

Revision questions-Grade 7 NS

Explain what the biosphere is. [2 marks]

Give an example of something that is found in each of the following: [3 marks]

Lithosphere:

Hydrosphere:

Atmosphere:

Discuss why the atmosphere is important for life on Earth. [2 marks]

Imagine an alien creature arrives on Earth attached to a meteorite (fallen space rock). You were tasked with deciding whether it lives in the conventional way that we understand organisms to live. Draw up seven questions to determine how this organism lives and whether it can be classified as alive. [7 marks]

Learners need to be able to use their knowledge of the 7 life processes to ask these key questions in order to establish if this organism is living or not. Questions should include something as follows:

Can it move?

Can it make more of its own kind? How does this reproduction occur?

Can it sense changes in its environment and respond to this?

Does this organism grow?

How does it get energy for movement, reproduction or growth?

Does it excrete waste products?

Does it get nourishment somehow?

What are the requirements for sustaining life on Earth? [5 marks]

Look at the following photos of different organisms in their environments. Answer the questions about how they are adapted.

Giraffe



How are giraffe adapted to eat their food? Hint: They eat the leaves of trees. [1 mark]

A cactus



This cactus is adapted to live in hot environments? How do you think it stores water for long periods? Hint: Look at its leaves. [1 mark]

How do you think the cactus has adapted to prevent other animals from eating it? Hint: What is on the leaves? [1 mark]

A stick insect.



Can you see the stick insect in this photo? How do you think it is adapted, especially to hide away from predators? [1 mark]

Think back to the scientific investigation you did in this section. Evaluate how well you think you followed the scientific method to make your experiment fair or not fair. [2 marks]

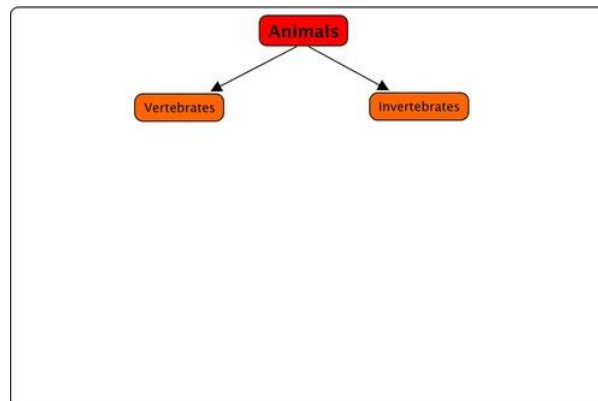
Use the following diagram to fill in how we classify organisms. The first 3 have been filled in as we did not discuss domains in this chapter. You will learn more about domains in later grades. [6 marks]



Which two levels of classification do we use to name an organism? What is the correct way to write the scientific name of an organism? [3 marks]

Why was Aristotle's method of classifying animals as walkers, swimmers or flyers not very effective? [2 marks]

Use the following space to draw a classification diagram of the animal kingdom. It has been started for you. You only need to include the phyla and classes that we studied in detail. [11 marks]



Give one word for the following or complete the sentence required:

The existence of a large number of different kinds of plant and animal species which make a balanced environment. [1 mark]

The animal kingdom can be divided into two main groups. [2 marks]

The five classes of vertebrates are: [5 marks]

The phylum of animals that have a hard exoskeleton. [1 mark]

The phylum of animals that have a soft body often protected by a shell. [1 mark]

Write true or false next to each of the following sentences. If the sentence is false, rewrite it so that it is true. [10 marks]

A small percentage of the living organisms on Earth are invertebrates.

Invertebrate animals do not have a backbone.

Spiders are examples of arthropods.

All molluscs have exoskeletons in the form of shells.

Birds only have feathers as their body covering.

Endothermic animals need to keep very still when it is cold.

Look at the following sentences and underline the one that *best* describes mammals. [1 mark]

Mammals are animals that breathe, move, eat, reproduce and excrete.

Mammals are animals that can regulate their body temperatures.

Mammals are warm blooded animals that feed their young, have special organs for breathing and a backbone.

Mammals are warm blooded animals with mammary glands, a hairy body, lungs and a backbone.

Mammals give birth to live young, can be found living on land and in water, and can sense their environment with well defined smell and touch senses.

Describe how the seeds of angiosperms differ from those produced by the organism in the photo. [2 marks]



A cycad with a cone.

Use the following space to draw a classification diagram of plants. [10 marks]

Are Dobermans, terriers and bulldogs from the same species? Give a reason for your answer. [2 marks]

A new breed of cat has been developed, called the munch kin cat. Breeders specifically tried to breed a cat with very short front legs. Explain how you think they achieved this. [2 marks]



Predict whether you think munch kin cats would be able to hunt as well as other cats with normal length front legs. [2 marks]

Do you think it is correct for humans to breed animals in this way? Explain your answer. [2 marks]

Explain in your own words what you understand by the term "inherited characteristics". [2 marks]

Why do you think it takes a long time for a species to adapt and change to its changing environment? [2 marks]

Total [12 marks]