



# Integrated Sciences

20

25

3<sup>rd</sup>  
Week

Home Work

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Prepared and Revised by  
**Science Development  
Office**

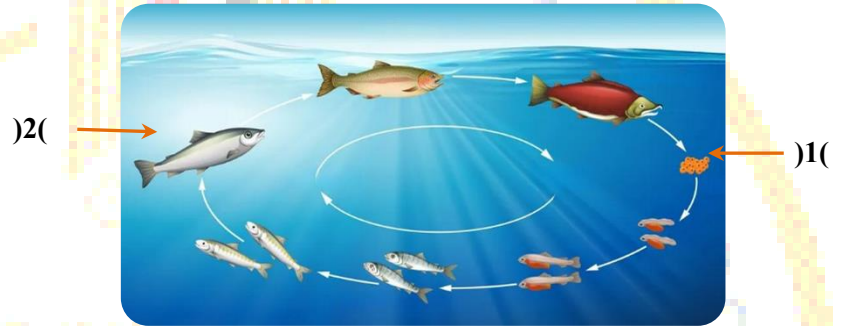


## Week (3) Assessment

(1) The figure shows the life cycle of Salmon fish.

Write the name of each aquatic ecosystem (river / sea)

That are labeled with arrows (1) and (2)



(2) Write the type of each adaptation for each of the following cases:

1- Changes in organisms' bodies that help them survive in their environments.

2- The fish migration between fresh water and saltwater.

3- Some deep-ocean fish have special abilities to regulate respiration under the state of oxygen deficiency.

4- Sharks maintain the balance of water and salts within their bodies through controlling the level of urea in their blood.

5- Fish are a streamlined body that reduces water resistance to the fish's movement

(3) How does the Electric Eel adapt to the surrounding environmental conditions?

(4) Give reason:

1- Deep-sea fish have strong and durable arteries and veins.

2- Deep-sea fish have the ability to effectively adjust their blood pressure

(5) Give one example for each of the following adaptation in the aquatic ecosystem:

1- Physiological adaptation

2- Behavioral adaptations

3- Structural adaptation

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(6) What is meant by:

- 1- The internal energy of the object equals 1000 Joules?
- 2- The specific heat of liquid water equals 4180 J/Kg.K?

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(7) Compare between (amount of heat) and (temperature) concerning:

- 1- The concept of each
- 2- The measuring unit of each

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(8) The data table shows, the specific heat of a group of different materials

W, X, Y, and Z. If we take equal masses from these materials, then are gained with the same amount of heat at the same conditions.

Which material, its temperature will be raised The greatest? Explain your answer

The material	Its specific heat J/Kg.K
W	450
X	385
Y	897
Z	130

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(9) Calculate the required amount of heat to raise the temperature of 0.5 Kg of iron by 40 °C  
Give that : the specific heat of iron is 450 J/Kg.K

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(10) A piece of aluminum of temperature 30 °C , When it is gained 500 Joule as heat ; its temperature is raised to 310 K. Calculate the mass of that piece.

Give that : the specific heat of aluminum is 897 J/Kg.K

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(11) Compare between (Direct solar radiation) and (Indirect solar radiation) concerning the concept of each

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(12) What are the factors on which The amount of solar radiation reaching a specific location or a certain object on Earth's surface depends on?

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(13) When the sunlight penetrates water surface shown in the figure; it will be divided into two parts. Mention them



(14) Give reason:

- 1- Photosynthesis mainly occurs in the surface layers of water bodies.
- 2- Solar radiation is a vital factor in maintaining ecological balance in aquatic environments.
- 3- Algae and phytoplankton, are abundant in the surface layers of water bodies.
- 4- Coral reefs thrive in warm shallow waters near the equator.

(15) Light gradient defines different zones in the water bodies according its depth.

- List three of these zones
- Compare between their concepts
- At which of them, photosynthesis mainly occurs? Explain

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