





MANAGEMENT – Marine Management

Topics

Recreational Fishing Fisheries Management Marine Science

Phase of Learning

Late 3-6, 7-10

Site (location)

Classroom and Internet

Activities & Duration

- 1. <u>Bioregions 30 minutes</u>
- 2. <u>Recreational Species</u> <u>Profile – 1 hour</u>
- 3. Fishing Log Sheet
 60 to 90 minutes
- 4. Fish for the Future Quiz– 30 minutes

Materials

- Species identification guide
- Recreational fishing guide
- Western Australian map or atlas
- Colour pencils

Student Worksheets

- 1. <u>Western Australia's</u> <u>Fisheries Bioregions</u>
- 2. Fish Profile
- 3a. <u>Fishing Log Sheet</u>
- 3b. <u>Fish Catch Northern</u> Western Australia
- 3c. <u>Fish Catch Southern</u> <u>Western Australia</u>
- 4a. <u>Category Limits –</u> West Coast
- 4b. <u>Category Limits –</u> <u>North, Gasoyne, South</u>
- 5. Fish for the Future Quiz

Fishing for the Future

1. OVERVIEW

Students will explore the management of recreational fisheries in Western Australia and interpret local rules and regulations using Department of Fisheries' publications and website.

2. LINKS TO CURRICULUM

CURRICULUM FRAMEWORK (WA)

COMMICOLOM FILMEN	AGSTIBLEMIT COMMICCE	
Learning Area	Outcome	Strand
Science	Investigating Communicating Scientifically Science in Daily Life Acting Responsibly Science in Society Life and Living	SCIENCE Science Understanding Science as a Human Endeavou Science Inquiry Skills
Society & Environment	Investigation, Communication and Participation Active Citizenship	ENGLISH
English	Viewing Reading Writing	MATHEMATICS
Mathematics	Working Mathematically Number Measurement Chance and Data	Statistics & Probability
Technology	Technology Process Information	

AUSTRALIAN CURRICULUM

Strand SCIENCE	Sub-strand
Science Understanding	Biological Sciences
Science as a Human Endeavour	Use and Influence of Science
Science Inquiry Skills	Planning and Conducting Processing and Analysing Data and Information Evaluating
	Communicating
ENGLISH	
Literacy	Interpreting, Analysing, Evaluating Creating Texts
MATHEMATICS	
Statistics & Probability	Data Representation and Interpretation

3. OBJECTIVES

Students will:

Be able to identify local recreationally important fish species.

Be aware of different types of fisheries management regulations.

Describe the need for a 'Fish for the future' philosophy.

4. TEACHER BACKGROUND INFORMATION

Western Australia's fisheries management strategies have one primary goal – Fish for the future. This means ensuring our fisheries are ecologically sustainable.

These strategies are part of an integrated approach to management that not only takes into account the impact of fishing by recreational, commercial and indigenous sectors – but also the effect of other human activities on the State's aquatic ecosystems.

Recreational fisheries are threatened by population growth, coastal development and improved fishing technology. A high participation rate, due to the low cost of equipment and the ability of fishers to access previously remote areas, is placing pressure on many

Vocabulary

Bag Limit: restriction on the number of a particular marine organism that a fisher may catch and keep, usually over a 24 hour period.

Bioregion: a

geographic area characterised by a combination of physical and biological characteristics, for example, terrain, climate and ecological communities.

Closed Season: the closure of a fishing ground for a defined period of time, used as a tool in the management of a fishery, frequently to protect a stock during a spawning season or reduce fishing effort.

Demersal: bottom-dwelling, or living near the ocean floor.

Fishing gear: any equipment, implement, device, apparatus or other thing used or designed for use or in connection with fishing. Includes rods, handlines, nets and pots.

Pelagic: associated with the surface or middle depths of a body of water.

Possession Limit:

is the maximum number or amount of species that a person can control or transport at any one time.

Recreational fishing: fishing for pleasure, to catch a feed of fish.

Size Limit: the legislated size which individuals of the prescribed fish species, if caught, are not to be retained.

fish stocks. Industrial activities and other human-induced environmental changes have caused damage to many fish habitats.

In Western Australia, recreational fisheries are managed by the Department of Fisheries, and this management is based on the biology and ecology of fish stocks and knowledge of past exploitation patterns. Fishing in marine waters is managed in four broad biological regions – North Coast, Gascoyne Coast, West Coast and South Coast.

Controls are set to limit the over-exploitation of various species and conserve them for the sustained enjoyment of future generations.

Daily bag limits are designed to set a social standard for a 'fair day's catch' for an individual fisher, sharing the available catch among the thousands of fishers wanting to catch a fish. They may also reduce the rate at which an aggregation of fish or an area is depleted by fishing, and ensure that a larger number of fish are available in the water for a longer period of time. When set very low, they may also reduce the total catch of a species.

Possession and trip limits manage the total take of an individual fish on any one fishing trip. They represent an individual quota and put a ceiling on the total amount of fish a person can possess at any one time in a defined area – whether in total weight or in numbers of fish, or a combination of both.

Minimum size and maximum size limits are usually based on the breeding biology of a species, and are set to protect fish until they reach maturity and have been able to spawn at least once. These limits can also be set to enhance recreational fishing quality by increasing the average size of fish available. **Maximum size** (or referred to as slot limits when used in combination with a minimum size limits) are useful in protecting large breeding fish or in reducing the take of highly prized, and often rare, large individuals.

Additional protection measures can be introduced when fish are in a **vulnerable life stage**, such as physically displaying fertilised eggs in the case of crustaceans (berried females) or signs that the fish has reached a breeding condition.

Some species in WA are **totally protected**, which means they must not be caught by any means. This is an important measure to be introduced if a species becomes rare or endangered, is extremely vulnerable to overfishing or to maintain a high level or apex predators.

Closed seasons and closed areas are widely used in recreational and commercial fisheries to contain total effort outside the peak fishing season or to protect fish at a crucial stage of their life cycle, such as spawning. These seasons affect all fishers equally, and effectively limit the opportunity to fish for a given number of days. These are widely accepted in marron, trout, rock lobster, prawn and abalone fisheries, and recently in blue swimmer crab and demersal finfish fisheries.

Gear and method restrictions limit the type of fishing gear that can be used, or limit the area and time in which defined types of gear may be used. In recreational fisheries, highly destructive fishing methods such as the use of poisons and explosives, as well as the use of highly efficient commercial-type fishing, are illegal. Gear controls also aim to reduce conflict in some areas between incompatible fishing activities such as set netting and angling.

Licensing is a key strategy used throughout the world to manage recreational fisheries. There are six recreational fisheries in WA that require a license. Licences provide a database for research and education, as well as ensuring the level of funds for the management of recreational fisheries is in line with the growth in recreational fishing.

A licence is required to fish for abalone, rock lobster and marron, and also for boat fishing, netting and south-west freshwater angling within WA.

References

Bunting, J., 2001, Fish protection measure to ensure fish for the future, Fisheries Management Paper No. 141, Department of Fisheries, WA.

Department of Agriculture, Forestry and Fisheries (Commonwealth), www.daff.gov.au/fisheries/recreational

Recfishwest, <u>www.recfishwest.org.au</u>

5. TEACHER PREPARATION

This activity introduces students to recreational fishing management in Western Australia. The Department of Fisheries has a range of support materials on its website, containing specific rules and regulations for recreational fishing. These materials can be downloaded, viewed onscreen or printed.

It is best practice for students to become familiar with viewing materials from the Department of Fisheries website. From time to time, fishing rules and regulations will change, and the most up-to-date recreational fishing support materials will be located online.

Hardcopy versions may be available through your local Department of Fisheries office or Community Education Officer. Note the published date on the brochures to confirm hardcopies are current with those on the website.

In this lesson plan the intention is to introduce students to some fisheries management tools as well as some specific rules pertaining to the entire state or each bioregion.

Choose the bioregion in which the school is located. Refer to the appropriate Recreational Fishing Regional Guide and Species Identification Guide for the North Coast, Gascoyne Coast, West Coast or South Coast.

Related Resources

Carlish, B 2009, 'It's fishing, Jim, but not as we know it', Western Fisheries, September p. 38.

Carlish, B 2010, <u>Pinks back</u> from the brink, <u>Western</u> <u>Fisheries</u>, July, p. 6.

Department of Fisheries, Recreational Fishing <u>www.fish.wa.gov.au</u>

Recfishwest, www.recfishwest.org.au

Marine WATERs lesson plans:

- Manage a Fishery
- Plan a Safe Fishing Trip
- Hook, Line and Sinker
- What's My Age Again?

6. PROCEDURE

ACTIVITY 1: Bioregions

Students will locate Western Australia's four marine fisheries bioregions on a map.

Steps

- 1. Access the recreational fishing page of the Department of Fisheries WA website and display the map illustrating the bioregions. http://www.fish.wa.gov.au
- 2. Explain that Western Australia has an extensive coastline with different fish and marine habitats and because this, the State has been separated into four marine fisheries bioregions for management purposes. This can be explained in the context of a school, for example, it is easier to manage one of class students rather than all students at a school.
- 3. Access maps or atlases for students to use.
- 4. Using Student Worksheet 1: Western Australia's Fisheries Bioregions, correctly label each bioregion, shade in the land area with colour pencil, and label key WA cities and towns. Consider printing the worksheet in A3 for more space.
- 5. Check and monitor answers.

Related Resource

Department of Fisheries, Recreational Fishing <u>www.fish.wa.gov.au</u>

Student Worksheet

1. <u>Western Australia's</u> <u>Fisheries Bioregions</u>

ACTIVITY 2: Recreational Species Profile

Students will research a recreational fish species.

Steps

- 1. Ask students to choose a marine organism from a bioregional Species Identification Guide.
- 2. Complete Student Worksheet 2: Fish Profile, by researching resources on the Department of Fisheries website, Internet and books.
- 3. Check and monitor answers.

ACTIVITY 3: Fishing Log Sheet

Students will interpret recreational fishing support materials and practice applying size limits, bag limits and category limits.

Steps

- 1. Choose either Student Worksheet 3b: <u>Fish Catch Northern WA (North Coast and Gascoyne Coast)</u> or Student Worksheet 3c: <u>Fish Catch Southern WA</u> (West Coast and South Coast) and provide each student with a copy.
- 2. Access a copy of the current and appropriate Recreational Fishing Guide and Species Identification Guide.
- 3. Ask students to refer to recreational fishing support materials and complete Student Worksheet 3a by:
 - · Identifying each species.
 - Locating the minimum and maximum size limits, if applicable.
 - Locating the bag limit for each species or group of fish.
 - Stating if the fish is able to be retained legally, based upon size and bag limits only.
- 4. Check and monitor answers.
- 5. Remind students that in real life situations, fishers will immediately assess whether the catch can be retained legally or returned back alive to the water.
- 6. Using Student Worksheet 4a: <u>Category Limits West Coast</u> or 4b: <u>Category Limits North Coast</u>, <u>Gascoyne Coast</u>, <u>South Coast</u>, sort fish that could be legally retained into its appropriate category High Risk, Medium Risk, Low Risk.
- 7. Record the species name and quantity.
- 8. Record the mixed daily bag limit for each category.
- 9. Count the total number of fish in each category and refer to the mixed daily bag limit to calculate whether the catch is under or over the category limit.
- 10. Check and monitor answers.

Student Worksheet

2. Fish Profile

Related Resources

Allen, G. 1988, Marine fishes of tropical Australia and south-east Asia, Western Australian Museum, Perth.

Department of Fisheries, Western Australia, www.fish.wa.gov.au

Fishing WA, www.fishingwa.com

Hutchins, B & Swainston, R 1986, *Sea fishes of southern Australia*, Swainston Publishing, Perth.

Hutchins, B & Thompson, M 1983, The marine and estuarine fishes of southwestern Australia – a field guide for anglers and divers, Western Australian Museum, Perth.

Western Angler Magazine, www.westernangler.com.au

Student Worksheets

- 3a. Fishing Log Sheet
- 3b. Fish Catch Northern WA
- 3c. Fish Catch Southern WA
- 4a. <u>Category Limits West</u> <u>Coast</u>
- 4b. <u>Category Limits North</u> <u>Coast, Gacoyne Coast,</u> South Coast

Related Resources

Department of Fisheries, WA, *Recreational Fishing Guides:*

West Coast Region

South Coast Region

Gascoyne Coast Region

North Coast Region

Department of Fisheries, WA, *Species Identification Guides:*

West Coast Region

Southern Region

Gascoyne Coast Region

Kimberley/Pilbara Region

ACTIVITY 4: Fish for the Future Quiz

Students will interpret in further detail the content of recreational fishing support materials and management of recreational fisheries through completing a quiz.

Steps

- 1. Access a copy of a current Recreational Fishing Guide.
- 2. Distribute Student Worksheet 5 containing the Fish for the Future quiz.
- 3. Students work through the quiz by referring to a copy of the current Recreational Fishing Guide, which has been used to construct the quiz.
- 4. When complete, students swap quiz papers with other students while the teacher runs through the correct answers.
- 5. Clarify and elaborate on any questions students had trouble with.

EXTENSION ACTIVITIES

- Invite a Department of Fisheries community education officer to your class to talk about or deliver a hands-on activity on the management of Western Australia's aquatic resources.
- Visit the <u>Naturaliste Marine Discovery Centre</u> and participate in a Fishing for Sustainability session. In <u>Fishing for Sustainability</u>, students learn how rules and regulations help manage the State's recreational fisheries in a sustainable way. Students will participate in a virtual fishing game, exploring various scenarios to observe the effects of fishing pressure on Western Australia's fish stocks.
- Check out related Marine WATERs lesson plans:
 - Manage a Fishery
 - Plan a Safe Fishing Trip
 - · Hook, Line and Sinker
 - What's My Age Again?

Related Resources

Department of Fisheries,
Recreational Fishing Guides:
West Coast Region
South Coast Region
Gascoyne Coast Region
North Coast Region

Student Worksheet

5. Fish for the Future Quiz

Related Resources

Department of Fisheries WA, <u>Community and Education</u>
Department of Fisheries WA, Regional and District Offices, <u>www.fish.wa.gov.au</u>
Naturaliste Marine Discovery Centre, <u>Fishing</u>

for Sustainability activity

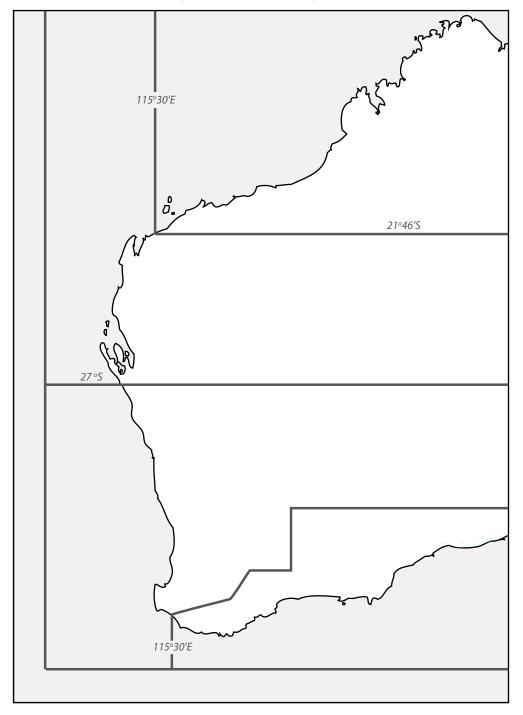
STUDENT WORKSHEET 1: Western Australia's Fisheries Bioregions

Western Australia's Fisheries Bioregions

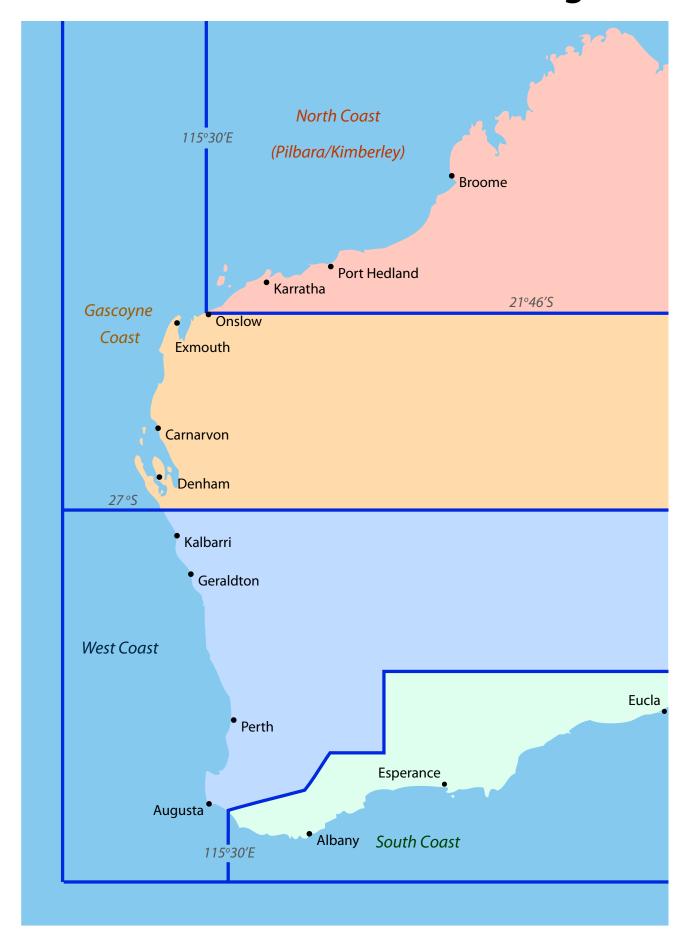
Name:	Date:

Steps

- 1. Label each marine fisheries bioregion.
- 2. Use coloured pencils to shade in the land area of each bioregion based on the colours used in Department of Fisheries' publications.
- 3. Label the following Western Australian cities and towns: Albany, Augusta, Broome, Bunbury, Busselton, Carnarvon, Denham, Esperance, Eucla, Exmouth, Geraldton, Jurien, Kalbarri, Karratha, Kununurra, Mandurah, Onslow, Perth and Port Hedland. Include a label for the town your school is located in, if not included in the above list.
- 4. Using a different colour, label any locations where you have been fishing.



Western Australia's Fisheries Bioregions



STUDENT WORKSHEET 2: Fish Profile Fish Profile Name: _____ Date: _____ Species Name: Bioregion: 1. What other common names do people call me? 2. What is my scientific name? 3. Describe what I look like? 4. Make a sketch of me in the box below:

	EN I WORKSHEET 2: Fish Profile continuea
6. H	ow long do I live for?
7. W	/hat habitat am I found in?
_	
8. W	/hat do l eat?
_	
9. Ai	re people allowed to fish for me?
10. ls	there a limit of how many of my species can be caught per day, i.e., bag limit or boat limit?
11. D	o I have any legal size limits – minimum or maximum?
12. W	/hat other fishing rules would fishers need to be aware of when fishing for me?
_	
13. Li	st some interesting facts about me.
_	

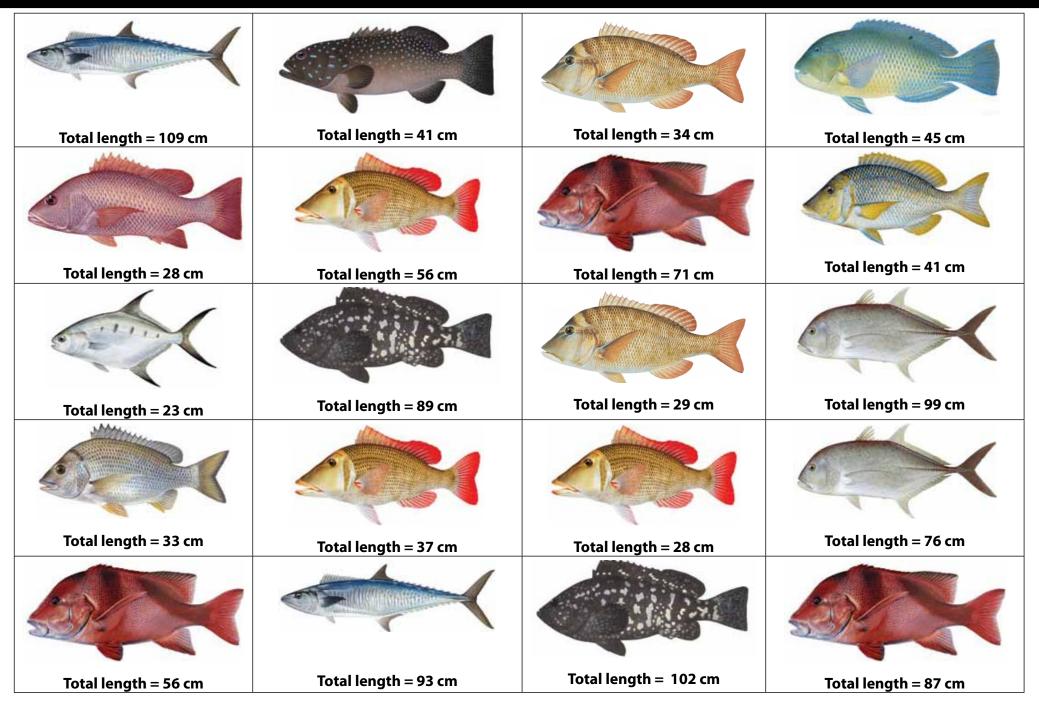
Fishing Log Sheet

Name:	Date:

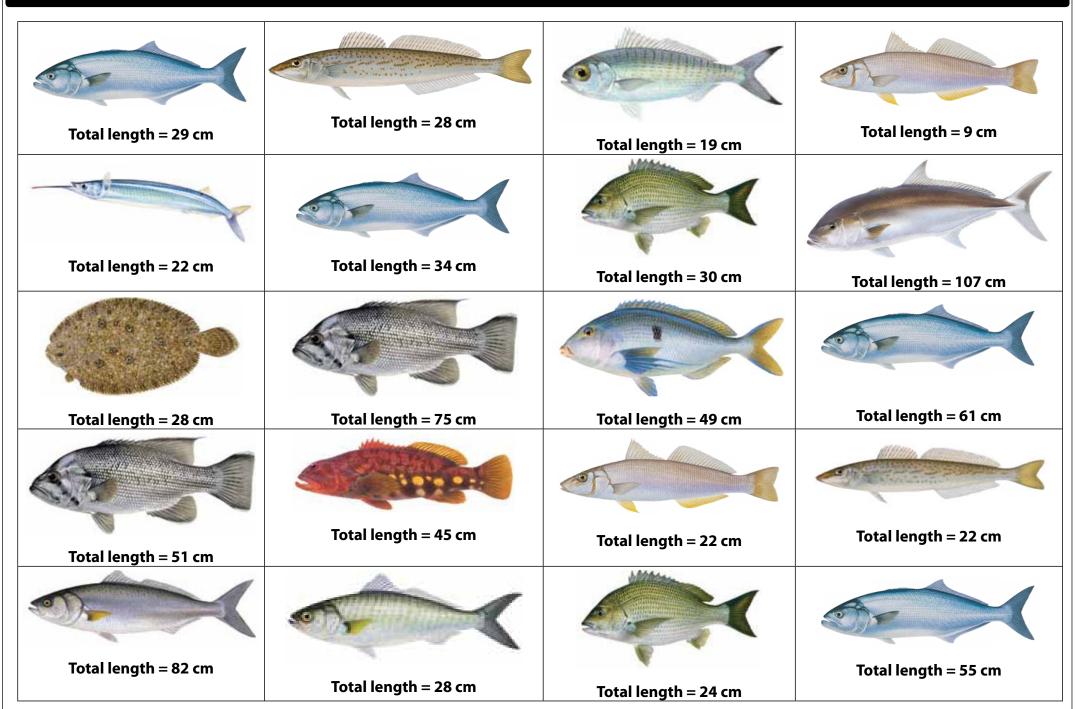
Bioregion:_____

Species	Actual size (cm)	Minimum Size (cm)	Maximum size (cm)	Bag limit	Does fish meet bag and size limits regulations? (Yes or No)

STUDENT WORKSHEET 3b: Fish Catch – Northern WA



STUDENT WORKSHEET 3c: Fish Catch – Southern WA



SUGGESTED TEACHER ANSWERS: Fishing Log Sheet – North Coast

Bioregion: North Coast

Species	Actual size (cm)	Minimum Size (cm)	Maximum size (cm)	Bag limit	Does fish meet bag and size limits regulations? (Yes or No)
1. Narrow-barred Spanish mackerel	109 cm 93 cm	90 cm	N/A	2	Yes
2. Bar cheek coral trout	41 cm	45 cm	N/A	Coral and coronation trout combined; 1 west of the De Grey River, 2 east of De Gray River	No. 4 cm undersíze
3. Blue-lined emperor	34 cm	32 cm	N/A	4 (Emperors and seabream)	Yes
4. Blackspotted tuskfish	45 cm	40 cm	N/A	4 (Tuskfish and wrasse)	Yes
5. Mangrove jack	28 cm	30 cm	N/A	4 or 2 at Dampíer Archípelago	No. 2 cm undersíze
6. Sweetlip emperor	56 cm 37 cm 28 cm	28 cm	N/A	4 (Emperors and seabream)	Yes Yes Yes
7. Red emperor	71 cm 56 cm 87 cm	41 cm	N/A	2	Yes Yes No. Already have 2
8. Spangled emperor	41 cm	41 cm	N/A	4 (Emperors and seabream)	No. Already have 4 Emperor/Seabream bag límít
9. Common dart	23 cm	N/A	N/A	8	Yes
10. Rankín cod	89 cm 102 cm	N/A	100 cm	2 (Maximum of 2 rankin cod incombined cod bag limit of 4)	Yes No. 2 cm oversíze
11. Giant trevally	99 cm 76 cm	N/A	N/A	4 (Trevally combined)	Yes Yes
12. Yellowfin bream	33 CM	30 cm	N/A	8 (Bream combined)	

SUGGESTED TEACHER ANSWERS: Fishing Log Sheet – Gascoyne Coast

Bioregion: Gascoyne Coast

Species	Actual size (cm)	Minimum Size (cm)	Maximum size (cm)	Bag limit	Does fish meet bag and size limits regulations? (Yes or No)
1. Narrow-barred Spanísh mackerel	109 cm 93 cm	90 cm	N/A	2	Yes
2. Bar cheek coral trout	41 cm	45 cm	N/A	1 (Coral and coronation trout combined)	No. 4 cm undersíze
3. Blue-lined emperor	34 cm	32 cm	N/A	4 (Emperors and seabream)	Yes
4. Blackspotted tuskfish	45 cm	40 cm	N/A	4 (Baldchín groper and tuskfísh)	Yes
5. Mangrove jack	28 cm	30 cm	N/A	4 (Tropical snappers and sea pearch)	No. 2 cm undersíze
6. Sweetlip emperor	56 cm 37 cm 28 cm	28 cm	N/A	4 (Emperors and seabream)	Yes Yes Yes
7. Red emperor	71 cm 56 cm 87 cm	41 cm	N/A	2	Yes Yes No. Already have 2
8. Spangled emperor	41 cm	41 cm	N/A	4 (Emperors and seabream)	No. Already have 4 Emperor/seabream bag límít
9. Common dart	23 cm	N/A	N/A	40	Yes
10. Rankín cod	89 cm 102 cm	N/A	100 cm	4 (Cods combined)	Yes No. 2 cm oversíze
11. Gíant trevally	99 cm 76 cm	N/A	N/A	2 (Giant and golden trevally combined)	Yes Yes
12. Yellowfin bream	33 CM	30 cm	N/A	8 (Bream combined)	Yes

SUGGESTED TEACHER ANSWERS: Fishing Log Sheet – West Coast

Bioregion: West Coast

Species	Actual size (cm)	Minimum Size (cm)	Maximum size (cm)	Bag limit	Does fish meet bag and size limits regulations? (Yes or No)
1. Taílor	29 cm	30 cm	only 2 fish	8	No. 1 cm undersíze
	34 cm		over 50 cm		Yes
	61 cm				Yes
	55 cm				
2. Kíng George whítíng	28 cm	28 cm	N/A	8	Yes
	22 cm				No
3. Australían herring	19 cm	N/A	N/A	30	Yes
4. Garfísh	22 cm	N/A	N/A	30	Yes
5. Black bream	30 cm	25 cm	only 2	4	Yes
24 cm		bream over 40 cm in Swan- Canning rivers		No. 1 cm undersíze	
6. Flounder	28 cm	25 cm	N/A	8 (Combined flathead/flounder)	Yes
7. Samson fish	107 cm	60cm	N/A	2	Yes
8. Western Australian	75 cm	50 cm	N/A	1	Yes.
dhufish	51 cm				No. Exceeded bag limit of 1 per day
9. Queen snapper	49 cm	41 cm	N/A	2	Yes
10. Harlequín físh	45 cm	N/A	N/A	2 (Cods)	Yes
11. Yellowfin whiting	22 cm	N/A	N/A	12	Yes
	9 cm				Yes
12. Australían salmon	82 cm	30cm	N/A	4	Yes
	28 cm				No. 2 cm undersíze

SUGGESTED TEACHER ANSWERS: Fishing Log Sheet – South Coast

Bioregion: South Coast

Species	Actual size (cm)	Minimum Size (cm)	Maximum size (cm)	Bag limit	Does fish meet bag and size limits regulations? (Yes or No)
1. Taílor	29 cm	30 cm	Only 2 fish over	8	No. 1 cm undersíze
	34 cm		60 cm		Yes
	61 cm				Yes
	55 cm				
2. Kíng George whítíng	28 cm	28 cm	N/A	12	Yes
	22 cm				Yes
з. Australían herríng	19 cm	N/A	N/A	40	Yes
4. Garfísh	22 cm	N/A	N/A	40	Yes
5. Black bream	30 cm	25 cm		8	Yes
	24 cm				No. 1 cm undersíze
6. Flounder	28 cm	25 cm	N/A	8 (Combined flathead/flounder)	Yes
7. Samson fish	107 cm	60cm	N/A	2	Yes
8. Western Australían	75 cm	50 cm	N/A	2	Yes
dhufísh	51 cm				Yes
9. Queen snapper	49 cm	41 cm	N/A	4	Yes
10. Harlequín físh	45 cm	N/A	N/A	4 (Cods)	Yes
11. Yellowfin whiting	22 cm	N/A	N/A	16	Yes
	9 cm				Yes
12. Australían salmon	82 cm	30cm	N/A	4	Yes
	28 cm				No. 2cm undersíze

Category Limits – West Coast

Name:	Date:

High Risk Species	High Risk 'Pelagic' Species	Medium Risk Species	Low Risk Species
Mixed daily bag limit –	Mixed daily bag limit –	Mixed daily bag limit –	Mixed daily bag limit –
per angler	per angler	per angler	per angler
I am under/over the category limit by	I am under/over the category limit by	I am under/over the category limit by	I am under/over the category limit by
fish	fish	fish	fish

STUDENT WORKSHEET 4b: Category Limits – North Coast, Gascoyne Coast and South Coast

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		- J		

Name:	Date:

Bioregion:_____

High Risk Species		Medium Risk Species		Low Risk Species	
Mixed daily bag limit –	per angler	Mixed daily bag limit –	per angler	Mixed daily bag limit –	per angler
I am under/over the category lim	it by	I am under/over the categor	y limit by	I am under/over the category	limit by
fish		fish		fish	

West Coast Bioregion

High Risk 'Demersal' Species	High Risk 'Pelagic' Species	Medium Risk Species	Low Risk Species
Mixed daily bag limit – 2 per angler	Mixed daily bag limit – 2 per angler	Mixed daily bag limit – 12 per angler	Mixed daily bag limit – 30 per angler
1 x Western Australian dhufish * 1 x Queen snapper 1 x Harlequin fish	1 x Samson fish	3 x Tailor 1 x King George whiting 1 x Black bream 1 x Flounder 2 x Yellowfin whiting 1 x Australian salmon	1 x Australian herring 1 x Garfish
I am O∨er the category limit by 1 fish	I am under the category limit by	I am under the category limit by 3 fish	I am under the category limit by 28 fish

 $^{^*}$ Western Australian dhufish has a bag limit of 1 and a boat limit of 2 in the West Coast Bioregion

North Coast Bioregion

High Risk Species	Medium Risk Species	Low Risk Species
Mixed daily bag limit – ${\mathcal F}$ per angler	Mixed daily bag limit – 16 per angler	Mixed daily bag limit – 40 per angler
2 x Narrow-barred Spanish	1 x Yellowfin bream	
mackerel	1 x Dart	
1 x Blue-lined emperor	2 x Giant trevally	
1 x Blackspot tuskfish	, 0	
3 x Sweetlip emperor		
1 x Rankin cod		
2 x Red emperor		
I am O∨er the category limit by 3 fish	I am under the category limit by 12 fish	I am under the category limit by 40 fish

Gascoyne Coast Bioregion

High Risk Species	Medium Risk Species	Low Risk Species
Mixed daily bag limit – チ per angler	Mixed daily bag limit – 16 per angler	Mixed daily bag limit – 40 per angler
2 x Narrow-barred Spanish mackerel	1 x Yellowfin bream	1 x Dart
1 x Blue-lined emperor		
1 x Blackspot tuskfish		
3 x Sweetlip emperor		
1 x Rankín cod		
2 x Giant trevally		
2 x Red emperor		
I am O√er the category limit by 5 fish	I am under the category limit by 15 fish	I am under the category limit by 39 fish

South Coast Bioregion

High Risk Species	Medium Risk Species	Low Risk Species
Mixed daily bag limit – チ per angler	Mixed daily bag limit – 16 per angler	Mixed daily bag limit – 40 per angler
2 x Western Australian dhufish 1 x Queen snapper 1 x Harlequin fish	3 x Tailor 1 x King George whiting 1 x Black bream	1 x Australían herring 1 x Garfísh
1 x Samson fish	1 x Flounder 2 x Yellowfin whiting 1 x Australian salmon	
I am under the category limit by 2 fish	I am ルルder the category limit by チ fish	I am under the category limit by 38 fish

Fish for the Future Quiz

Circle or mark the correct answer.

- 1. Recreational fishing is a type of fishing that
 - a) allows fishers to catch fish and sell them.
 - b) is all about people fishing for fun with family and friends.
 - c) involves holding, growing or rearing aquatic organisms.
 - d) sets out to damage the marine environment.
- 2. To be able to recreationally fish from a boat in Western Australia and keep a bag limit of fish, you need
 - a) a hat.
 - b) a recreational fishing from a boat licence.
 - c) a marron licence.
 - d) an Esky.
- 3. How do you measure the length of a finfish?
 - a) Measure it from the point of the snout to the tip of the tail.
 - b) Measure the length of the fish fillets.
 - c) Measure from the inside fork of the tail to the end of the snout.
 - d) Against another fish.
- 4. Which type of fishing method is <u>not</u> permitted to catch crabs recreationally in Western Australia?
 - a) By a drop net.
 - b) By a crab trap.
 - c) By a scoop net.
 - d) By hand.
- 5. What is the maximum number of hooks or gangs of hooks you are permitted to have on a fishing line in Western Australia?
 - a) 1
 - b) 2
 - c) 3
 - d) 4

- 6. True or false. A licence is required to fish for abalone in Western Australia.
 - a) True
 - b) False
- 7. What is the maximum weight of fish fillets a person is allowed to be in possession of anywhere in Western Australia?
 - a) 5 kg
 - b) 10 kg
 - c) 20 kg
 - d) 100 kg
- 8. Which State Government agency manages fish stocks in Western Australia?
 - a) Department of Environment and Conservation
 - b) Recfishwest
 - c) Environmental Protection Authority
 - d) Department of Fisheries
- 9. What is the Department of Fisheries website address?
 - a) www.fish.wa.gov.au
 - b) www.recfishwest.org.au
 - c) www.fisheries.wa.gov.au
 - d) www.fishy.wa.gov.au
- 10. Which is the correct *Fishwatch* telephone number used to report illegal and suspicious fishing activities?
 - a) 13 FISH
 - b) 1800 123 456
 - c) 1800 815 507
 - d) 1800 507 815

STUDENT WORKSHEET 5: Fish for the Future Quiz continued...

- 11. What can be used to measure the size of a fish?
 - a) A tape measure.
 - b) A fish ruler sticker from the Department of Fisheries.
 - c) A wooden ruler.
 - d) All of the above.
- 12. Which of the following cartilaginous fish species is not a protected species?
 - a) Port Jackson shark
 - b) Whale shark
 - c) Great white shark
 - d) All sawfish species
- 13. When recreational fishing, you should
 - a) keep absolutely everything you catch.
 - b) continue fishing until your Esky is full.
 - c) catch enough fish for a meal, within the fishing regulations.
 - d) catch fish to put in the freezer or give away to family and friends.
- 14. The town of Augusta lies in which Western Australia marine fishing bioregion?
 - a) North Coast
 - b) Gascoyne Coast
 - c) West Coast
 - d) South Coast
- 15. Fines for recreational fishing offences may be high as:
 - a) \$20.
 - b) \$5,000 plus up to 10 times the dollar value of the species.
 - c) \$15,000 per fish over the bag limit.
 - d) \$1,000 for each undersized fish.

Fish for the Future Quiz

- 1. Recreational fishing is a type of fishing that
 - a) allows fishers to catch fish and sell them.
 - is all about people fishing for fun with family and friends.
 - involves holding, growing or rearing aquatic organisms.
 - d) sets out to damage the marine environment.
- 2. To be able to fish from a boat in Western Australia and keep a bag limit of fish, you need
 - a) a hat.
 - b) a recreational fishing from a boat licence.
 - c) a marron licence.
 - d) an Esky.
- 3. How do you measure the length of a finfish?
 - a) Measure it from the point of the snout to the tip of the tail.
 - b) Measure the length of the fish fillets.
 - c) Measure from the inside fork of the tail to the end of the snout.
 - d) Against another fish.
- 4. Which type of fishing method is <u>not</u> permitted to catch crabs with in Western Australia?
 - a) By a drop net.
 - b) By a crab trap.
 - c) By a scoop net.
 - d) By hand.
- 5. What is the maximum number of hooks or gangs of hooks you are permitted to have on a fishing line in Western Australia?
 - a)
 - b) 2
 - c) 3
 - d) 4
- 6. True or false. A licence is required to fish for Abalone in Western Australia.
 - a) True
 - b) False
- 7. What is the maximum weight of fish fillets a person is allowed to be in possession of anywhere in Western Australia?
 - a) 5 kgs
 - b) 10 kg
 - c) 20 kg
 - d) 100 kg
- 8. Which State Government agency manages fish stocks in Western Australia?
 - a) Department of Environment and Conservation
 - b) Recfishwest
 - c) Environmental Protection Authority
 - d) Department of Fisheries

- 9. What is the Department of Fisheries website address?
 - a) www.fish.wa.gov.au
 - b) <u>www.recfishwest.org.au</u>
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