and purchase of ships
- ship chartering, including reference to general charter markets, chartering procedures, types of charter, charter party, laycan, laytime, demurrage, dispatch, notices of readiness, voyage instructions, factors influencing fluctuations in charter rates
- ship scrapping, including reference to the interrelationship between ship charter markets, shipbuilding trends and scrap prices
- ship's agency operations and procedures, including reference to the role of ship owners' agents, charterers' agents, cargo agents
- bunkering, including reference to various types of ships' fuel and precautions taken when bunkering to avoid pollution or fire
- stevedoring, with reference to cargo handling for the various types of cargo
- ship repair and maintenance, with reference to the need for regular maintenance and repair of ships, dry-docking, synchrolifts
- ship chandling: suppliers of stores to ships e.g. food, paint, engine room spares
- personnel logistics, with reference to STCW 95, employment of contract seafarers, career paths for sea-going personnel, and those in the National Port Authority, as well as potential shoreside careers in the shipping industry.

Explain cargo work, with special reference to:

- **stowage plans** – factors to be taken into account when compiling cargo stowage plans (e.g. stresses on the ship, stability, port rotation, hazardous cargoes, non-compatible cargoes, heavy lifts, cargo handling equipment)
- **time** – calculating port stays using realistic examples
- **costs** – calculations relating to time in port
- **labour requirement** – comparing labour requirements for the handling of bulk, breakbulk and containerised cargo

Effectively use information relating to salvage operations in order to analyse case studies.

Determining causes of marine accidents, methods of salvage, the application of Scopic or Lloyd's Open Form in recent case studies, and salvage arbitration.

Calculate shipping voyage costs with given parameters.

Performing calculations with a range of parameters including but not limited to:

- speed
- distance
- length of stay in port
- port costs
- agency fees
- volume of cargo
- rate of loading
- fuel
- sundry costs

Grade 12

Content

Analyse and evaluate intermodal transport systems.

Tracing of routes and mode of transport and procedures (e.g. checking the container for damage, container number, container seals, customs clearances) and documentation (especially the characteristics and use of a bill of lading)

Explain and discuss issues relating to the registration of ships and the role of classification societies.

Understanding and debating issues around

- The need to register ships; the concept of flag state control; the concept of flags of convenience (advantages and disadvantages)
- The role of classification societies with special reference to ship construction, seaworthiness, accidents, and special surveys

Apply the correct INCOTERMS to case studies in cargo logistics, especially in the context of container shipping

- Defining the term INCOTERMS, and determining its purpose and use
- Determining where to find the information and evaluating which is most appropriate in a particular case study.

Use information relating to marine insurance effectively to discuss case studies involving various aspects of maritime risk, including general average.

Synthesising information on aspects of marine insurance mentioned below to evaluate or suggest resolutions in selected case studies:

- Hull & Machinery Insurance
- Protection & Indemnity Clubs
- TT Club
- Fixed & Floating Objects
- General Average

Apply knowledge relating to ship chartering in lay time calculations.

- Calculating the difference between the agreed duration of cargo work and the actual duration of cargo work
- Defining demurrage and dispatch
- Determining factors that are taken into account when demurrage or dispatch is ascertained.

MARITIME ECONOMICS GRADES 10 – 12

Topic 3: International Trade**Grade 10****Content****Investigate and present major elements of and milestones in the history of the South African maritime trade**

- Exploring concepts of indigenous knowledge systems and identifying how they may have contributed to early use of water bodies for trade(e.g. Nile River)
- Examining the factors that have stimulated (or stunted) the growth of the South African shipping industry, including the following:
 - Early explorers, Dutch & British colonization, and early shipping services
 - Influence of major events on the local shipping industry, especially the mineral discoveries, opening of the Suez Canal, Anglo-Boer War, World Wars 1 & 2, both closures of the Suez Canal, Apartheid era and trade sanctions, Abolition of apartheid and full democracy, the post-apartheid trade boom, global trade fluctuation, especially the global shipping boom based on Far Eastern economic growth
 - Development of major South African shipping lines

Identify and describe the locations and inter-relationships of the world's leading trading nations

- Accessing a variety of sources including map reading to locate leading trading nations and regions including China and other Far eastern nations, North America Western Europe, Russia, India, Arabian Gulf, Australia
- Identifying and listing major commodities imported and exported from each of the above nations/regions

Describe containerisation with special reference to its advantages.

Understanding containerisation terminology, definitions and concepts such as:

- A brief history of containerisation,
- Types of containers and their uses
- Markings on containers
- Container terminal, container depot, container stack
- Shoreside equipment used in container shipping
- Basic layout of a containership
- The terms TEU and FEU

Investigate the extent of transgressions of maritime law

Defining types of transgressions and counter-measures, citing recent case studies:

- Transgressions: piracy, smuggling, cargo broaching, ship hijacking, terrorism, stowing away, illegal transportation of humans, drugs and weapons, poaching of marine resources.
- Counter measures taken by navies, coastguards, immigration authorities, fisheries protection agencies and customs.

Grade 11**Content****Analyse and explain the principles governing transport and trade.**

Analysing and explaining principles including:

- Economies of scale in relation to sea transport
- Principles of supply and demand
- Major global areas of supply and demand
- Definitions of competitive advantage and absolute advantage
- Definitions of export and import
- Factors influencing trade fluctuations

Analyse international trade routes involving major commodities past and present

- Identifying areas of supply and demand of commodities such as:
 - oil
 - coal
 - iron ore
 - other minerals
 - grain
 - containerised cargo
- Identifying the shortest route between these areas and the most appropriate type of vessel to support this commodity
- Briefly outlining periods of boom or depression in the above trades and the impact of global events (e.g. war,) natural disasters (e.g. drought, floods, tsunami's, earthquakes, volcanoes or hurricanes)

**Examine and report on procedures pertaining to shipping containers.**

Referring to the roles of:

- Customs services in international shipping
- Forwarding agents
- Documentation (brief reference to bills of lading)
- Logistics warehousing

Interpret the role of territorial waters and economic exclusion zones as these affect littoral states, and routing of shipping.

Investigating and explaining:

- The need for littoral states to declare areas of control over passing traffic and economic activities
- Concept of 'right of innocent passage'
- The role of the state in controlling and monitoring these areas e.g. fisheries patrols and naval patrols

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Grade 12**Content****Critically interrogate the notion of fair trade with special reference to human rights issues.**

Asking critical questions about controversial issues of maritime trade such as:

- The concept of 'dumping' i.e. flooding markets with cheaper products
- State subsidies that prevent fair trade
- The positive and negative consequences of international trade on local employment opportunities

Evaluate the strategic importance of convergence zones in the historical context and in current global politics.

Access and synthesise information to evaluate the importance of convergence zones such as:

- Identifying zones on maps where major shipping routes converge
- Determining reasons for the economic and political importance of the following convergence zones: Suez Canal, Panama Canal, Straits of Malakka, Straits of Hormuz.
- Investigating the impact of periods and events when major convergence zones assumed greater importance or were inaccessible to normal shipping e.g. during war – closing zones, war zones

Discuss the conference line system, with reference to examples of advantages and disadvantages of this system.

Accessing relevant data as a basis for discussion including:

- A definition of the term 'shipping conference'
- Examples of shipping conferences
- The advantages and disadvantages of the shipping conference system

Discuss elementary aspects of South African Maritime law and how it conforms to international law, conventions and regulations.

Analysing the roles of each of the following bodies, codes or conventions in shipping:

- International Maritime Organisation
- Port State Control
- Flag State Control
- South African Maritime Safety Authority
- SOLAS
- MARPOL
- STCW 95
- ISM
- ISPS
- Loadline restrictions
- Carriage of Goods by Sea

Topic 4: Maritime Environmental Challenges**Grade 10****Content****Display a working knowledge of**

- Tides: understanding how tides are formed.
- Ocean Currents: engaging with sources to find the location and direction of the currents (North Atlantic Drift (Gulf Stream), Benguela Current, Mozambique Current, Agulhas Current, Canary Current).

Describe meteorological factors that impact on shipping operations, in port and at sea.

Investigating the effects on shipping of:

- Fog
- Wind
- Sea Conditions
- Ice

Explain the fragility of marine ecosystems and the need to safeguard such systems.

Defining the concept of ecosystems and investigating:

- The marine food chain
- The need for safe shipping practices that aid conservation of marine resources
- Management and protection of marine resources

Describe the processes involved in the extraction of marine resources with special reference to fishing, minerals (diamond dredging) from the ocean floor and oil and gas from beneath the ocean floor.

Investigating operations such as:

- Diamond dredging operations
- Prospecting for sub-sea oil and gas
- Exploitation of sub-sea oil and gas
- Deep sea fishing
- Vessels and floating structures associated with these operations

Grade 11**Content****Express reasoned opinions regarding environmental aspects which could affect maritime operations.**

Engaging in problem solving activities regarding positive and negative effects of tides and ocean currents on ship operations.

Analyse the influence of depressions, tropical cyclones, and monsoons to explain their influence on shipping operations.

Understanding of the formation of depressions, tropical cyclones, and monsoons and the consequences of these phenomena for shipping

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Discuss aspects of the fishing industry and the need for careful conservation of marine resources

Investigating and presenting findings regarding:

- Southern African waters as a global source of seafood
- Depletion of global marine resources
- Methods of sea fishing (trawling, long line fishing, crayfishing, shell fishing operations)
- Methods of conservation to control exploitation e.g. quotas, permits, fisheries patrol

Evaluate the environmental impact of the extraction of marine resources and minerals from the ocean floor, and oil and gas from beneath the ocean floor

- Investigating the need for exploiting marine diamond deposits and sub-sea oil and gas reserves and the long term impact on the environment e.g. disturbances to the ocean floor, possible pollution
- Investigating and recommending alternative energy sources and alternative lifestyles

Grade 12**Content****Recommend solutions regarding environmental aspects which could be affected by maritime operations e.g. oil pollution, waste disposal, ballast water discharge**

Researching current maritime environmental challenges and expressing reasoned opinions regarding environmental aspects that relate to or could be affected by shipping operations. In particular, the following aspects should be understood in broad outline, and applied to case studies:

- Marine ecosystems
- Damage caused to marine ecosystems by over-fishing and poaching
- Marine pollution (including oil pollution, waste disposal at sea)
- Uncontrolled deballasting
- Shipping accidents

Apply meteorological knowledge to maritime weather forecasting, shipping routing and other operations.

- Simulating realistic voyages to determine meteorological effects on shipping - analysing meteorological data that will affect a ship during her voyage
- Describing the effects of weather on cargo operations

Investigate and suggest solutions regarding human rights and fair trade issues around the fishing industry and the import-export industry

Discussing aspects of the fishing industry with special reference to:

- Southern Africa and the southern islands
- The need for careful management of fish resources
- Aspects of crewing the fishing fleets

Promote responsible attitudes towards the marine environment.

Creating innovative ways to inform the public regarding the need for marine conservation and how individuals and society at large should respond to this need.

SECTION 4**ASSESSMENT****4.1 Introduction**

Assessment is a continuous planned process of identifying, gathering and interpreting information about the performance of learners, using various forms of assessment. It involves four steps: generating and collecting evidence of achievement; evaluating this evidence; recording the findings and using this information to understand and thereby assist the learner's development in order to improve the process of learning and teaching.

Assessment should be both informal (Assessment for Learning) and formal (Assessment of Learning). In both cases regular feedback should be provided to learners to enhance the learning experience.

Suggested weighting of Topics in Maritime Economics:

Topic 1 Maritime World	20%
Topic 2 Shipping Operations	40%
Topic 3 International Trade	30%
Topic 4 Maritime Environmental Challenges	10%
Total	100%

4.2 Daily assessment Grades 10, 11 and 12

In Maritime Economics daily assessment is the informal monitoring of learners' progress. This is done through observation, discussions, learner-teacher conferences, informal classroom interactions and homework. The activities provide learners with opportunities to develop the skills, knowledge and values required to complete the tasks in the Programme of Assessment. These assessment activities should be reflected in the teachers' Work Schedule and lesson planning and should not be seen as separate from the learning activities taking place in the classroom. Informal daily assessment does not have to be recorded and is not taken into account for promotion or certification purposes, but the Maritime Economics teacher could keep notes on the development of learners' knowledge, skills and values, learners' strengths and weaknesses and additional support required and provided during these activities.

In addition to tests and examinations, assessment activities may include opportunities for:

- Source-based activities – finding, selecting, reading, comprehending, analysing, interpreting, using and applying information from a wide range of sources
- Map reading, labelling of maps
- Reading charts, plotting charts
- Analysing graphics, tables and other forms of data
- Discussion
- Debates
- Research
- Interviews
- Composing letters and articles on topical issues
- Presentations
- Excursions (including visits to work places)
- Drawings, sketching and design tasks
- Designing maritime related games
- Model-building of ships and harbours
- Simulations
- Scenario planning
- Case studies and
- Role-play

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Tools that may be used to assess the tasks include:

- Rubrics
- Checklists
- Memorandums
- Observation sheets

4.3 Programme of assessment in Grades 10 and 11

Formal Assessment provides the teachers with a systematic way of evaluating how well learners are progressing in a grade in a particular subject. Formal assessment tasks must therefore be recorded. The Maritime Economics teacher must draw up a formal 'Programme of Assessment', which must be submitted to the School Management team before the start of the new academic year. The learner's development needs to be continuously measured to determine the learners' progress or areas of weakness as they move towards completing the formal Programme of Assessment tasks.

4.3.1 The Programme of Assessment for Maritime Economics in Grade 10 is:

PROGRAMME OF ASSESSMENT Grade 10 (400 marks)	
ASSESSMENT TASKS 50% (200 marks)	END-OF-YEAR ASSESSMENT EXAM PAPER 50% (200 marks)
<ul style="list-style-type: none"> • 2 tests • 1 exam (mid year) • 3 other tasks 	<ul style="list-style-type: none"> • Written exam Topics 1 – 4

Example of a Programme of Assessment for Grade 10:

TERM 1	TERM 2	TERM 3	TERM 4
Task 1: Test 50 marks	Task 3: Research Task 50 marks	Task 5: Test 50 marks	Task 7: Exam (Theory paper) 200 marks
Task 2: Assignment 50 marks	Task 4: Midyear exam 150 marks	Task 6: Assignment 50 marks	
Total of 6 assessment tasks = 400 divided by 2 to maximum of 200			

The Programme of Assessment for Maritime Economics in Grade 11 is:

PROGRAMME OF ASSESSMENT Grade 11 (400 marks)	
ASSESSMENT TASKS	END –OF-YEAR ASSESSMENT
25% (100 marks)	EXAM PAPER 75% (300 marks)
<ul style="list-style-type: none"> • 2 tests • 1 exam (mid year) • 3 other tasks 	<ul style="list-style-type: none"> • Written exam TOPIC 1 – 4

Example of a Programme of Assessment for Grade 11:

TERM 1	TERM 2	TERM 3	TERM 4
Task 1: Test 50 marks	Task 3: Research Task 50 marks	Task 5: Test 50 marks	Task 7: Exam Theory paper) 300 marks
Task 2: Assignment 50 marks	Task 4: Midyear exam 150 marks	Task 6: Assignment 50 marks	
Total of 6 assessment tasks = 400 divided by 4 to maximum of 100 marks			

Tasks

In addition to two tests and two examinations in the Grade 10 and 11 Programme of Assessment, Maritime Economics learners should also be formally assessed in three other tasks such as assignments and research tasks.

See Annexure A for ideas for assignments and research tasks.

Tests

The suggested outline for tests is as follows:

- Minimum of 50 marks
- Duration: 1 hour
- Questions at different cognitive levels

Each task and examination must cater for a range of cognitive levels and abilities of learners. See Appendix B for Bloom's Taxonomy, a useful as a guide to compile tasks and examination questions encompassing the different cognitive levels:

To provide for learners at every level within the class, it is recommended that the tests and examinations should include questions with the following cognitive weighting:

COGNITIVE LEVEL	PERCENTAGE	MARKS
Knowledge	30	60
Comprehension	20	40
Application	30	60
Analysis, evaluation and synthesis	20	40

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4.3.2 Examinations in Grades 10 and 11

The midyear and end-of-year examination papers should test the knowledge and skills covered in the Maritime Economics Topics. The paper will consist of various themes each of which may include short questions, drawings, calculations and longer written responses.

The following table suggests the marks weighting outline for final examinations in Grades 10 and 11

SUGGESTED WEIGHTING OF TOPICS FOR THE MARITIME ECONOMICS EXAMINATIONS	PERCENTAGE
Maritime World	20
Shipping Operations	40
International Trade	30
Maritime Environmental Challenges	10
TOTAL	100%

The examination mark, which is the raw score in June and December (Grade 10 & 11) must be used for the calculation of the internal assessment mark.

4.3.3 Assessment in Grade 12

In Grade 12, assessment consists of two components: a Programme of Assessment which makes up 25% of the totals mark for Maritime Economics and external assessment which makes up the remaining 75%. The Programme of Assessment for Maritime Economics comprises six (6) tasks, which are internally assessed. The external assessment component consists of a written paper. The final examination is externally set, marked and moderated.

PROGRAMME OF ASSESSMENT (400 marks)	
ASSESSMENT TASKS 25% (100 marks)	END -OF-YEAR ASSESSMENT EXAM PAPER 75% (300 marks)
<ul style="list-style-type: none"> • 2 tests • 2 exams (mid year and trial) • 2 other tasks 	<ul style="list-style-type: none"> • Written exam TOPIC 1 – 4

Example of a Programme of Assessment in Grade12:

TERM 1	TERM 2	TERM 3	TERM 4
Task 1: Test 50 marks	Task 3: Research Project 50 marks	Task 5: Test 2 50 marks	External exam (theory paper) 300 marks
Task 2: Assignment 50 marks	Task 4: Midyear exam 300 marks	Task 6: Trial Exam 300 marks	
800 divide by 8 = 100 marks			

4.4 PROGRAMME OF ASSESSMENT FOR GRADE 12

4.4.1 Programme of Assessment for Grade 12

The Programme of Assessment for Maritime Economics in Grade 12 comprises 6 tasks, which are internally assessed. Of the six tasks, two are examinations and two are tests.

Tasks

The remaining two tasks consist of different forms such as an assignment and a research

project. See Annexure A for ideas of assignments and research projects.

Tests

The suggested outline for tests is as follows:

- Minimum of 50 marks
- Duration: 1 hour
- Questions at different cognitive levels

Each task and examination must cater for a range of cognitive levels and abilities of learners. See Annexure B for Bloom's Taxonomy examples of cognitive verbs. The following is used as a guide to designing examination questions encompassing the different cognitive levels:

COGNITIVE LEVEL	PERCENTAGE	MARKS
Knowledge	30	90
Comprehension	20	60
Application	30	90
Analysis, evaluation and synthesis	20	60
TOTAL	100	300

4.4.2 Examinations in Grade 12

In Grade 12 the three-hour mid year, preliminary and end-of-year examination papers should test the knowledge and skills covered in the Maritime Economics Topics. The preparatory examinations need to be closely related to the final examination in terms of time allocation, layout of paper and mark allocations. The final examination may examine learners on material from Grade 10, 11 and 12. At least 30% of the examination paper should be drawn from the Grade 10 and 11 curriculum.

The examination mark, which is the raw score in June and September must be used for the calculation of the internal assessment mark for promotion purposes.

The following table suggests the outline for the final examinations in Grade 12. Since topics may be integrated in the questions, the weighting is flexible.

SUGGESTED WEIGHTING OF TOPICS FOR THE FINAL MARITIME ECONOMICS EXAMINATIONS	MARKS
Maritime World	60
Shipping Operations	120
International Trade	90
Maritime Environmental Challenges	30
TOTAL MARKS	300

4.5 PROMOTION

For promotion and certification purposes learners should achieve at least a level 2 rating (Elementary achievement: 30 – 39%) in Maritime Economics. This is subject to the requirement that a learner must achieve at least a level 3 rating (Moderate Achievement: 40 – 49%) in at least one of the three choice subjects.

4.6 MODERATION OF ASSESSMENT

Moderation ensures the validity of assessment instruments, the fairness of the assessment processes and the reliability of assessment decisions by all assessors according to agreed standards. Moderation standards must be transparent and thus set before teaching, learning and assessment begins.

All Grade 10 and 11 tasks are internally moderated within the school, while all Grade 12 tasks need to be internally and externally moderated. The subject head for Maritime

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Economics or any other head of Department at the school will generally manage the process. The assessment of this task will be carried out using an assessment rubric.

4.6.1 Internal Moderation

As part of its school assessment policy, each school should have an internal moderation policy. Internal moderation must ensure that school-based assessment is consistent, accurate and well designed. Transparency in the methods used is of the utmost importance. Moderation methods will include face moderation, moderation of practical activities, moderation of products, script or file moderation. Performance assessment work must be face moderated. Care must be taken in group work that the distribution of marks / rating codes can be correlated with that of the written work for the group.

4.6.2 External Moderation

As part of the national assessment policy, each province should have an external moderation policy. External moderation must ensure that school-based assessment is consistent, accurate and well designed. Criteria must be drawn up by the relevant moderators, prior to the commencement of moderation. Transparency in the methods used is of the utmost importance. Portfolios of those learners whose progression is questioned during the year, should be made available to the Curriculum Advisor/ District Officers.

4.6.3 Files

Two types of files are required:

The teacher's file contains all the instructions and assessment criteria, marking memoranda and rubrics pertaining to all the internal assessment tasks set for the learners as well as attendance registers, and interventions.

The learner's file may be described as a purposeful, accumulated body of work produced by the learner, providing evidence of learning and growth, which supports a teacher's assessment of the learner's progress towards or attainment of the required topics. The learner file contains the evidence of the formal assessments that are used to calculate the learner's internal assessment mark e.g. research tasks, tests, examinations, assignments and projects. Informal assessment activities may be kept in the file but should be separated from the formal assessment, which should be easy to locate in the file for moderation purposes.

Learners' portfolios should be located in the most appropriate form for Maritime Economics. The pieces of evidence may be stored in files, folders, boxes, binders, exercise books, notebooks or a combination of these.

It is important that the evidence collected is sufficient and reflects current competence. The learner and assessor may plan the file jointly. The learner is responsible for submitting the evidence and the compilation of the file. The file must consist of a variety of assessment instruments and tools, e.g. assessment grid, rubrics, marking memoranda, checklists, rating scales etc. Assessment methods and instruments must be selected according to competencies to be assessed.

APPENDIX A
IDEAS FOR ASSIGNMENTS AND RESEARCH PROJECTS

Grade 11 TOPIC 1 & TOPIC 2	Harbour Location Project: Topographical map of an island including bays, rivers, mountains and depth of water, prevailing winds and currents. Select a location for harbour construction and indicate whether any navigational aids will be required e.g. lighthouses or buoys or beacons. Substantiate why they chose that location for the harbour and why the navigational aids will be required. Plan the harbour and build a model out of suitable materials e.g. clay/ paper/ cardboard/wood or recycled materials.
Grade 10 TOPIC 2	Harbour Rejuvenation Project: This could include an excursion to a harbour area that has undergone recent redevelopment. A worksheet with questions would form part of the assignment. Research other harbours that have also undergone rejuvenation and then write a report explaining the reasons and purposes of rejuvenation of derelict zones.
Grade 10 TOPIC 1	Prepare a Poster: to encourage people to join the Maritime Industry. The poster should show the diverse types of jobs in the industry. (This could be a group collage project).
Grade 11 TOPIC 1	Design a brochure/pamphlet: encouraging people to join the Maritime Industry. The brochure/pamphlet should show the diverse types of jobs in the industry and should include information pertaining to the training, education and experience needed to pursue the various maritime careers. An alternative suggestion is to design a brochure advocating the choice of Maritime Economics as a subject for Grades 10 – 12.
Grade 10 TOPIC 3	Indigenous knowledge research project: – find out how people traded across water bodies prior to the development of formal shipping links and structured maritime trade.
Grade 10 TOPIC 3	Research project on the development of shipping or the contribution shipping makes to the economy of a country e.g. South Africa
Grade 12 TOPIC 1	Investigate the effects that the use of steam engines in ships had on world trade as they replaced sail as the major propulsion form. Prepare a report on this topic for a maritime journal.
Grade 11 TOPIC 1	Draw a world map to show the countries that trade with South Africa, the commodities traded and the associated shipping routes
Grade 11 TOPIC 3	Investigate and explain why the volume of containers keeps growing and what the effect this has on harbours.
Grade 10 TOPIC 3	Select one of the following maritime transgressions: <ul style="list-style-type: none"> • piracy • hijacking of ships • smuggling • cargo broaching • poaching of marine resources • terrorism • stowing away Find a recent account of the transgression and analyse what laws were being broken, the consequences of the transgression and the counter-measures that were taken or need to be taken. Write your answer as an article for a maritime magazine.
Grade 12 TOPIC 4	Research project on marine ecosystems. Define an ecosystem. Apply the definition to a local marine ecosystem and explain why it is fragile, what the risks are and how the ecosystem needs to be safeguarded.
Grade 11 TOPIC 2	Select a South African Harbour <ul style="list-style-type: none"> • Build a scale model of a harbour or draw a map of the harbour indicating the cargoes that are handled at various berths and the depth of water in the harbour • Draw a world map and show by means of flow charts the movement of cargo to and from the harbour
Grade 11 TOPIC 4	Research the environmental impact of the extraction of marine resources. Focus on one of the following: fishing /diamond dredging / oil and gas exploration and exploitation.
Grade 11 TOPIC 2	Write a report on the reasons for the growth of the size of tankers over the years. Include in your report political and economic factors that led to the evolution of ultra-large crude carriers and factors that have since led to a reduction in the number of these vessels in operation.

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ANNEXURE B
BLOOM'S TAXONOMY

The following cognitive levels should be taken into consideration when setting assessment tasks and tests to allow for differentiation. According to Bloom's taxonomy (6 levels) one can apply different levels of questioning.

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
Knowledge	Understanding	Application	Analysis	Synthesis	Evaluation
define describe identify label locate name recognise select state	compare define describe distinguish explain generalise illustrate infer interpret match paraphrase restate select summarise	adapt compute discover draw gather graph modify operate prepare revise show solve survey use	categorise classify compare contrast decipher deduce differentiate distinguish explain generalise infer predict relate solve	combine compose create depict design develop incorporate integrate invent organise plan predict produce structure	appraise critique decide evaluate judge justify recommend



APPENDIX C RESEARCH PROJECTS

These may be done individually, in pairs or in groups not larger than four. They may include a practical and/or oral presentation, but must be accompanied by a written presentation. Generic skills needed to be developed and assessed from Grades 10 to 12.

Cognitive/thinking skills Bloom's categories	Motor/Process skills	Life skills
Knowledge Comprehension Application Analysis Synthesis Evaluation	Follow instructions Designing procedures/action plan Access information from various sources Observational skills Writing skills Drawing conclusions	Ability to work in groups Ability to work independently Creativity, initiative, interest, attitude Managerial skills; ability to plan/organize/divide tasks/ time management Communication skills: report back - oral skills

To develop skills in doing projects and assignments, the teacher should develop learners from Grade 10 by guiding the process step by step. By the time learners are in Grade 12, they must be able to do projects independently due to the time factor.

When giving a project in Grade 10 and 11:

1. The teacher gives the topic and negotiates the steps and time frames with the learners.
2. Brainstorm the topic together. Discuss the action plan and procedures - where and how to get information.
3. Collect information relevant to the topic. Use textbooks, encyclopaedias, interviews, magazines, newspapers, etc. Learners must understand and know terminology/content.
4. Divide the topic into smaller steps. Allocate tasks, timeframes and marks. Plan who will assess and develop the assessment instrument.

Projects should be a maximum of 2000 words (about 4 handwritten pages or 4 typed pages) for with 12 font, single-spaced, bound or stapled and should include:

- A front page
- Table of contents
- Text divided into paragraphs
- References of sources
- Pictures/ photos/ diagrams/ graphs

A standardised marking scheme would imply that when a particular skill is being assessed, all teachers follow the same criteria, and standards would be more comparable.

Penalties

- **While learners are encouraged to use the Internet as a resource tool, plagiarized work should earn a zero. This applies to materials plagiarized from books and other media.**
- Late submission of work should be penalised at the rate of 10% of the marks per day unless permission is granted by the teacher prior to the submission date or on the presentation of a doctor's certificate.

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Exemplar of an Assessment of a Research Project using marks		
Candidate: _____ Assessor _____		
School _____ Date _____		
Assessment Criteria	Rating	Possible total
Content & Topic: Level of information – detailed relevant, informed Variety of Sources – varied, bibliography Topic – challenging, original		20
Interpretation: Creative and insightful use of the information that shows a good understanding of the topic		20
Use of Language: Personalised, fluent, articulate, clear		20
Aims & Conclusion: Successfully addresses the objectives set out in the topic Brings the essay to a successful conclusion		20
Accuracy: Of information and grammar		10
Presentation: Neat, ordered lay out, type, effort, clarity, illustrations – useful, necessary		10
Total		100
Comments:		

Alternatively, Levels of Achievement which could be converted into marks

KEY	DESCRIPTION
1	Not yet achieved
2	Very superficial, disorganised, lacking insight
3	Completely descriptive, superficial, lacking in detail, missing the focus of the assignment
4	Slightly more descriptive than critical and answered with understanding, analysis vague at places,
5	Good critical and concept analysis, focused work
6	Excellent critical and conceptual analysis, stays very focused
7	Beyond expectation

APPENDIX D
EXAMPLES OF ASSESSMENT TASKS

A. Grade 10 Class Exercise: The Maritime World
Topic 1
Individual Task: 1 Hour

Questions

- 1.1 Draw a cross-section of A MULTI-PURPOSE ship (port to starboard) and indicate clearly draught; freeboard; tank tops; **and any other relevant parts.** (8)
- 1.2 List three types of cargo that this ship would carry. (3)
2. The *Safmarine Nokwanda* loaded in Bremerhaven (Germany), Rotterdam (Netherlands), Tilbury (UK) and Le Havre (France) for South Africa. Give the seas, bays, oceans, etc, through which she would have sailed on her voyage to Durban via Cape Town. (8)
- 3.1 Explain what an integral container is. (4)
- 3.2 For what purpose is a flat-rack container used? (4)
4. *Smit Amandla* is registered in Cape Town. What flag will she fly at the stern when she is in Luanda (Angola)? (1)
5. The cargoes below are available for loading in Richards Bay. Also provided are details of the port at which the cargo will be discharged.

Cargo	Tonnage	Destination	Shoreside discharge facilities available	Length of berth	Maximum depth of water
Ferrochrome	30 000	Dalian	No	200 m	14 m
Steel	25 000	Bahrein	No	210 m	12 m
Coal	160 000	Constanta	Yes	330 m	21 m
Coal	60 000	Istanbul	No	250 m	14 m
Woodchip	22 000	Antwerp	Yes	200 m	12 m
Titanium Slag	28 000	Rotterdam	Yes	210 m	12 m

The following ships are available to transport the cargoes. Indicate which ship will be most suited to each cargo.

Ship	DWT	Length	Loaded draught	Geared
Pluto	32 000	176 m	10 m	Yes
Neptune	33 500	182 m	10 m	Yes
Uranus	20 000	150 m	09 m	Yes
Saturn	25 000	168 m	10 m	Yes
Jupiter	160 000	280 m	17 m	No
Mars	220 000	314 m	19 m	No
Venus	170 000	300 m	18 m	No
Mercury	70 000	210 m	12 m	Yes
Comet	32 000	176 m	11 m	No
Planet	54 000	192 m	12 m	No

6 x 2 (12)

TOTAL**40 MARKS**

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B. Grade 12 Class Exercise: Shipping Operations
Topic 2
Individual Task: 1 Hour

Questions

The *Apollo Star* is owned by the Apollo Tanker Corporation, Athens (Greece), registered in Morovia, Liberia, and chartered to Elf Petrochemicals, Paris (France). She loaded a cargo of crude oil to be shipped by Sahara Oil Corporation, Tripoli (Libya) to Genoa (Italy) aboard an Aframax tanker. From Genoa, the cargo will be sent by pipeline to Schweitzer Oliengesellschaft, Switzerland. En route, the cargo is sold to a client in Norway and the tanker is diverted to Bergen, Norway. The cargo is sold again, this time to a British company who wants the ship to divert to Fawley, Southampton.

Assume the following:

- The *Apollo Star* berthed at Tripoli at 08:00 on 23 February. There was a delay of 3 hours while chemical tests were done before loading could commence.
- The *Apollo Star* has 9 tanks with the following capacities
 - No 1 Tank 4000 tons
 - No 2 Tank 6000 tons
 - No 3 Tank to No 9 Tank 8000 tons
- Loading sequence Tank 4 – 1 – 6 – 2 – 8 – 5 – 9 – 7 - 3
- Between loading of the tanks, there will be a 30-minute break while further tests are done and in some cases, to change manifolds.
- A loading rate of 2000 tons per hour

1. When will she start loading? (2)
2. How many hours (without breaks) will it take to load this vessel? (8)
3. How many tons will she still have to load at 23:00 on 23 February? (8)
4. When will she finish loading? (4)
5. If she is expected to sail an hour after completion of loading, what is her ETD? (4)
6. If the freight rate is \$5 per ton, what would her expected earnings be for the voyage to Genoa? (4)
7. Cargo movement and ship registry are subject to international maritime law.
- 7.1 How many bills of lading will be issued in the course of the amended voyage? (2)
- 7.2 For the *original* voyage of this tanker, who are the following:
 - 7.2.1 The carrier
 - 7.2.2 The consignee
 - 7.2.3 The consignor 3 x 2 (6)
8. Assume that a loading time of 24 hours (including breaks) was agreed. Will dispatch or demurrage be paid? (2)

TOTAL 40

<p>C. Grade 12 Written Task: Shipping Operations Topic 3 Individual Task</p>

Questions

1. During a voyage to Karachi, the officer of the watch on the *Atlantic Savior* hears a MAYDAY call from the *Capetan Michael* which gives her position about one hundred nautical miles south west of the position of the *Atlantic Savior*. He calls the Master of the *Atlantic Savior*, Captain Zakarias, who responds to the MAYDAY and hears that the *Capetan Michael* has a fire in number 3 hold. The ship is carrying a variety of cargo. Captain Zakarias orders a change of course to take the *Atlantic Savior* to the position given by the *Capetan Michael*.
- The salvage tug *Champion* also responds to the MAYDAY call, but gives her ETA at the scene much later that night. The Master of the *Champion* asks the Master of the *Capetan Michael* for a Lloyd's Open Form Salvage Agreement. The Master of the *Capetan Michael* agrees and is instructed to radio confirmation to the *Champion* via Colombo Radio.
- Seven hours later, the *Atlantic Savior* arrives at the scene and the Master tells Captain Zakarias by radio that he is flooding number 2 hold as he fears the fire will spread to number 1 hold where there is a large consignment of flammable chemicals in drums.
- The tug also arrives and a team of salvage personnel boards the *Capetan Michael*, and a few hours later, they manage to extinguish the fire.
- As his ship has suffered fire damage, but is not crippled by the fire, the Master of the *Capetan Michael* requests the tug to accompany her to Colombo, the nearest port.

- 1.1 What is a MAYDAY call? (2)
- 1.2 What is meant by the term **Lloyd's Open Form Salvage Agreement** (6)
- 1.3 The value of the *Capetan Michael* is US\$25 000 000 and her cargo manifest shows the following:

1 HATCH	4800 TONS DRUMMED CHEMICALS (DANGEROUS CARGO) From Sharjah Chemicals, Dubai, to Kiwi Chemical Co, Auckland Value: US\$240 000
2 HATCH	7200 TONS BAGGED RICE From Karachi Rice Co, to Tasty Rice, Auckland Value: US\$120 000
3 HATCH	7800 TONS DRUMMED CHEMICALS (DANGEROUS CARGO) From Sharjah Chemicals, Dubai, to Kiwi Chemicals, Auckland Value: US\$440 000
4 HATCH	7200 TONS BULK RICE From Karachi Rice Co, to Tasty Rice, Auckland Value: US\$120 000
5 HATCH	7200 TONS CEMENT From Khalifah Cement Co, Dubai, to Island Bulk Products, Auckland Value: US\$150 000

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- 1.3.1 The Owners of the *Champion* claim US\$2.5 million for the fire fighting operation which effectively saved the ship`. The owners of the *Capetan Michael* declare General Average.
- (a) Explain the term **General Average**. (8)
- (b) In terms of the details provided, what will Sharjah Chemicals have to contribute to the cost of salvage? (8)
- 1.4 From information supplied to them by the ship's Master, the owners of the *Atlantic Savior* calculate that the diversion and two-day delay caused to their ship has cost them US\$80 000. They wish to claim that amount from their insurers.
- 1.4.1 What kind of marine insurance covers such incidents? (2)
- 1.4.2 Assuming the claim is realistic, whose insurers will eventually have to pay that amount? (2)
- 1.4.3 What kind of marine insurance will cover the fire damage to the hull structures of the *Capetan Michael*? (2)
- 1.4.4 What records kept by the Master of the *Atlantic Savior* will be extremely important as evidence when their insurance claim for the diversion costs is submitted? (2)
- 1.5 The owners of the salvage tug make a claim for salvage.
- 1.5.1 Do you think their claim will succeed? (2)
- 1.5.2 Give a reason for your answer to Question 1.5.1. above. (4)
- 1.5.3 In which city are many salvage claims judged? (2)
- 1.5.4 Besides the salvage claim, the tug's owners can also submit a claim for another service they rendered to the *Capetan Michael*. What service did they perform? (2)
2. Give a definition of salvage. (4)



D. Grade 12: Maritime Environmental Challenges
Topic 4
Group Activity

- Divide the class into an even number of groups of between 4 and six learners each. (e.g. Groups A, B, C, D, E, F) for debates surrounding the scenarios listed below.
- The groups are to be given at least two weeks to prepare for the debate.
- Groups must ensure that each of their members is assigned tasks that ensure that the group has as much background information on the matter as they can gather.
- Formal debating procedures require that one member of the group is the main proposer and another is the seconder.
- Speeches must have been properly researched and must be presented with sound arguments to support a particular point of view.

1. PLACE OF SAFE REFUGE

- *Ocean Giant*, a tanker with 250 000 tons of crude oil on board, has broken down off Cape Agulhas.
- Her draught is 18 metres.
- The authorities have instructed the salvage tug *Ekapa* to tow her into False Bay for repairs.
- False Bay has been designated a *Place of Safe Refuge* for vessels that need repair but are too deep to enter Cape Town.
- Because parts for repairs to the tanker have to be brought from Japan, it is expected that she will be in False Bay for about a month.
- The local environmental groups are apprehensive about a laden tanker coming into False Bay.
- The authorities believe that there is no danger of pollution as the vessel has engine trouble and is structurally sound.

Group A (proposers) & Group B (opposers) are to debate the following:

Ocean Giant should be allowed to enter False Bay.

Group C (proposers) & Group D (opposers) debate the following:

Because it is too environmentally sensitive, False Bay should *not* be a place of safe refuge for ships.

2. TRANSPORT OF NUCLEAR WASTE

- Nuclear waste is being transported from Britain to Japan aboard a ship that is specially constructed for this purpose.
- The South African government has instructed the vessel to keep more than 200 nautical miles off the coast.
- Environmentalists are pleased with this instruction.
- Maritime practitioners point out that the ship will be forced to sail through a region where some of the roughest seas are experienced and therefore, it is dangerous.

Group E (proposers) & Group F (opposers) debate the following:

The South African government is correct in ordering the ship to keep more than 200 nautical miles off the coast.

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GRADE 10 Shipping: Cape Town Harbour
Topic 2
Individual Task

Provide each learner with a map of Cape Town harbour **showing the use of the cargo berths.**

1. *Dolphin Bay* has given her expected time of arrival at the pilot station at Cape Town as 06:00 on 26 April.
 - 1.1 Explain what will happen from about 05:00 to ensure that she berths at C Berth on schedule.
 - 1.2 When *Dolphin Bay* berths at C Berth, the following ships are in the Duncan Dock (Their expected time of departure is given in brackets) :

A Berth	Diamond 2 (To be advised)
B Berth	Snow Crystal (27/4)
C Berth	-
D Berth	Winter Star (12:00 28/4)
E Berth	St Helena (16:00 29/4)
F Berth	Amber Lagoon (27/4)
G Berth	Victory M (16:00 26/4)
H Berth	Anna F (19:00 26/4)
J Berth	Frederick Oldendorff (10:00 28/4)
K Berth	Taisei Maru No 4 (29/4)
L Berth	Fairwind (30/4)
Landing Wall	Abel Jensen (15:00 26/4)
Tanker Basin	Rainbow (27/4)
Tanker Basin	Rita Knutsen (28/4)
Eastern Mole	Iannis V (To be advised)
Eastern Mole	Red Cloud (17:00 26/4)

 - 1.2.1 Study the map of the Port of Cape Town and answer the questions set:
 - (a) Give the types of cargo being handled by each of the following ships:
 - (i) Fairwind
 - (ii) Victory M
 - (iii) Rainbow
 - (iv) Taisei Maru No 4
 - (v) Rita Knutsen
 - (b) 1.2.1.2 From information on the map, which three ships in port are NOT loading cargo, but are either bunkering or having some sort of engineering work done?
 - (c) 1.2.1.3 The bulker *Aegean King* is due to arrive at 14:00 on 26 April to discharge a cargo of wheat. Her draught of 11 metres means she must berth at either G, H, or K Berths.
 - (i) What is the earliest she can berth?
 - (ii) Which berth can the port authorities use for her?
 - (iii) She will berth starboard side to. Which ship will be ahead of her when she berths?
 - (d) What cargo will be handled at berths B,C and D at this time of the year?
 - (e) What type of ship is *Snow Crystal*?
 - 1.3 The cargo of wheat carried by *Aegean King* has been imported from a major grain-producing country. Name two possible sources of that grain.
 - 1.4 The multi-purpose ship *Amber Lagoon* carries several hundred containers and two other types of cargo on her regular service for her owners, MACS.
 - 1.4.1 In Cape Town she discharged 125 20-foot containers and 42 40-foot containers, using her own cranes. How many TEU did she discharge?

1.4.2 List the other two types of cargo which she carries.

1.4.3 Which of the following terms will apply to the *Amber Lagoon*?

- Trampship/Liner/Geared/Coaster/Nearsea Trader/Multi-Purpose Ship/Obo

1.5 The *Winter Star* is due to sail for London at 12:00 on 28 April. She will average 18 knots on the voyage of 6000 nautical miles.

1.5.1 How many days will it take for her to reach London? (Round off your answer to the NEXT day.)

1.5.2 What will be her ETA at London?



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Grade 11 Shipping: Ship Chartering And Voyage Costing
Topic 2
Individual task

1. DETAILS OF THE VESSEL AND HER VOYAGE

Bergenzee is a classified timber carrier with her accommodation and engine room aft.

Other details are as follows :

- | | |
|---------------------------------------|--|
| • Owners | Northern Shipping, Norway |
| • Charterer for this voyage | Finnish Timber Exporters, Helsinki |
| • Managers | Neptune Ship Managers, London |
| • Holds 1 & 2 | No Tweendecks |
| • Holds 3, 4 & 5 | One tweendeck and lower hold |
| • Each hold is served by a crane | SWL 20 tons for each crane |
| • Length Overall (Bulbous Bow) | 160 metres |
| • Beam (Extreme) | 24 metres |
| • Depth | 16 metres |
| • Loaded Draught | 10 metres |
| • Gross Tons | 16457 |
| • Classification : Det Norske Veritas | 100A1
DVMC |
| • Insurers : | Hull & Machinery
P&I Lloyds
Baltic & Scan-Ins |

1.1 VOYAGE CHARTER FIXTURE

BERGENZEE (34 540dwt., Norwegian, 14 knots on 20 tons HVF + 1.5 tons MDO, built 2002) delivery Skaw 04 September trip via Baltic, redelivery Walvis Bay-Beira range. \$26 750 daily (Jebsen)

1.2 VOYAGE & CARGO DETAILS

She will deliver to her charterer at 00:01 on 4 September off Skaw (the most northerly point of Denmark), and will sail to Helsinki in Finland where she will load timber for Port Elizabeth (South Africa). The charter rate excludes fuel and other costs shown below.

While his ship was off Skaw, the master of *BERGENZEE* sent the following message to his agent in Helsinki:

FINNSHIP HELSINKI

ETA HELSINKI PILOT 0600 6 SEPTEMBER. REQUEST STORES AND BUNKERS AS PER ORDER EMAILED 4 SEPTEMBER PLUS CHARTS SOUTH AFRICAN COAST. 2ND ENGINEER OLAFSEN PAYING OFF ON LEAVE. HE TO BE FLOWN TO BERGEN. ASSUME REPLACEMENT RYDAHL WILL BE JOINING IN HELSINKI. CHEF MARTINEZ REQUIRING TREATMENT FOR MINOR BURNS TO HAND. OILER DA MINTO REQUIRES DENTAL TREATMENT.

MY CARGO STOWAGE PLAN HELSINKI – PORT ELIZABETH IS AS FOLLOWS:

HATCH NUMBER 1	5 000 TONS PLYWOOD
HATCH NUMBER 2	6 000 TONS SAWN TIMBER
HATCH NUMBER 3	7 000 TONS PLYWOOD
HATCH NUMBER 4	6 000 TONS SAWN TIMBER
HATCH NUMBER 5	7 000 TONS PLYWOOD
DECK CARGO	600 LOGS
NOTE:	FOR STABILITY CALCULATIONS, WE ARE ASSUMING EACH LOG WEIGHS 1 TON & WE PLAN TO LOAD 120 LOGS ATOP EACH HATCH COVER

REQUIRE CARGO SURVEYOR IN ATTENDANCE ON ARRIVAL.

ERIKSEN MASTER BERGENZEE

1.3 SOME SPECIFIC DETAILS

- | | | |
|--|--------------------|--|
| • Freight rate | Sawn Timber | \$28 per ton |
| | Plywood | \$35 per ton |
| | Logs | \$28 per log |
| • ETD Helsinki | | 23:59 12 September . |
| • Bunker costs Helsinki | | HFO : \$385 per ton |
| | | MDO : \$496 per ton |
| • Distance Helsinki – Port Elizabeth | | 8200M |
| • Port costs : Helsinki | | \$7 000 per day |
| • Port costs : Port Elizabeth | | \$6 000 per day |
| • Tugs and pilotage | | \$17200 for the voyage |
| • Working time Port Elizabeth | | Berthing 1 hour after arrival or
1 hour after sunrise
(about 07:30), whichever is the
later.
Discharging to begin about 3 hours
after berthing, Note the agreed hours
of work.
<i>Agreed hours of work :</i>
08:00 – 10:00; 10:30 – 12:30
13:00 – 15:00; 15:30 – 17:30
18:00 – 20:00 |
| • Discharge time : Port Elizabeth | Sawn Timber | : 10 lifts per hour
per crane |
| | Plywood | : 8 lifts per hour per
crane |
| | Logs | : 10 logs per hour per
crane. |
| | NB | : Logs to be discharged before
any other cargo. |
| • Will require one full day cleaning holds after completion of cargowork, i.e. assume that the charter will end at midnight on the day following completion of cargowork | | |
| • Agency costs, insurance, and sundry | | \$105 000 for the voyage |
| • Fuel consumption given in charter fixture. | Note: | HFO only consumed at sea;
MDO consumed at sea and in port. |



IN ALL CALCULATIONS RELATING TO CARGO WORK, ROUND OFF TO THE **NEXT** (NOT NEAREST) HOUR. E.G. 12, 7 HOURS = 13 HOURS or 13,2 HOURS = 14 HOURS

IN ALL CALCULATIONS RELATING TO TIME AT SEA, ROUND OFF TO THE **NEXT HALF DAY**. E.G. 12,3 DAYS = 12,5 DAYS or 13,6 DAYS = 14.0 DAYS

1. Compile the reply that the Agent will send to Captain Eriksen, Master of *Bergenzee*. Ensure that all relevant details are included.
2. List the arrangements that the Port Agent will need to make prior to the arrival of *Bergenzee* in Helsinki.
3. Assume that *Bergenzee* will arrive at the pilot station at the time given by the Master. List the preparations that Helsinki Port Control will need to make prior to that time.
4. When *Bergenzee* berths in Helsinki, the agent is on the wharf.
- 4.1 When will he be able to board the ship?

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- 4.2 Apart from the ship's documents, what other important item will he have with him?
- 4.3 What piece of equipment is vital to a ship's agent to ensure that all arrangements run smoothly before and during the ship's stay in port?
5. Compile the message that the Helsinki agent will send to **Algoa Shipping**, the agent in Port Elizabeth, once *Bergenzee* has sailed from Helsinki. (***If certain information is not available to you in this part of the examination, you may use reasonable "guesstimates" to ensure that the message is complete.***)

VOYAGE COSTING

1. How many days will it take *Bergenzee* to reach Port Elizabeth?
2. What is her ETA off Port Elizabeth?
3. What time will she berth? **NB: Note Working times Port Elizabeth.**
4. What time will cargowork begin? **NB: Note Working times Port Elizabeth**
5. How many hours would it take to complete the discharge of her cargo? **Remember to read all the points relating to the ship and her voyage, especially the discharging rates.**
6. When will she finish cargo work? **Remember to read all the points relating to cargo working hours.**
7. When will her charter end?
8. How many days was she in Port Elizabeth?
9. How many days was she on charter? **Remember to include the period from Skaw to Helsinki and in Helsinki as well.**
10. Calculate the cost of the entire voyage.
11. You have been given the freight rates. What did she earn from the voyage?
12. How much profit/loss did the voyage make?



APPENDIX E
EXAMPLE OF AN ASSESSMENT TOOL

Learner's Name _____ Class _____

Topic : Annotated Map Of A South African Harbour

Criteria	Mark Obtained	Possible Mark	Comments
<i>Accuracy Of Map</i>		25	
<i>Accuracy Of Details On Map</i>		25	
<i>Neatness</i>		15	
<i>Use Of Colour</i>		10	
<i>Overall Impression</i>		25	
Total		100	

Overall Comments:

TEACHER'S SIGNATURE _____



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APPENDIX F

ASSESSMENT TERMINOLOGY

From Department of Education

20 04 06

TERMINOLOGY	EXAMPLES
Types of assessment (X4)	Formative assessment, Summative assessment, Baseline assessment and Diagnostic assessment
Methods of assessment – <i>i.e. who is carrying out the assessment</i> (X4)	Teacher assessment, Self-assessment, Peer assessment and Group assessment
Methods of collecting evidence (X3)	Observation-based assessment, Test-based assessment and Task-based assessment
Forms of Assessment	Assignment, Aural test, Case study, Examinations, Multiple response questions, Demonstrations, Role plays, etc.
Tools for assessing learner performance	Rubrics, Rating scales, Checklists, Observation sheets, Marking memoranda, Assessment grids, etc.
Recording tools	Class list, Mark sheet, Promotion schedule, etc.
Reporting tools	Report card using competence descriptions, Teacher-parent interview, Teacher-learner interview, Written comments in learner work books, etc.

- Assessment:** Gathering of evidence to make a judgement or describe the status of learning of an individual or group.
- Assessment for learning:** Formative or diagnostic assessment, which aims to monitor and improve the teaching and learning process.
- Assessment of learning:** Assessment which serves as a basis for documenting the extent to which the learner mastered the topics for the unit of study / work. Assessment for the purposes of promotion and certification.
- Assessment form:** Refers to the kind of assessment instrument used in relation to the topics. A variety of assessment forms are used to ensure a fair assessment process.
- Assessment method:** Refers to the activity that an assessor engages in, as he/she assesses a learner and the learner's work.
- Assessment instrument:** Refers to the nature of the assessment task or activity given to the learner to do as well as the relevant criteria used to assess the learner's performance.
- Day-by-day Assessment:** It is a problem-solving exercise done in class with clear guidelines and of specified length. Assignments are less open-ended than projects.
- Fairness:** An assessment should not in any way hinder or advantage a learner.
- Learner File:** Collection of different types of evidence, which relates to work being assessed.
- Performance Assessment** A task based on problem solving involving investigation designing, making, evaluating and communicating. The this task in done over a period of time. The essential focus of this task is to test practical competency practical; The work being carried out under supervision of the teacher.

- Recording:** Recording involves the detailed record keeping of a learner's performance to monitor the learner's progress and to work out methods that can improve the learner's development.
- Reporting:** This involves presenting information about the learner to the learner and his/ her parents/ guardian. This information is selected from the teacher's records and is presented in such a way that it reflects the learner's progress in achieving the required outcomes.
- Reliability:** Reliability in assessment is about consistency. Consistency refers to the same judgement being made in the same, or similar contexts each time a particular assessment for specified stated intentions is administered.
- School-based Assessment:** Schools internally assess learning continuously / on an ongoing basis.
- Teacher's file:** Contains all the instructions and assessment criteria and rubrics pertaining to all the internal assessment tasks set for the learners.
- Validity:** Assessment procedures, methods, instruments and materials have to match what is being assessed.

