

MASTER FISHMONGER STANDARD **■**

Fulfilment of this workbook should help you with build upon your existing knowledge of the following:

- Fisheries
- Aquaculture
- · Fish and Shellfish Knowledge
- · Preparation and Knife Skills
- Imports, Exports and Domestic Landings
- Customer Service
- Handling and Processing
- Retail & Display
- Quality Assessment & HACCP
- Nutrition
- Recipes / Cooking

Unless stated, one mark will be allocated based on one true and relevant answer. For example, if there are three marks available then three relevant and correct statements or answers should be given to obtain the full marks available.

Research

Within this workbook you will find links to important learning resources that will help you to complete your answers. Please ensure that you take the time to read or watch them, and reference them when possible to ensure that your marker understands where you have obtained your information from.

Good luck!

Acknowledgements

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Fisheries

LEARNING RESOURCES

Watch:

The Business of Fishing

https://www.youtube.com/watch?v=7pOzP 29N3HI

Read:

'UK Seafood Industry: Dashboard 2016' http://www.seafish.org/media/publications/Dashboard_Screen.pdf

Fish and Season: Sustainable Fish http://fishandseason.com/seasons

Marine Conservation Society – buying seasonal fish

http://www.mcsuk.org/downloads/fisheries/BuyingFishInSeason.pdf

Harvesting Methods

http://www.seafoodwatch.org/oceanissues/fishing-and-farming-methods

The Seafood Guide: Responsible Sourcing and The UK Seafood Industry – An Overview

The Seafish Guide to Responsible and Sustainable Sourcing

http://www.seafish.org/media/publications/Seafish_Resp_sourcing_and_sustainabilit_09_08_2016.pdf

The Seafish Guide to Illegal, Unreported and Unregulated (IUU) Fishing

http://www.seafish.org/media/publications/SeafishGuidetoIUU07-2016.pdf



The Business of Fishing

1. Using the online resource: 'UK Seafood Industry: Dashboard 2016', describe the total number of fishermen employed (full and part time) in England, N. Ireland, Scotland and Wales? (2 marks) What is the total number of full-time and part-time fishermen employed in the UK? (2 marks) (Total: 4 marks)
Watch 'The Business of Fishing' then answer the following questions:
2. What are the four main costs associated with purchasing your own fishing vessel? (3 marks)
3. What are the four main costs associated with operating a fishing vessel? (2 marks)
4. Name four reasons why more young people are not getting into the fishing industry? (2 marks)
5. Name six challenges associated with being a fisher? (3 marks)

Sustainable Fisheries

are part of a natural breeding cycle. Sustainable fisheries will identify 'peak' season when the mature fish are best quality to eat out of breeding (spawning) condition and 'out of season' when the species are spawning. Explain two benefits and two challenges of purchasing seafood during 'low' and 'peak' season. (4 marks)
2. Name four harvesting methods generally regarded as more selective and environmentally responsible? (2 marks)
3. Can you name four major reasons why overfishing has occurred in the last fifty years? (4 marks)
4. Describe three measures which can be taken by a consumer to support sustainable fisheries and aquaculture'? (3 marks)
5. Name four problems with buying and selling illegally caught fish and shellfish? (4 marks)

Gear & Equipment

LEARNING RESOURCES

Watch:

Beam Trawl Selectivity:

https://www.youtube.com/watch? v=COeEq_yQO1c

Read:

Fishing UK: past, present and future

www.seafish.org/media/Publicatio ns/UKFishing_PastPresentFuture.p df

Harvesting Methods

http://www.seafoodwatch.org/oce an-issues/fishing-and-farmingmethods

Marine Conservation Society - how fish are caught

http://www.mcsuk.org/downloads/fisheries/Fishing_Methods.pdf



Gear & Equipment

1. Describe three types of passive fishing gears. (3 marks)
2. Describe three types of active fishing gears. (3 marks)
3. What are the advantages and disadvantages of passive fishing gears? (4 marks)
4. What are the advantages and disadvantages of active fishing gears? (4 marks)
5. What is bycatch (1 mark), why is it a problem for conservation and fisheries (2 marks) and what changes are being put in place to prevent it? (3 marks) (Total: 6 marks)

Gear & Equipment

7. Name the main types of fishing methods used to harvest the following species:

Species	Fishing Method
Mussel	e.g. Rope grown or seabed
Mackerel	e.g. Purse Seine / Hand Line
Haddock	
Cod	
Cockles	
Gilthead bream	
Salmon	
Seabass	
Crab	
Monkfish	
Scallops	
Tuna	



Aquaculture

LEARNING RESOURCES

Watch:

Shellfish!

https://www.youtube.com/watch?v=AN5OZn7M318

Harvesting Methods

http://www.seafoodwatch.org/oce an-issues/fishing-and-farmingmethods

FAO: Why Aquaculture?

http://www.fao.org/docrep/t8598 e/t8598e03.htm

FAO: State of the World Fisheries: Aquaculture

http://www.fao.org/3/a-i5555e.pdf

Marine Conservation Society - how fish are caught

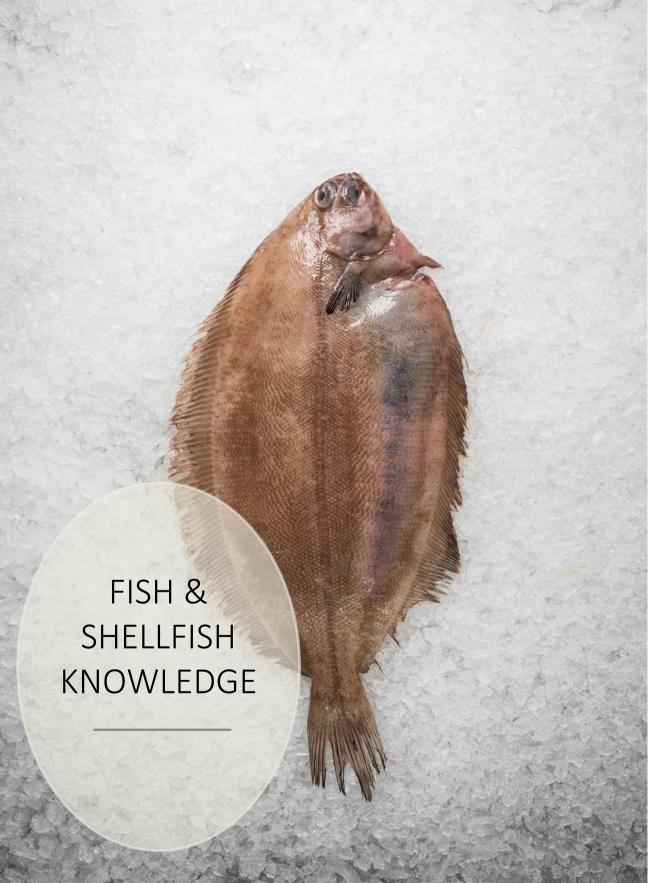
http://www.mcsuk.org/downloads/fisheries/Fishing_Methods.pdf



Aquaculture

Watch the Seafish' 'Shellfish!' video then answer the questions 1 - 3:

1. Name four bivalve species which are harvested in the UK (2 marks) and the five aquaculture techniques used. (3 marks) (Total: 5 marks)
2. What the four main benefits of shellfish production in the UK? (4 marks)
3. Where can shellfish spat be harvested from? (4 marks)
4. What is organic aquaculture? What are two advantages and two disadvantages of this type of fish farming? (6 marks)
5. Using the Seafood Guide, describe how aquaculture falls into three broad areas Briefly describe the processes involved in each area and provide an example of a farmed species for each area. (6 marks)



Fish & Shellfish Knowledge

LEARNING RESOURCES

Read:

The Seafood Guide: Species and Availability / Species Availability

Fishbase: Marine science web site with access to pictures and names of fish from around the world http://www.fishbase.org/search.ph p

M&J Seafood – The fish book http://www.mjseafood.com/the-fish-book

Pelagic Fisheries

https://oceanservice.noaa.gov/fact s/pelagic.html

Deepwater species

http://www.gov.scot/Topics/marin e/marineenvironment/species/fish/deepwat er

Commercial names of fish

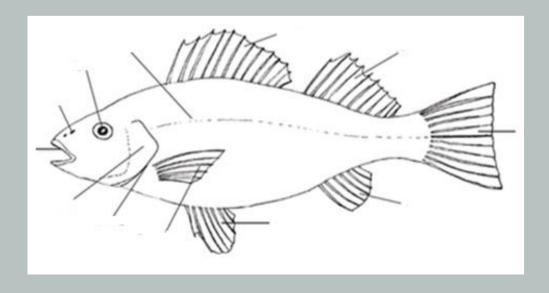
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/236702/pb14027-uk-commercial-designation-fish-list.pdf



Fish & Shellfish Knowledge

1. What is a pelagic fish species? What are the characteristics of these fish species? (2 marks)
2. What is a demersal fish species? What are the characteristics of these fish species? (2 marks)
3. What are the characteristics of a benthic species? (1 marks)
4. What is the definition of a deep-sea fish? What are the characteristics do deep-sea fish have that make them vulnerable to overfishing? (2 marks)

5. Complete the fish diagram with the names of each body part. (6 marks)





Preparation & Knife Skills

LEARNING RESOURCES

Watch:

Seafish Training Fish Preparation Masterclass Series

https://www.youtube.com/playlist?list=PLjmL1 YNydu1EE0yahhu-me_xy3Mp2U6RP

Read:

The Seafish Guide

Cuts and portions
Direct Seafoods – fish cuts

http://www.directseafoods.co.uk/fish-seafood/preparation

M&J Seafood - Cuts and portions

http://www.mjseafood.com/fishipedia-seafood-guide/buying-storing-and-cooking/cuts-and-portions/



Preparation & Knife Skills

1. Using the Seafood Guide, complete the following table: (20 marks)

Cuts	Describe the cut, it's benefits and provide an example of a species that can be cut using this technique.
	Large round fish and large game fish; cod, hake, tuna, marlin, mahi mahi
Loins	Typical the thickest section of the fillet with the largest muscle blocks/ flakes
Pocketed fish	
Quarter-cut	
Steaks (darnes)	
Steaks	
(troncons)	
Butterfly fillet	
Paves	
Supremes	
Eccalones	
Escalopes	
Canoe fillets	



Imports, Exports and Domestic Landings

LEARNING RESOURCES

Read:

The Seafood Guide: The UK Seafood Industry – An Overview

'UK Seafood Industry: Dashboard 2016'

http://www.seafish.org/media/publications/Dashboard_Screen.pdf

UK Sea Fisheries Statistics

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/647482/UK_Sea_Fisheries_Statistics_2016_Full_report.pdf



Imports, Exports and Domestic Landings

ports (in terms of volume of seafood) in 2016. (2 marks)
2. Using the UK Sea Fisheries Statistics, name the top five domestically landed species by UK vessels (by volume) in 2016 (2 marks)
3. Using the UK Sea Fisheries Statistics, name the top five domestically landed species by UK vessels (by value) (2 marks)
4. Using the Seafood Guide, name the top five imported species by volume into the UK. (2 marks)
5. Using the Seafood Guide, what are the four main countries the UK exports seafood to? (2 marks)
6. Why is transparency and traceability important when buying seafood? (3 marks)
7. Describe what is meant by an underutilised fish species? (1 mark)



Customer Service

LEARNING RESOURCES

Read:

What defines good customer service in retail?

https://www.highspeedtraining.co.uk/hub/good-customer-service-retail/

Food Labelling guide for fishmongers

http://www3.hants.gov.uk/tradingstan dards/tradingstandards-business/ts-business-food/tsguide-labelling-fishmongers.htm

Marine Conservation Society – Fish to eat and fish to avoid

http://www.mcsuk.org/downloads/fish eries/fishweek/FishWeek_FishList_Jan 2011.pdf

Marine Conservation Society – Good Fish Guide

http://www.goodfishguide.org/

Marine Conservation Society – buying seasonal fish

http://www.mcsuk.org/downloads/fisheries/BuyingFishInSeason.pdf

Direct Seafoods - What's in Season

http://www.directseafoods.co.uk/fish-seafood/what-s-in-season

NHS Advice on how much fish to eat

http://www.nhs.uk/Livewell/Goodfood/Pages/fish-shellfish.aspx#much2

NHS - Fish & Shellfish in your diet

http://www.nhs.uk/Livewell/Goodfood/Pages/fish-shellfish.aspx



Customer Service

1. Describe four major impacts of poor customer service on a seafood business. (2 marks)
2. Describe the steps taken to open, conduct and close a sale. (2 marks)
3. When serving a customer what information <u>could</u> you provide about the product? (4 marks)
4. Why is it important to sell fish and shellfish that is of a high quality? (2 marks) What are the impacts on the industry of selling poor quality products? (1 mark) (Total: 3 marks)
5. State the importance of accuracy during filleting and the issues associated with poor accuracy, including the impact on customers. (4 marks)



Handling & Processing

LEARNING RESOURCES

Watch:
Seafish: The Business of
Processing
https://www.youtube.com/watch?

v=GPaorAYnFqY

Read:

The Seafood Guide: Seafood Processing / Processing and Techniques

Seafood Processing Industry Report:

http://www.seafish.org/media/pub lications/2014_Seafood_Processin g_Industry_Report.pdf

Food Labelling guide for fishmongers

http://www3.hants.gov.uk/trading standards/tradingstandardsbusiness/ts-businessfood/tsguide-labellingfishmongers.htm



Handling & Processing

1. Using the Seafood guide, describe what is meant by primary processing? (1 mark)
2. Using the Seafood guide, describe what is meant by secondary processing? (1 mark)
3. List all the personal protective equipment needed for hand filleting. (2 marks)
4. List the tools and equipment needed for hand filleting. (2 marks)
5. State food safety procedures to meet legal and regulatory requirements for filleting fish by hand. (6 marks)
6. When purchasing seafood, what are the legal labelling requirements that should be stated on the packaging. (6 marks)



Retail & Display

LEARNING RESOURCES

Read:

Reference fish labelling Regulations 2013

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/245013/pb13760-fish-labelling-regs-guidance.pdf

Seafood Freshness Quality

http://www.seafish.org/media/pub lications/seafishfactsheet_seafoodf reshnessquality_201101.pdf

Seafish - Buying Seafood

http://www.seafish.org/eating-seafood/buying-seafood/buying-fresh

NHS – How to store food properly

http://www.nhs.uk/Livewell/home hygiene/Pages/how-to-storefood-safely.aspx



Retail & Display

1. What design features should a seafood counter have? (3 marks)
2. Describe how to set up a seafood display in compliance with food safety and labelling regulations. (6 marks)
3. Describe how to maintain a seafood display in compliance with food safety and labelling regulations. (3 marks)
4. Describe how to dismantle a seafood display in compliance with food safety and labelling regulations. (4 marks)
5. When storing seafood overnight, what stock rotation and storage measures should be implemented? (3 marks)
6. Describe what type of seafood products need to be kept separate from one another, and the correct method to separate these products on a seafood display. (3 marks)



Quality Assessment & HACCP

LEARNING RESOURCES

Quality Assessment

Watch:

Seafood Quality Assessment Systems (videos 1 – 4) https://www.youtube.com/watch?v=9No0yWcQ78w&list=PLjmL1YNydu1EKxilnxGWrJMaB_5Gw9o2u

Seafish Training: Health and Safety

https://www.youtube.com/watch?v=fzPbxBqfFis&list= PLjmL1YNydu1GzUti-rmjNtdjFbaXI5FTP

Read:

Seafood Freshness Quality

http://www.seafish.org/media/publications/seafishfact sheet_seafoodfreshnessquality_201101.pdf

Seafish – Buying Seafood

http://www.seafish.org/eating-seafood/buying-seafood/buying-fresh

Seafish Sensory Assessment Scoresheets

http://www.seafish.org/media/Publications/sensory_a ssessment_scoresheets_14_5_10.pdf

HACCP

Watch:

Seafish Training: Hygiene in the Seafood Industry

https://www.youtube.com/watch?v=ZeBoQN4azxQ&list=PLjmL1YNydu1Gu6iNTYbdf05LAPE_JNN2I

Read:

An Introduction to Hazard Analysis Critical Control Point

http://seafoodacademy.org/pdfs/haccp-olm-segment.pdf



Quality Assessment & HACCP

Quality Assessment & HACCP

Species name:

6. Using the Seafish Sensory Assessment Scoresheets, complete the following Assessment Recording Form at your place of work for one species: (14 marks)

Origin: Harvesting method: Raw or cooked:				
	Eyes	Skin	Texture / Effect of Rigor Mortis	
Description				
Score (using TORRY or QIM)				
	Flesh and Belly Flaps	Kidney and Blood	Gills: Appearance and Odour	
Description				
Score (using TORRY or QIM)				

Quality Assessment

7. Name each species, describe the quality, and say whether you would stock this product in your store.





Nutrition

LEARNING RESOURCES

Read:

Fish a food

https://en.wikipedia.org/wiki/Fish_as_food

Seafish - Health benefits

http://www.seafish.org/eating-seafood/seafood-for-health/health-benefits

NHS - Fish & Shellfish in your diet http://www.nhs.uk/Livewell/Goodfood/ Pages/fish-shellfish.aspx

Scombrotoxin - Histamine

http://www.foodsafetywatch.org/factsheets/scombrotoxin-histamine/

NHS - Fish & Shellfish in your diet http://www.nhs.uk/Livewell/Goodfood/ Pages/fish-shellfish.aspx



Nutrition

1. Name three parts of the body that benefit from omega-3 fats? (1 mark)
2. What nutrients do fish provide? Give some examples using white fish, shellfish and oily fish. (4 marks)
3. Name 8 varieties of oily fish (4 marks)
4. What are the names of the two omega-3 fats found mainly in fish? (2 marks)
5. If you sold fish cakes that contained cod, prawns, peas and mashed potato, dipped in egg and covered in breadcrumbs, which allergens would you need to declare by law. (2 marks)



Recipes & Cooking

LEARNING RESOURCES

Read:

Fish Easy

Mitch Tonks

Fish & Shellfish / Seafood Odyssey

Rick Stein

Leith's Fish Bible

Caroline Waldegrave & CJ Jackson

Fish

Mat Follas

Fresh Fish

Jennifer Trainer Thompson

200 Fab Fish Dishes

Gee Charman

Hook, Line and Sinker

Galton Blackiston

Fish Without a Doubt

Rick Moonen and Roy Finamore

Passion for Seafood

Gordon Ramsay

Simply Fish

Fishmongers' Company and Steve Pini



Recipes & Cooking

mark)
2. Describe what type of fish is suitable for the barbeque and how it should be prepared. (2 marks)
3. Describe the difference between shallow-frying, pan frying and deep frying. (3 marks)
4. Suggest a preparation technique that someone could use if they were in a rush, but wanted something healthy. (4 marks)
5. Provide a recipe that a customer could prepare for a dinner party (6 marks)

Useful Contacts

General Programme Enquiries

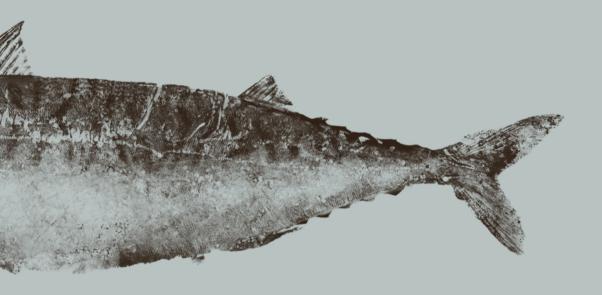
The Master Fishmonger Standard
The Fishmongers' Company
Fishmongers' Hall
London Bridge
London EC4R 9EL

www.masterfishmonger.co.uk MFS@FishHall.org.uk 020 7626 3531

MFS Preparation Course and Examination Enquiries

Seafood School at Billingsgate
Office 30, Billingsgate Market
Trafalgar Way
London
United
Kingdom E14
5ST

www.seafoodtraining.org admin@seafoodtraining.or g 020 7517 3548



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Design & Art-Direction:
Freytag Anderson
Photography by:
Rueben Paris
Barry O'Toole
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