



EGG CASE MATCHING GAME

OBJECTIVES

In this activity students will:

- become aware that egg cases vary by species.
- learn various scientific names.
- be challenged to match pictures of the adult and egg case it was hatched from.
- gain an understanding of where around the world some species live, the range of depths that they are found, and what they eat.

INTRODUCTION: Over 25% of shark species and their relatives like skates and chimaeras are oviparous, meaning that they lay egg cases externally. The egg contains an embryo and a yolk sac, much like a chicken egg. These egg cases are also known as mermaid's purses.

SET UP: Print the image page of this packet (page 2). You may choose to use cardstock for repetitive use or laminate after printing. Cut out the separate animals and egg cases (10 in total).

DIRECTIONS

1. Spread some cards out as if you are playing and demonstrate the game.
2. Turn over a card, set it down in its place so that every player can see it, and read any/all of the words on the card.
3. Tell the opponent(s) what you are hoping to turn over to create a match (what the matching card might say or how the matching picture might look).
4. Turn over a second card, set it down in its place so that every player can see it, and read any/all of the words on the card out loud.
5. Say either "These cards match" (read the information on the answer key and pick the cards up) or say "These cards do not match" (and flip them back over so that they are face down on the table in their original position).
6. Have an opponent take a turn.
7. Check answers until all cards are picked up.

Optional challenge: When cards match, have the opponent provide the information on the answer key. Say "Good job" and have the opponent pick the cards up if information is correct. Say, "Good try" if the opponent is unable to provide the information and flip the cards back over after rereading the information.

VOCABULARY

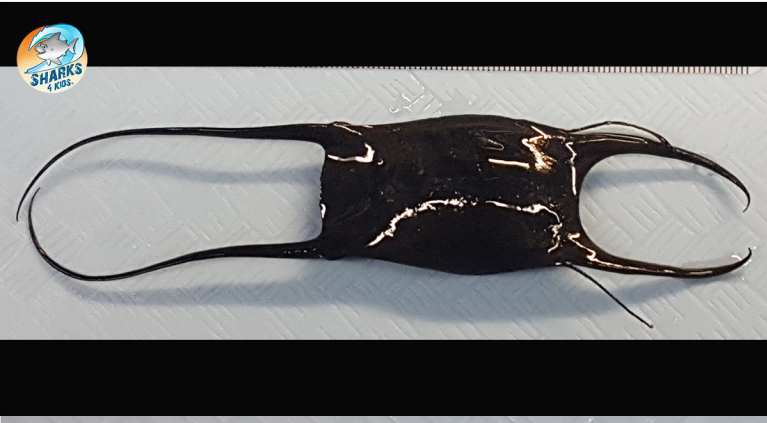
- Chimaera: A cartilaginous fish related to sharks and rays, which is also known as 'Ghost Sharks.' There are over 50 different species of chimaera. They differ from sharks in 3 main ways. They have 4 gills with 1 external opening (sharks have 5-7 external gill slits), their upper jaw is fused to their skull, and 3 pairs of permanent grinding tooth plates.
- Cartilaginous: Having a skeleton made of cartilage (no bones).
- Oviparity: Means egg-laying. Skates, chimaera and some sharks produce offspring in egg cases. The capsule protects the embryo while also providing nutrients for growth.



SPOTTED RATFISH (*Hydrolagus collicii*)



WINTER SKATE
(*Leucoraja ocellata*)



CHAIN CATSHARK (*Scyliorhinus retifer*)



PORT JACKSON SHARK (*Heterodontus portusjacksoni*)



FILETAIL CATSHARK (*Parmaturus xanthurus*)



ANSWER KEY



Filetail Catshark (*Parmaturus xanthurus*)

Deep-sea species of shark found in the Northeast Pacific. Can reach a length of 61 cm (2 ft). They eat mainly crustaceans and small bony fishes.



Port Jackson Shark (*Heterodontus portusjacksoni*)

They are believed to be endemic to Southern Australia. Can reach a length of 1.65 m (5.4 ft). They eat sea urchins, molluscs, crustaceans and fishes.



Spotted Ratfish (*Hydrolagus coliei*)

This species of chimaera is found in the Eastern Pacific at depths up to 900 m (2,950 ft). Can reach a length of 60 cm (2 ft). They eat clams, polychaete worms, crabs, shrimp and small benthic fishes.



Chain Catshark (*Scyliorhinus retifer*)

They are found in the Northwest Atlantic, Gulf of Mexico and Caribbean at depths of up to 753 m (2470 ft) . Can reach a length of 59 cm (1.9 ft). They eat small bony fishes, polychaete worms, squid and crustaceans.



Winter Skate (*Leucoraja ocellata*)

They are found in the Western Atlantic at depths up to 91 m (300 ft). Can reach a length of 1.05 m (3.4 ft). They eat fish and crustaceans.