Fish cards

For whom: All grades	**Where:** Indoors
Wilderness passport section: Fishing	**When:** All seasons
Learning outcomes: Learning to identify the most common fish species found in Finland.	**What you need:** Fish cards (print and cut out)
Duration: 15 to 45 minutes	**Personnel resources:** 1

BACKGROUND

In this assignment the pupils learn to identify nine fish species found in Finland.

You can print out five types of cards, which can be used in many ways:

a) fish names only

b) fish pictures only

c) fish pictures and names

d) identifying features and behaviour of fish

e) identifying features and behaviour of fish with no names

The range section only describes the range of the fish in Finnish water areas.

Please only print the pages that you need. If you wish, you can print the cards with images and the ones with text directly on both sides. Remember to select 'landscape' in the print settings.

Below, instructions are given for four different species identification games. Select the most suitable one, or come up with your own way of using the fish cards!

INSTRUCTIONS

Memory game

Print out the cards (options **a** & **b**, **b** & **c**, **c** & **d** OR **c** & **e**) ON A SINGLE SIDE of thick paper, preferably in colour. Cut the cards apart. Place the cards face down on the table.

The players take turns flipping over two cards. If the cards match, the player can keep the two cards and have another go. If they find no matching pair, the next player gets their go. The player with the highest number of card pairs at the end is the winner. If you play the memory game with cards that do not show the name of the species (options **b** and **e**), you should also print out the correct answers so that the pupils can check them (options **c** and **d**).

Identification game A

On the reverse side of the cards with the names and images of the fish (option **c**), print the identifying features and habits without the names (option **e**). Print directly ON BOTH SIDES. Cut the cards apart and divide them to pairs of pupils.

The pairs stack the cards face down. The pairs take turns guessing the name of the fish based on its identifying features. After guessing, the cards are turned over. If the player guessed right, they get to keep the card (and receive one point). The winner is the one who identifies the most species.

You can also give each pupil making up the pair an equal number of cards. One of them reads the information and the other tries to guess the species. When the guess is right, they turn over the picture to see what the fish looks like.

Identification game B

On the other side of cards with fish images without names (option **b**), print the identifying features and information on the behaviour of the fish (option **d**). Print directly ON BOTH SIDES. Cut the cards apart and divide them to pairs of pupils.

Each pair places the stack of cards face up. Both pupils get to guess the name of the species, its food source and its range. The person who gets more of the information right keeps the card and receives a point. They check the correct answers on the reverse side of the card. When all cards in the deck have been used, the player who ends up with the most cards is the winner.

Identification game C

Print out the handout with fish pictures but no names (option **b**) for each pupil ON A SINGLE SIDE. Also print out one enlarged copy of the handout with fish images and names (option **c**) and cut these cards out. The enlarged images make completing the task easier.

Once cut off, hide the cards, for example on the walls in the hallway. The pupils must look for the cards in the hallway and memorise the image and name of the fish. After finding a card, the pupil returns to the classroom each time to write down the name of the fish in the right place in the handout. The task has been completed when all fishes have been named correctly.

QUESTIONS TO REFLECT ON

1. It has been calculated that there are around 100 fish species in Finland.

How many of them do you know by name?

2. Have you ever gone fishing? What kind of equipment did you use and where did you go? What did you

catch? How was the fish you caught prepared for food?

3. What can you conclude based on the appearance or colour

of the fish?

4. In most cases, the back of the fish is usually darker in colour than the abdominal side. Why is this?

5. In what ways have fish adapted to living in water?

ANSWERS TO THE QUESTIONS

1. It has been calculated that there are around 100 fish species in Finland.

How many of them do you know by name?

2. Have you ever gone fishing? What kind of equipment did you use and where did you go? What did you

catch? How was the fish you caught prepared for food?

Instructions for responsible fishing (Metsähallitus): https://www.eraluvat.fi/en/fishing/responsible-fisheries-management-and-fishing/guidelines-for-responsible-fishing.html

3. What can you conclude based on the appearance or colour

of the fish?

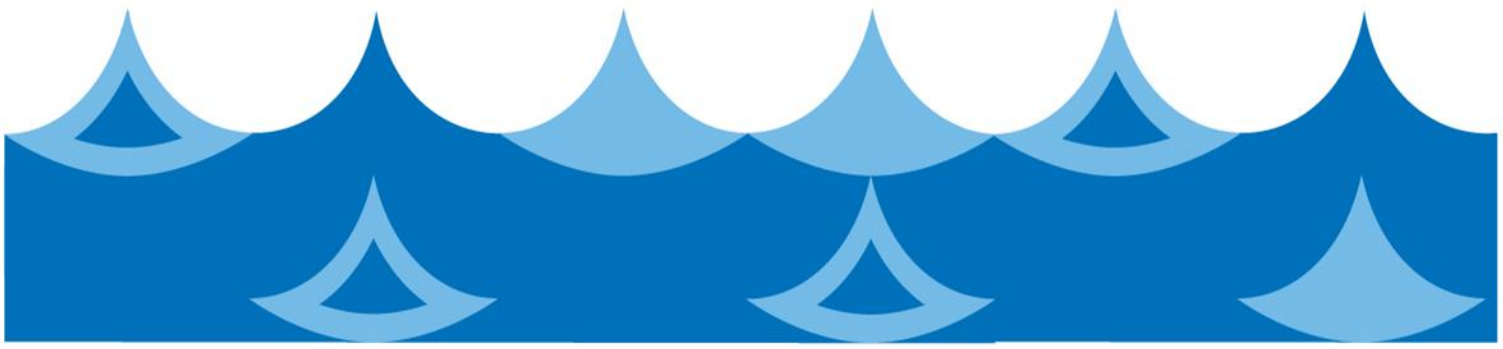
- A torpedo-shaped fish is a fast swimmer (such as the pike)
- The colouring of fish living in Finland is often similar to the colour of the water system in which they live. However, the colours of some fish, such as the perch, vary to some extent depending on the region in which they live.
- Predatory fish often have sharp and large teeth. Fish that eat parts of plants, small invertebrates or plankton mainly have small teeth or no teeth at all.

4. In most cases, the back of the fish is usually darker in colour than the abdominal side. Why is this?

A dark back and light abdomen is a protective colouring based on the amount of light in the water. The dark colour of the back confuses predators looking at a fish from above, as the dark colour blends well with the colour of very deep water or the bottom. The light colouring of the abdomen, on the other hand, protects the fish from predators attacking from below: when viewed from below, the light abdomen blends better with the higher amount of light close to the surface. This colouring also helps predators hide from their prey. Additionally, silver scales resemble the shimmering of the water. This hampers the hunting of birds that eat fish to some extent.

5. In what ways have fish adapted to living in water?

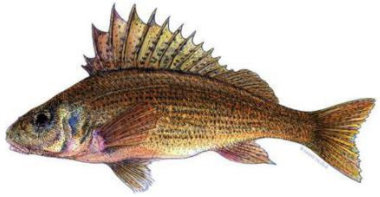
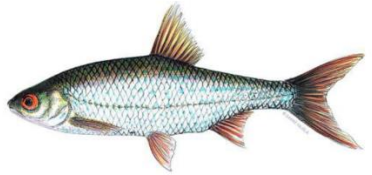
- Gills make it possible to take in oxygen and remove carbon dioxide in the water.
- Scales and mucus protect the skin and eliminate friction, making it easier for fish to move around.
- Fins are ideal for moving in water and keep the fish straight and in balance.
- The lateral line makes it possible to sense vibrations in water
- The swim bladder allows fish to regulate the depth at which they swim
- Large eyes in proportion to the rest of the body make it easier to see.
- No internal fertilisation is needed, as sperm (milt) and eggs (roe) discharged in the water can find each other.



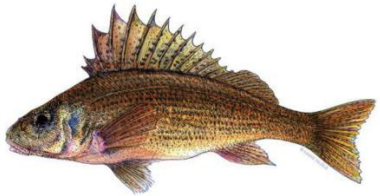
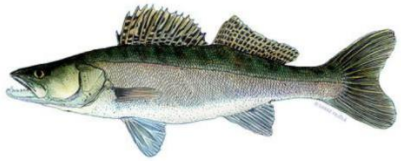
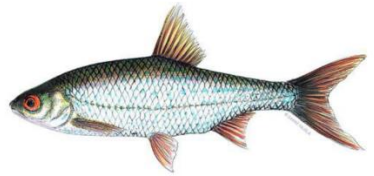
Printing option a

FLOUNDER	**PIKE**	**PERCH**	**VACANT**
BREAM	**PIKEPERCH**	**SALMON**	**EURASIAN RUFFE**
COMMON ROACH	**COMMON WHITEFISH**	**BALTIC HER-RING**	**TROUT**

Print option b *(Drawings of fish: Sakke Yrjölä)*

VACANT			
			
			

Print option c *(Drawings of fish: Sakke Yrjölä)*

VACANT	 **PERCH**	 **PIKE**	 **FLOUNDER**
 **EURASIAN RUFFE**	 **SALMON**	 **PIKEPERCH**	 **BREAM**
 **TROUT**	 **BALTIC HERRING**	 **COMMON WHITEFISH**	 **COMMON ROACH**

Print option d

FLOUNDER *Platichthys flesus* **Range**: The Baltic Sea, especially areas with higher salinity **Size**: 30 to 50 cm **Food**: Benthic animals, bay mussels **Special features**: The young go through a metamorphosis in which both eyes move to one side of the body, and the pigment on the other side becomes lighter. The fish then starts its life lying (and swimming) on its side on the bottom of the water body.	**PIKE** *Esox lucius* **Range**: Inland and coastal waters **Size**: 40 to 120 cm **Food**: Especially fish but also frogs, water voles and other small aquatic animals **Special features**: Sedentary fish. The second most common fish in Finland. Green sides with yellowish patches.	**PERCH** *Perca fluviatilis* **Range**: The whole country (not in Käsivarsi) **Size**: 15 to 30 cm **Food**: Fish, insects and similar **Special features**: The most common fish species in Finland. May vary slightly in colour depending on where it lives, but its dark stripes and red fins always stand out.	**VACANT**
BREAM *Abramis brama* **Range**: Inland and coastal waters **Size**: 25 to 50 cm **Food**: Molluscs and insect larvae **Special features**: Short and high body. Moves in shoals. Well able to tolerate eutrophication. The mouth stretches into a tubular shape.	**PIKEPERCH** *Sander lucioperca* **Range:** Southern and Central Finland, on the coasts in the south and west **Size**: 30 to 60 cm **Food**: Fish **Special features**: Most at home in lakes with dark waters. May form mixed shoals with perch. The dorsal fins do not touch.	**SALMON** *Salmo salar* **Range**: Almost the entire coast and rivers discharging into the Baltic Sea. A subspecies (landlocked salmon) lives in lakes. **Size**: 60 to 110 cm **Food**: Invertebrates, fish **Special features**: Migrates with the seasons. Wild populations are at risk, farmed for food. Adipose fin at the rear of the back.	**EURASIAN RUFFE** *Gymnocephalus cernua* **Range**: Inland waters and coastal areas in the southern, eastern and western parts of the country **Size**: 10 to 20 cm **Food**: Benthic animals, roe, non-biting midge larvae **Special features**: The dorsal fins touch. Spawning starts soon after the water body is free of ice.
COMMON ROACH *Rutilus rutilus* **Range**: Almost the entire country (excluding Lapland) **Size**: 15 to 50 cm **Food**: Zooplankton, benthic animals, aquatic plants **Special features**: Sedentary species. Well able to tolerate eutrophication. Rather large scales. The eyes are usually red.	**COMMON WHITEFISH** *Coregonus lavaretus* **Range**: The whole country, oxygen-rich clean and cold water bodies **Size:** 15 to 55 cm depending on where it lives **Food**: Young fish, invertebrates and roe **Special features**: Comes in many different subspecies. The upper jaw is longer than the lower jaw. Adipose fin at the rear of the back.	**BALTIC HERRING** *Clupea harengus membras* **Range**: Baltic Sea coast **Size**: 7 to 20 cm, up to 30 cm **Food**: Plankton, small fish **Special features**: Size varies depending on salinity of the habitat (Baltic herring in the Gulf of Finland may be twice the size of herring in the Bay of Bothnia). No lateral line. A shoaling fish.	**TROUT** *Salmo trutta* **Range**: The whole country. **Size:** 40 to 70 cm **Food**: Aquatic invertebrates, fish **Special features**: May either be sedentary or migrate with the seasons. Divided into subspecies based on habitats: lake, sea and brown trout. These populations differ from each other in their appearance and behaviour.

Printing option e

Platichthys flesus **Range**: The Baltic Sea, especially areas with higher salinity **Size**: 30 to 50 cm **Food**: Benthic animals, bay mussels **Special features**: The young go through a metamorphosis in which both eyes move to one side of the body, and the pigment on the other side becomes lighter. The fish then starts its life lying (and swimming) on its side on the bottom of the water body.	*Esox lucius* **Range**: Inland and coastal waters **Size**: 40 to 120 cm **Food**: Especially fish but also frogs, water voles and other small aquatic animals **Special features**: Sedentary fish. The second most common fish in Finland. Green sides with yellowish patches.	*Perca fluviatilis* **Range**: The whole country (not in Käsivarsi) **Size**: 15 to 30 cm **Food**: Fish and insects **Special features**: The most common fish species in Finland. May vary slightly in colour depending on where it lives, but its dark stripes and red fins always stand out.	**VACANT**
Abramis brama **Range**: Inland and coastal waters **Size**: 25 to 50 cm **Food**: Molluscs and insect larvae **Special features**: Short and high body. Moves in shoals. Well able to tolerate eutrophication. The mouth stretches into a tubular shape.	*Sander lucioperca* **Range:** Southern and Central Finland, on the coasts in the south and west **Size**: 30 to 60 cm **Food**: Fish **Special features**: Most at home in lakes with dark waters. May form mixed shoals with perch. The dorsal fins do not touch.	*Salmo salar* **Range**: Almost the entire coast and rivers discharging into the Baltic Sea. A subspecies (landlocked salmon) lives in lakes. **Size**: 60 to 110 cm **Food**: Invertebrates, fish **Special features**: Migrates with the seasons. Wild populations are at risk, farmed for food. Adipose fin at the rear of the back.	*Gymnocephalus cernua* **Range**: Inland waters and coastal areas in the southern, eastern and western parts of the country **Size**: 10 to 20 cm **Food**: Benthic animals, roe, non-biting midge larvae **Special features**: The dorsal fins touch. Spawning starts soon after the water body is free of ice.
Rutilus rutilus **Range**: Almost the entire country (excluding Lapland) **Size**: 15 to 50 cm **Food**: Zooplankton, benthic animals, aquatic plants **Special features**: Sedentary species. Well able to tolerate eutrophication. Rather large scales. The eyes are usually red.	*Coregonus lavaretus* **Range**: The whole country, oxygen-rich clean and cold water bodies **Size:** 15 to 55 cm depending on where it lives **Food**: Young fish, invertebrates and roe **Special features**: Comes in many different subspecies. The upper jaw is longer than the lower jaw. Adipose fin at the rear of the back.	*Clupea harengus membras* **Range**: Baltic Sea coast **Size**: 7 to 20 cm, up to 30 cm **Food**: Plankton, small fish **Special features**: Size varies depending on salinity of the habitat (Baltic herring in the Gulf of Finland may be twice the size of herring in the Bay of Bothnia). No lateral line. A shoaling fish.	*Salmo trutta* **Range**: The whole country. **Size:** 40 to 70 cm **Food**: Aquatic invertebrates, fish **Special features**: May either be sedentary or migrate with the seasons. Divided into subspecies based on habitats: lake, sea and brown trout. These populations differ from each other in their appearance and behaviour.