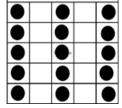
# BULARY BIN

What a fun way to reinforce content area vocabulary! This activity will have students actively thinking about and discussing the world of fish. 30 game boards are included to allow for either small group or whole class participation. Print out a few for use as a center, or enough for the whole class.

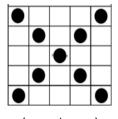
To prepare: Print out the boards and cards. Cut apart the cards on the solid lines. Fold the top of each card over to conceal the answer if a small group of students is playing without a separate caller. Photocopy the game boards, or place them in an erasable plastic sleeve. Store the folded cards by banding with a rubber band to preserve the fold that conceals the answer.

To play: Make sure all the cards are folded over to hide the answers. Mix up the cards into a face down pile. Take the top card and read the definition. If students are playing independently, remind them not to lift up the flap. Students can take turns doing this if playing without a dedicated caller. Students then look on their board for a term which fits the description. 30 vocabulary words are used, but each card has only 25 of them. Remind students that they may not have the word for every definition. To check student work, provide the answer after all players have checked their cards and either marked a space or determined they do not have a word matching the definition. Students can self correct - if a word is wrong they should color in that space as unplayable for the rest of the game (or if you prefer, just erase the mark). When students complete a row, column or diagonal, they win.\*

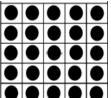
\*Games requiring a straight line of 5 to win can be played quite quickly. Add some variety (and increase the number of words needed to win) by using one of these variations. When playing one of these variations, do not have students mark incorrect answers as unplayable—wrong answers should just be erased.



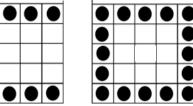
(or horizontal rows)



(or + shape)

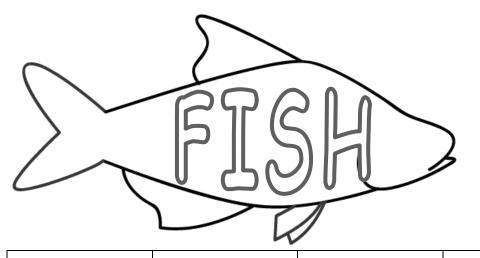


(or vertical lines)



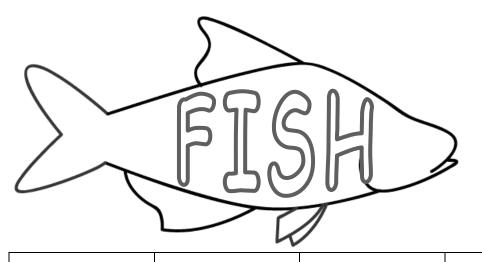
Or try any combination of one row and one column, any 2 rows or any 2 columns.





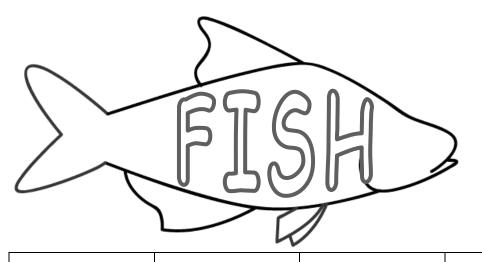


egg	anadromous fish	hatchery	ectotherm	cartilage
freshwater	catadromous fish	estuary	aquaculture	brackish water
nares	fins	gills	bycatch (incidental catch)	bony fish
spawn	anal fin	migrate	milt / sperm	smoltification
scales	dorsal fin	caudal fin	pectoral fins	pelvic fins



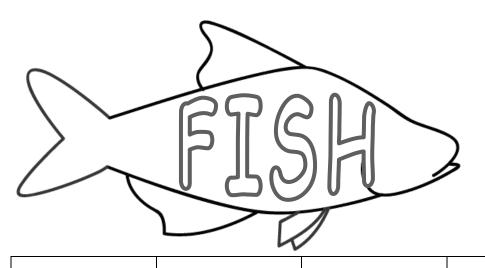


anadromous fish	freshwater	aquaculture	dorsal fin	scales
ectotherm	bycatch (incidental catch)	hatchery	brackish water	cartilage
egg	gills	saltwater	pectoral fins	spawn
bony fish	migrate	adipose fin	anal fin	pelvic fins
caudal fin	fins	catadromous fish	milt / sperm	swim bladder



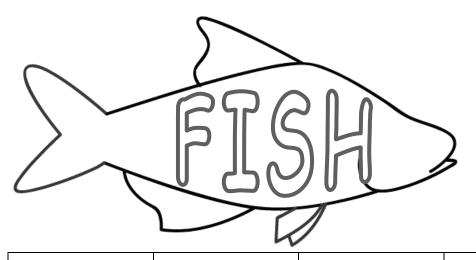


saltwater	bycatch (incidental catch)	anadromous fish	fins	dorsal fin
aquaculture	freshwater	ectotherm	swim bladder	milt / sperm
gills	scales	hatchery	cartilage	pelvic fins
pectoral fins	bony fish	catadromous fish	spawn	caudal fin
anal fin	egg	mating season	adipose fin	migrate



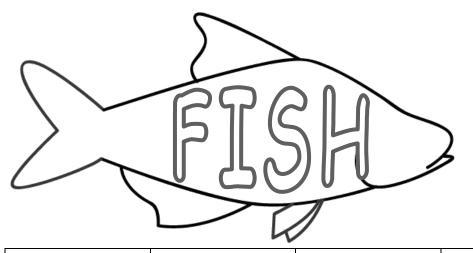


migrate	adipose fin	anal fin	gills	anadromous fish
pelvic fins	spawn	saltwater	bycatch (incidental catch)	ectotherm
fins	scales	catadromous fish	egg	aquaculture
cartilage	freshwater	bony fish	caudal fin	dorsal fin
pectoral fins	smoltification	hatchery	swim bladder	milt / sperm



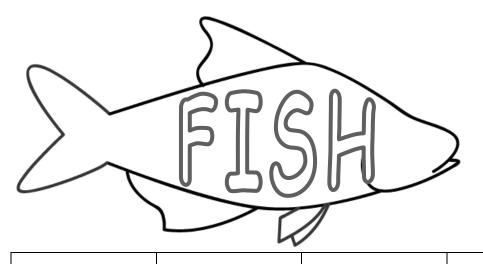


gills	scales	nares	fins	pelvic fins
anadromous fish	spawn	catadromous fish	hatchery	adipose fin
milt / sperm	egg	migrate	ectotherm	bycatch (incidental catch)
aquaculture	saltwater	caudal fin	cartilage	anal fin
dorsal fin	freshwater	bony fish	pectoral fins	smoltification



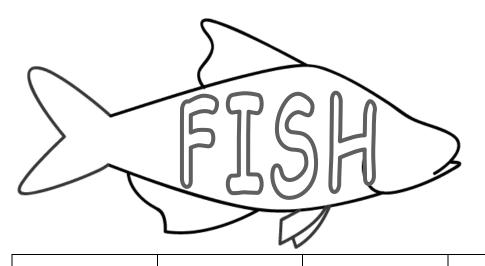


freshwater	estuary	catadromous fish	scales	gills
milt / sperm	anadromous fish	migrate	adipose fin	pelvic fins
spawn	fins	smoltification	hatchery	pectoral fins
ectotherm	caudal fin	egg	aquaculture	bycatch (incidental catch)
bony fish	saltwater	cartilage	overfishing	dorsal fin



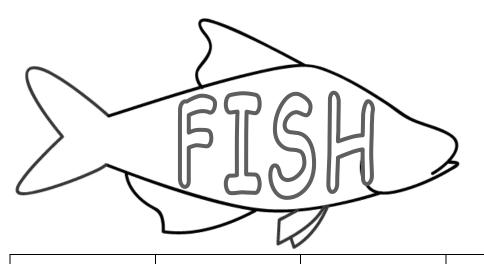


pelvic fins	adipose fin	caudal fin	nares	pectoral fins
freshwater	estuary	anadromous fish	spawn	milt / sperm
fins	mating season	dorsal fin	scales	overfishing
bony fish	aquaculture	ectotherm	hatchery	cartilage
gills	saltwater	bycatch (incidental catch)	catadromous fish	egg



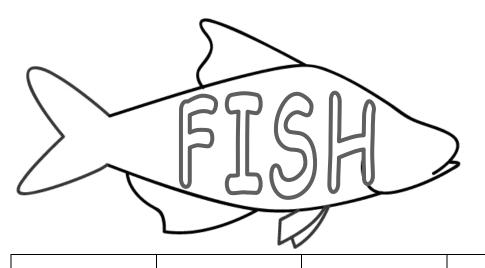


brackish water	bony fish	mating season	migrate	nares
milt / sperm	freshwater	smoltification	anadromous fish	dorsal fin
spawn	scales	estuary	swim bladder	pelvic fins
pectoral fins	saltwater	bycatch (incidental catch)	catadromous fish	ectotherm
overfishing	aquaculture	cartilage	egg	gills



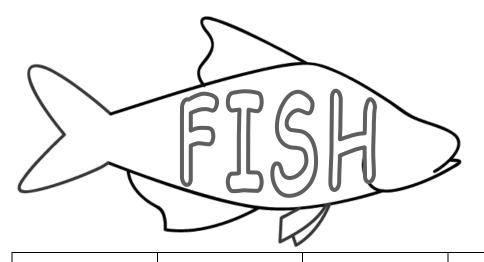


nares	brackish water	spawn	scales	estuary
anal fin	bony fish	adipose fin	mating season	anadromous fish
gills	swim bladder	overfishing	catadromous fish	saltwater
aquaculture	freshwater	cartilage	egg	smoltification
dorsal fin	ectotherm	pectoral fins	hatchery	pelvic fins



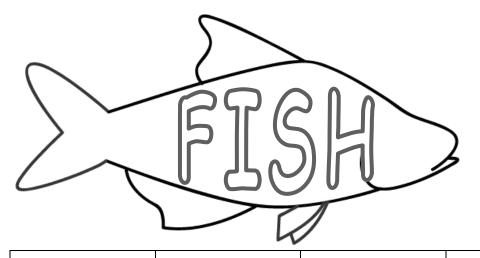


smoltification	overfishing	freshwater	gills	hatchery
nares	brackish water	saltwater	catadromous fish	egg
estuary	scales	cartilage	aquaculture	anadromous fish
dorsal fin	bony fish	migrate	swim bladder	pelvic fins
spawn	anal fin	mating season	ectotherm	pectoral fins



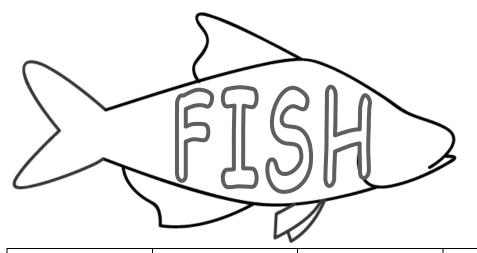


aquaculture	pectoral fins	anal fin	adipose fin	mating season
dorsal fin	overfishing	bony fish	scales	cartilage
nares	egg	anadromous fish	catadromous fish	hatchery
brackish water	saltwater	freshwater	gills	estuary
pelvic fins	swim bladder	ectotherm	smoltification	spawn



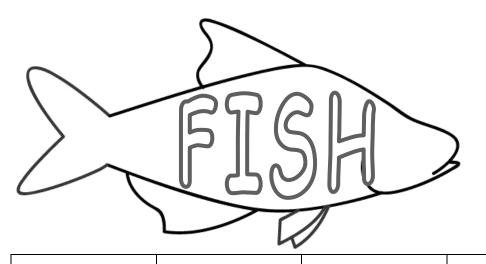


overfishing	saltwater	bony fish	nares	egg
aquaculture	cartilage	freshwater	brackish water	hatchery
scales	gills	estuary	anadromous fish	dorsal fin
adipose fin	spawn	smoltification	catadromous fish	pectoral fins
mating season	anal fin	pelvic fins	swim bladder	ectotherm



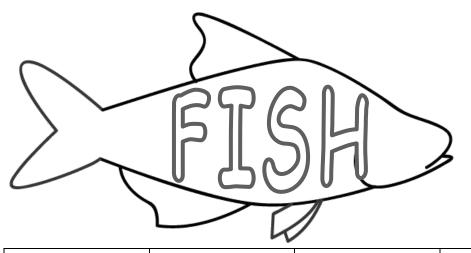


caudal fin	cartilage	gills	egg	aquaculture
smoltification	migrate	mating season	catadromous fish	estuary
fins	nares	spawn	freshwater	overfishing
anadromous fish	scales	brackish water	pectoral fins	hatchery
ectotherm	saltwater	bony fish	dorsal fin	pelvic fins



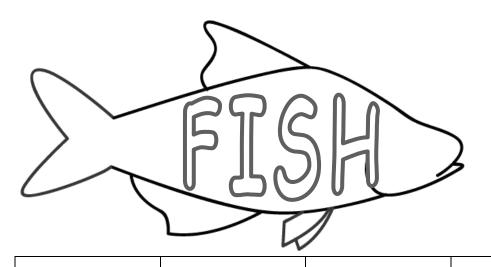


estuary	caudal fin	aquaculture	dorsal fin	milt / sperm
overfishing	cartilage	gills	bony fish	catadromous fish
egg	fins	nares	bycatch (incidental catch)	swim bladder
smoltification	anadromous fish	saltwater	freshwater	brackish water
migrate	anal fin	mating season	pectoral fins	hatchery



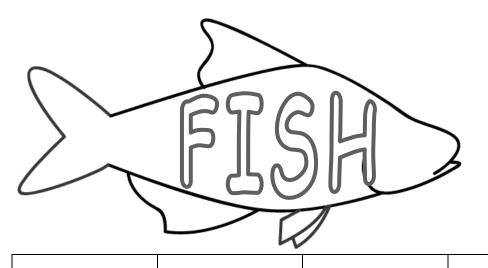


fins	adipose fin	mating season	gills	caudal fin
spawn	migrate	aquaculture	anal fin	milt / sperm
swim bladder	nares	pectoral fins	smoltification	cartilage
dorsal fin	overfishing	estuary	anadromous fish	catadromous fish
brackish water	saltwater	bycatch (incidental catch)	hatchery	bony fish



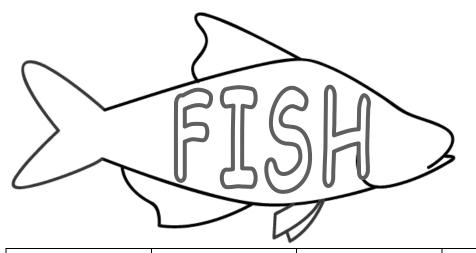


anal fin	pectoral fins	caudal fin	fins	bony fish
mating season	adipose fin	migrate	milt / sperm	smoltification
spawn	gills	swim bladder	dorsal fin	catadromous fish
overfishing	bycatch (incidental catch)	anadromous fish	saltwater	cartilage
estuary	nares	hatchery	freshwater	brackish water



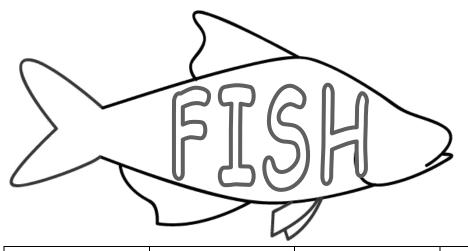


brackish water	pectoral fins	swim bladder	milt / sperm	nares
fins	caudal fin	smoltification	adipose fin	anal fin
gills	dorsal fin	freshwater	bycatch (incidental catch)	bony fish
mating season	migrate	spawn	estuary	anadromous fish
cartilage	hatchery	overfishing	saltwater	catadromous fish



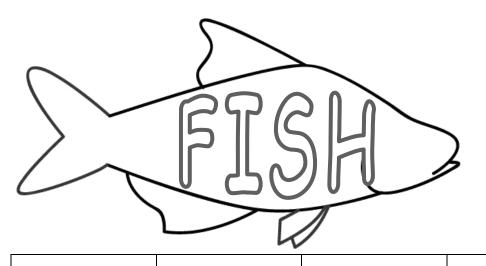


adipose fin	migrate	anal fin	spawn	hatchery
brackish water	saltwater	caudal fin	freshwater	overfishing
nares	fins	mating season	milt / sperm	estuary
pectoral fins	gills	bycatch (incidental catch)	anadromous fish	bony fish
dorsal fin	cartilage	catadromous fish	swim bladder	smoltification



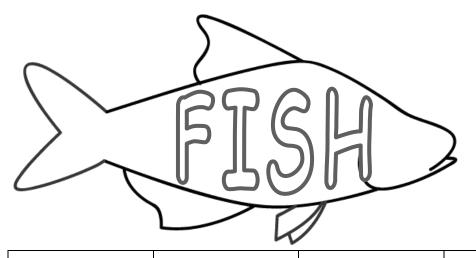


adipose fin	pelvic fins	milt / sperm	nares	overfishing
migrate	mating season	estuary	caudal fin	bony fish
fins	scales	ectotherm	freshwater	saltwater
brackish water	swim bladder	pectoral fins	gills	hatchery
catadromous fish	bycatch (incidental catch)	dorsal fin	cartilage	anadromous fish



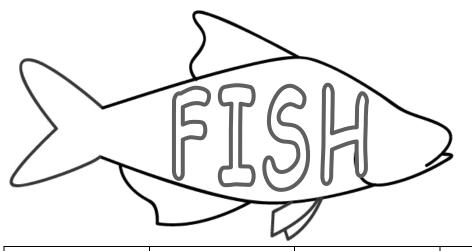


aquaculture	bycatch (incidental catch)	ectotherm	fins	hatchery
estuary	brackish water	overfishing	gills	caudal fin
scales	egg	pelvic fins	migrate	mating season
dorsal fin	anal fin	milt / sperm	freshwater	cartilage
nares	smoltification	swim bladder	anadromous fish	saltwater



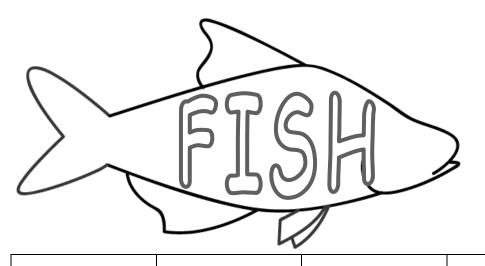


swim bladder	milt / sperm	estuary	scales	ectotherm
bycatch (incidental catch)	gills	aquaculture	migrate	fins
egg	mating season	caudal fin	pelvic fins	adipose fin
spawn	brackish water	smoltification	anal fin	dorsal fin
overfishing	saltwater	anadromous fish	freshwater	nares



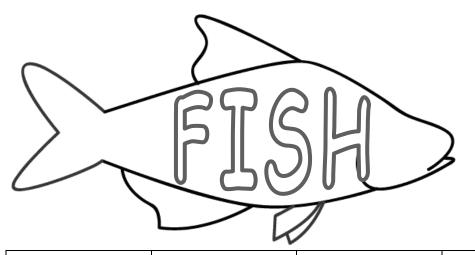


dorsal fin	overfishing	brackish water	egg	freshwater
estuary	ectotherm	adipose fin	mating season	migrate
gills	scales	aquaculture	caudal fin	fins
pelvic fins	milt / sperm	spawn	nares	saltwater
bycatch (incidental catch)	anadromous fish	swim bladder	smoltification	anal fin



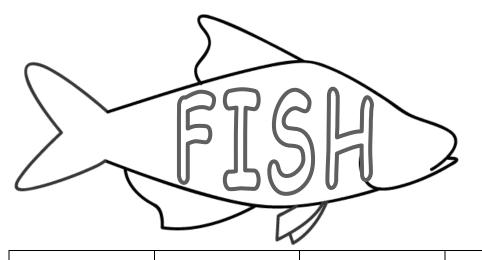


mating season	migrate	adipose fin	fins	dorsal fin
egg	overfishing	brackish water	ectotherm	freshwater
nares	gills	scales	saltwater	caudal fin
swim bladder	pelvic fins	estuary	aquaculture	bycatch (incidental catch)
anadromous fish	milt / sperm	anal fin	spawn	smoltification



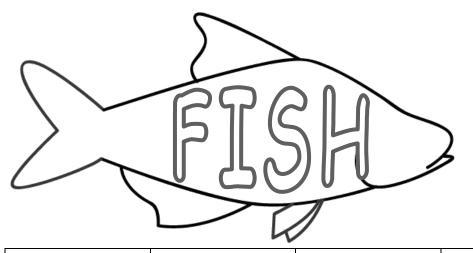


milt / sperm	spawn	anal fin	nares	bycatch (incidental catch)
saltwater	dorsal fin	hatchery	mating season	adipose fin
egg	scales	ectotherm	fins	freshwater
anadromous fish	caudal fin	brackish water	pelvic fins	smoltification
aquaculture	estuary	overfishing	swim bladder	migrate



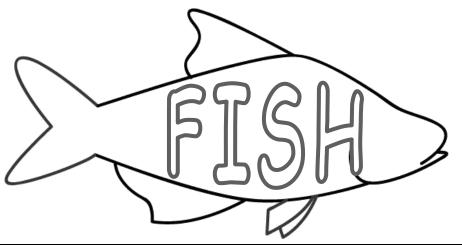


catadromous fish	bony fish	saltwater	gills	overfishing
hatchery	dorsal fin	egg	pectoral fins	mating season
scales	nares	fins	estuary	ectotherm
milt / sperm	adipose fin	caudal fin	bycatch (incidental catch)	anadromous fish
pelvic fins	swim bladder	brackish water	aquaculture	freshwater



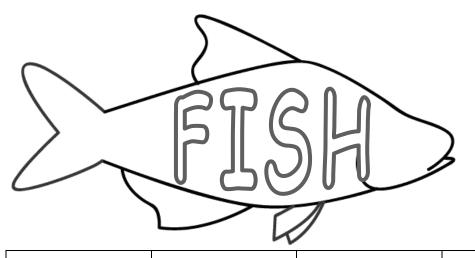


estuary	overfishing	bony fish	scales	saltwater
catadromous fish	cartilage	brackish water	spawn	smoltification
milt / sperm	egg	bycatch (incidental catch)	pectoral fins	nares
hatchery	ectotherm	fins	caudal fin	aquaculture
swim bladder	pelvic fins	adipose fin	anal fin	mating season



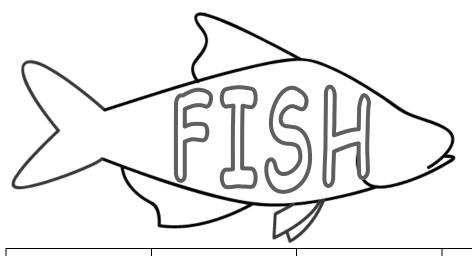


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pectoral fins	hatchery	nares	egg	estuary
bycatch (incidental catch)	bony fish	mating season	migrate	adipose fin
swim bladder	scales	brackish water	aquaculture	smoltification
catadromous fish	milt / sperm	overfishing	ectotherm	fins
caudal fin	cartilage	pelvic fins	spawn	anal fin



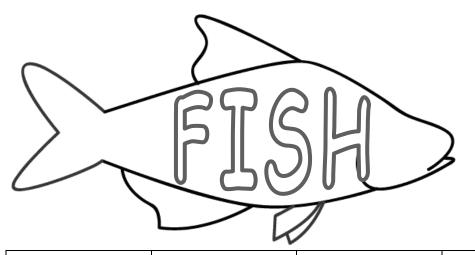


estuary	smoltification	milt / sperm	scales	mating season
nares	hatchery	bony fish	aquaculture	pectoral fins
egg	spawn	adipose fin	migrate	anal fin
swim bladder	pelvic fins	brackish water	cartilage	overfishing
catadromous fish	ectotherm	caudal fin	fins	bycatch (incidental catch)





scales	spawn	aquaculture	egg	swim bladder
mating season	migrate	milt / sperm	bony fish	smoltification
fins	nares	hatchery	pelvic fins	cartilage
overfishing	adipose fin	pectoral fins	anal fin	brackish water
estuary	catadromous fish	bycatch (incidental catch)	ectotherm	caudal fin





freshwater	ectotherm	adipose fin	fins	anal fin
cartilage	aquaculture	mating season	milt / sperm	spawn
nares	pelvic fins	bony fish	swim bladder	smoltification
bycatch (incidental catch)	catadromous fish	pectoral fins	brackish water	estuary
overfishing	hatchery	egg	caudal fin	scales

adipose fin	anal fin
a soft, fleshy fin found on some fish, such as salmon, which is on the back between the dorsal fin and the caudal fin	a single fin located beneath the tail, which provides stability while swimming
anadromous fish	aquaculture
a fish born in fresh water, that spends most of its life in saltwater and returns to freshwater to spawn (salmon, striped bass, sturgeon)	the farming of freshwater and salt- water organisms for consumption
bony fish	brackish water
fish that have a skeleton made primarily of bones - includes all fish except for sharks, rays, skates, hagfish and lampreys	water that has more salt than fresh water, but less than seawater

bycatch (incidental catch)	cartilage
any fish or marine animals that are unintentionally caught while fishing for other species	a translucent, elastic connective tissue that supports the skeleton; shark skeletons are completely made of this
catadromous fish	caudal fin
a fish that lives in fresh water and enters salt water to spawn (such as eels)	the tail fin – moves back and forth to propel fish through water
dorsal fin	ectotherm
the single large fin located along the back of a bony fish - provides balance	coldblooded - an animal whose body temperature depends on its surroundings

egg	estuary
the female reproductive cell	the part of a body of water where the freshwater of a river or stream enters into the salt water of an ocean freshwater
moveable parts that stick out and help a fish move, steer and balance	water that contains little, if any, salt; of or found in saltwater
hatchery	gills
an enclosed environment where fish are cultivated, bred, then released into their natural environment	body structures that act like filters to move oxygen from the water into the body of a fish or other aquatic creature

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mating season	migrate
the period of time when males & females pair to produce offspring	to pass periodically from one region or climate to another for feeding or breeding
milt / sperm	nares
the male reproductive cell	paired nostrils in fish which are used to detect odors in water
overfishing	pectoral fins
when fish are removed from a habitat faster than they can reproduce	a pair of fins on either side just behind a fish's head; allow fish to speed up, slow down, stop and quickly change direction

pelvic (ventral) fins	saltwater
a pair of fins on either side and towards the rear of a fish; allow the fish to move up and down in water	water containing a large amount of salt; of or found in salt water
scales	smoltification
thin, flat, overlapping pieces of hard skin that cover the bodies of fish	the series of physiological changes that prepare some young fish (like salmon) to adapt from living in fresh water to living in seawater
spawn	swim bladder
the mass of eggs of aquatic animals (such as fish) that lay many small eggs	a gas-filled sac present in the body of many bony fishes, used to maintain and control buoyancy