



Answer sheet



1.

Origin: Over half a billion years ago, during the Cambrian, when Europe and Britain were covered by the sea.

Habitat: the sea floor, water at 20°C

Features: simple multicellular animal, soft-bodied, spicules support the body

Feeding, respiratory & excretory systems: water containing oxygen and food particles enters the inner cavity through holes in the body & passes over tiny whip-like structures which absorb the oxygen and nutrients from the water & give off waste which is carried out by the water.

2.

a. They had thick shells.

b. Shark.

3.

a. Any two: clams, sea urchins, starfish, sponges.

b. They had developed mechanisms to avoid sinking. Many sea urchins had club-like spines to spread their weight, some starfish were broad and flat, and clams had spines that lifted the shell off the sea floor and large shells which spread the weight.

4.

a. They lived in the Mesozoic Era during the periods called the Triassic, Jurassic and Cretaceous.

b. (Reverend Richard) Owen, in 1842.

c. Dinosaurs had legs which stood straight below their bodies.

d. We don't really know!

e. Ornithischians – Iguanodon, Hysilophodon, Valdosaurus, Pachycephalosaurus.

5.

a. Because, when they were still alive there was a great diversity of species of dinosaurs, the climate was hot; there was plenty to eat and drink – and a variety of local environments to live in, from rivers, sandy dunes, low hills and mud ponds.

b. Hysilophodon, Eucamerotus, Iguanodon, Polacanthus, Neovenator, Yaverlandia and Valdosaurus.

c. The Isle of Wight was formed in a sinking sedimentary basin. As dinosaurs died their remains were progressively covered by layers of mud and sand. A lack of oxygen in the soils meant there was little life in the ground to destroy the bones; heavy minerals then soaked into the bones and turned them into fossils.



6. Bat-like reptiles with wings.

- a. Because of the shape of their teeth we can say that they fed on fish, suspended food matter, plankton.
 - b. No.
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7. Black colored bones come from plant-debris beds; the pink color comes from iron minerals in the red-brown mudstone where fossil bones were preserved in.

8.

- a. 65 million years ago.
They think that an asteroid hit the area of the Gulf of Mexico creating an explosion, tidal waves and dust cloud. These caused the world's ecosystem to collapse.
 - b. Update: evidence published about 6 years ago by Professor Keller and her research group on the sediments associated with this impact. She found there was a considerable time gap between the blast deposits and an overlying thin seam of clay containing the element Iridium. The Iridium was dated to the time dinosaurs went extinct, but the blast debris from the impact was dated around 300,000 years earlier.
Many geologists now believe that the evidence shows that the impact was too early to finish off the dinosaurs.
Some also believe that the body that hit the earth was more likely to be an enormous ice and rock comet rather than a solid rock.
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9. Because of the discovery of an animal with all the features of a bird which also had a reptile tail, teeth and claws.

Deinonychus or Archaeopteryx.

10.

- a. The Saurischia – (a sub-group called Theropods meaning 'beast foot').
 - b. Plant eating sauropods.
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11. The teeth.

- a. High ridges on the teeth.
 - b. By using the genus name and the latinized version of Fox's name.
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12.

- a. Huxley: based on the teeth not Iguanodon
Owen: new type of Iguanodon foxii because the bones of the dinosaurs are similar.
 - b. Hypsi!
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13.

- a. Premaxillary teeth, four toes on foot, long powerful legs, maximum length maybe 3 m.
 - b. It was a ground forager, eating plants & maybe insects.
 - c. Fast, it has slim long tibia and short femurs in its legs.
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14. Huge natural sandstone foot casts left by the back feet of Iguanodon.
