

Ecological relationships and classification

Lesson 13 - Revision 1

Biology - Key Stage 3

Miss Lewis



Quick Fire Questions - Food Chains

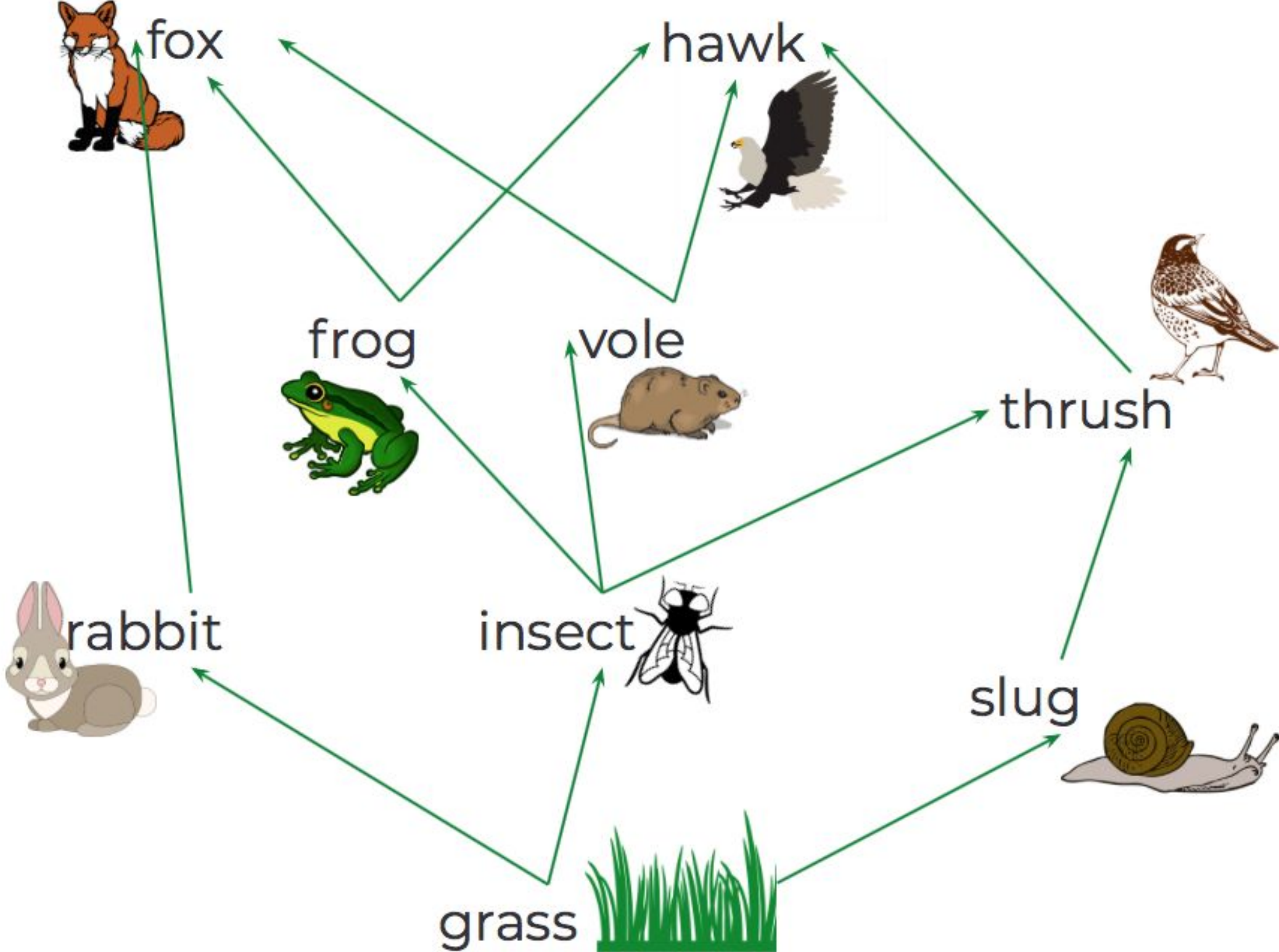
- 1. What do the arrows in a food chain represent?
- 2. What is a trophic level?.....
- 3. What organisms are always found at trophic level 1?

Grass -> Cow -> Human

- 4. How many trophic levels are there in this food chain?
- 5. Which is the secondary consumer in this food chain?



Exam Style Questions



Credit: Pixabay



Exam Style Questions

1. Which living things in this food web do frogs eat?
2. Which living thing in this food web is a predator of rabbits?
3. Which living thing in this food web is a herbivore?
4. Write out a food chain with 4 trophic levels
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5. Where does the grass get its energy from?.....



Exam Style Questions

6. What would happen to the population of other organisms if all the insects died? Explain your answer.

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Quick Fire Questions - Decay

- 1. What 3 factors affect the rate of decay?
- 2. How does a low temperature affect decay?.....
- 3. How does a high temperature affect decomposers?.....
- 4. What do decomposers need water for?.....
- 5. What do decomposers need oxygen for?.....



Exam Style Question - model

A farmer is trying to produce the best compost to put in his soil for his vegetables. He has to get the temperature inside his compost bin just right - between 35 °C and 50 °C.

Explain why the production of compost is reduced above and below these temperatures. (2)

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Exam Style Question

After heavy rain, a compost bin can become water-logged.

The production of compost will increase over the following few weeks.

Suggest why. (2)

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Exam Style Question

The wood from pine trees does **not** rot.

The wood is full of thick sap which means the wood does **not** easily absorb oxygen or water.

Explain why the wood does **not** rot. (2)

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Correct the mistakes in the answer

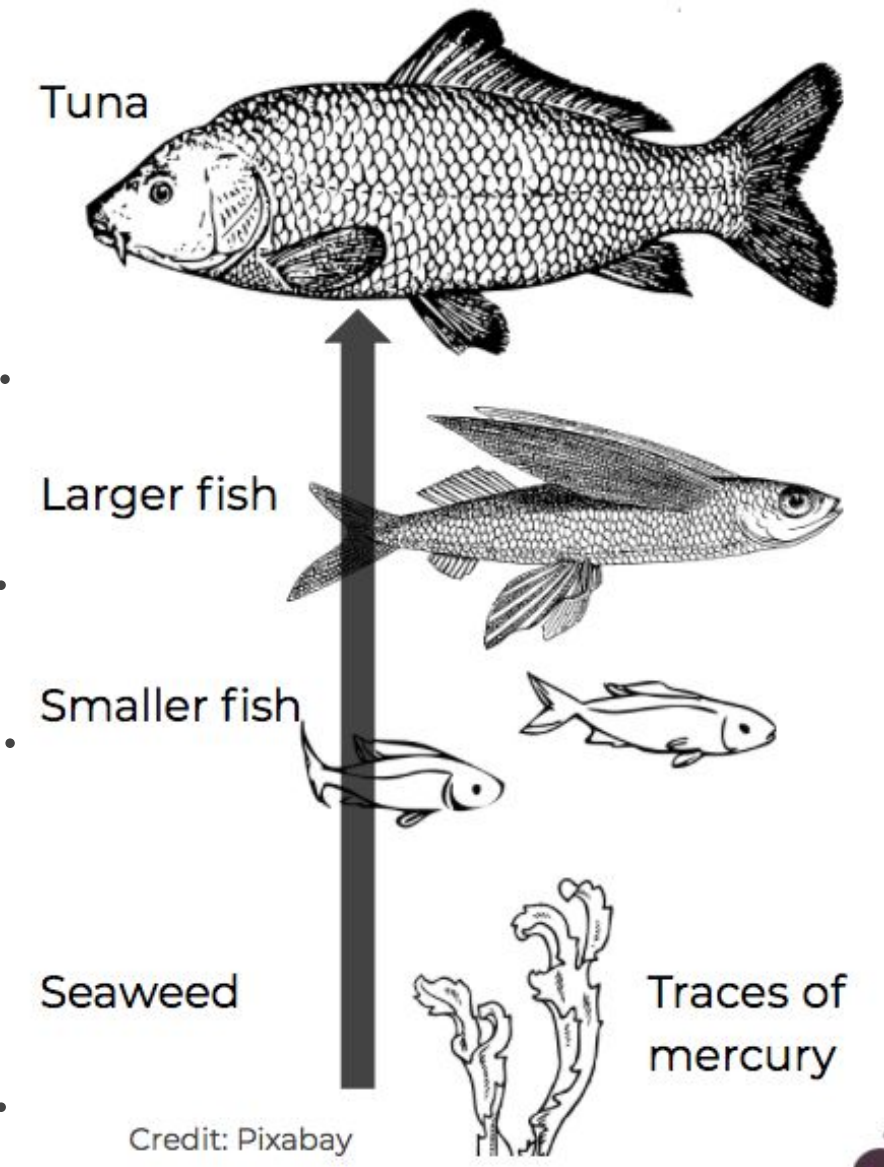
In the food chain, the top predator contains the highest concentration of insecticide. Explain why. (3 marks)

The insecticide is first absorbed by the consumer and the primary consumers eat lots of these so the concentration of insecticide decreases. It is passed through food link with the concentration increasing with each round. This is decomposition. The insecticide is easily broken down so it builds up in the food chain until the top predator has the highest volume.



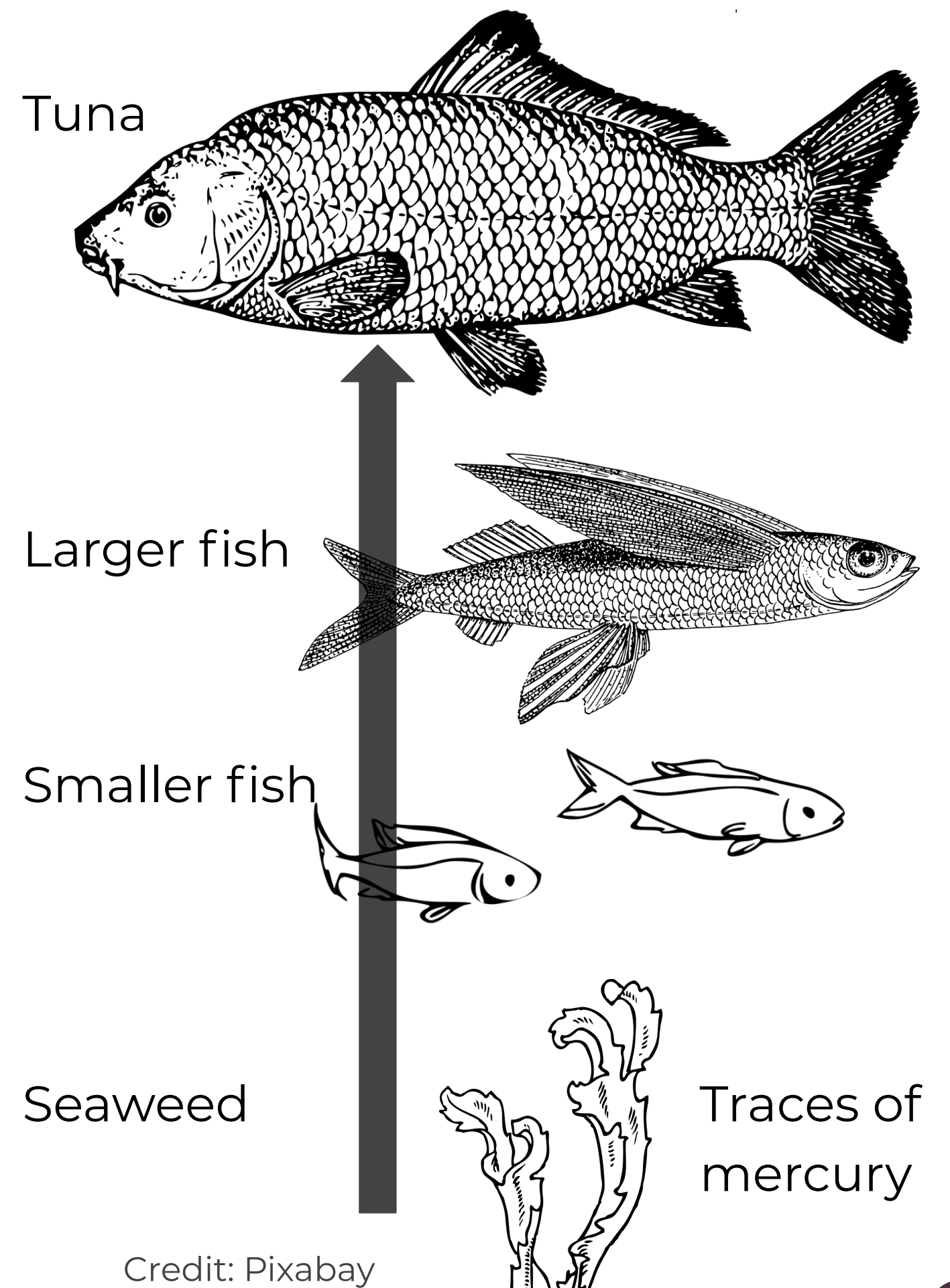
Quick Fire Questions - Bioaccumulation

1. How does mercury get into the food chain?
2. How does mercury move up the food chain?
3. What happens to the concentration of mercury up the food chain?
4. Where is the concentration the highest?.....
5. How does this food chain pass onto humans?.....
6. How are humans affected by mercury?.....



Exam Style Question

Mercury compounds used to be used in pesticides and paint designed for boats. However, mercury is poisonous and damages the nervous and reproductive systems of mammals. Look at the food chain and explain why mercury could be a problem for human health.



Credit: Pixabay



Quick Fire Questions - Random Sampling

- 1. What is the name of the equipment used in random sampling?
- 2. How do you ensure the quadrat is place randomly?
- 3. What piece of equipment is used to measure the sample area?.....
- 4. How must we place our quadrats?.....
- 5. What do you do once the quadrat has been placed down?.....
- 6. How many times do we repeat?.....
- 7. What must we calculate at the end?.....
- 8. How is mean calculated?.....



Improve this method

Numbered bullet points

Start each point with a
command word

Include the equipment you
will use

Include repeats

First you measure the area of the sampling site and then place your quadrat on the field nearest your feet. You must the number of organisms that touch the edges. Repeat this one more time and calculate the mode.



Improve this method

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