

## Explore and Discover...

### Animal skeletons

# Rattle the bones quiz



**Look at a range of animal skeletons and compare them to humans.**

**Think about how human joints affect movement**

#### Galleries visited

(please see accompanying map)



Central Hall



Fishes, Amphibians & Reptiles



Human Biology

#### Suitable for



Key Stage 2 (ages seven to 11)

#### Curriculum links

QCA Science Unit 4A: Moving & Growing  
NC Science: Life Processes & Living Things 2e

#### Example page

[www.nhm.ac.uk/animal-skeletons-ks2](http://www.nhm.ac.uk/animal-skeletons-ks2)

#### Pre-visit preparation

- Vocabulary: skeleton, compare, skull, ribs, spine, similarities, differences, joints, hinge joint, ball and socket joint, limbs.
- An appreciation of the fact many animals have an internal skeleton made up of many different bones. These bones provide protection and support for the body and allow the animal to move.













# Explore and Discover...

## Animal skeletons

### Rattle the bones quiz

#### Activities within the guide

The children will be asked to complete six challenges:

	Challenge	Location	Description
	1. <i>Diplodocus</i> challenge		Compare the <i>Diplodocus</i> skeleton to a human skeleton
	2. Jolly joints challenge		Explore different types of joints
	3. You from the inside challenge		Explore the human skeleton
	4. Skeletons challenge		Investigate a range of reptile and amphibian skeletons
	5. Frog and tortoise challenge		How the skeleton of these animals affects their movement
	6. Star challenge skeletons		Imagine what the skeleton would be like for one of the exhibits

These can be done in any order within the three galleries. Depending on how many challenges the children complete, they can reach these levels:

- researcher (two challenges completed)
- scientist (four challenges completed)
- professor (six challenges completed)

#### Certificates

On return to school, certificates (available at the end of this document) can be printed out and awarded, depending on the number of challenges completed.

# Explore and Discover...

## Animal skeletons

### Rattle the bones quiz

#### Techniques

There are a range of techniques used within the guide. To complete the challenge, children will be required to:

- make choices based on observation
- write short answers
- look for similarities and differences
- make informed decisions based on the information available
- make sketches
- discuss answers with a partner or group
- extract information from exhibits and their information boards

#### Follow-up activities

- **Award ceremony**

Print out certificates and have an award ceremony.

- **Literacy: Speaking & Listening**

Discuss the experiences had at the Museum and the challenges that were undertaken.

- **Science/Literacy**

Research other animal skeletons and find out which animals do not have a bony skeleton.

#### Suggested answers for challenges



##### **Diplodocus challenge**

Answers will vary but may include the following.

Similarities – five toes, long thigh bones, ribs, four limbs, backbone.

Differences – no tail, smaller, differently shaped skull, two legs (and two arms), shorter neck.



##### **Jolly joints challenge**

**Question 2:** The hinge joint is found in the elbow and knee and can move up and down. The elbow, knee and fingers should be circled on the skeleton. The ball and socket joint is found in the shoulder and hip and can move round and round. The shoulder and hip should be circled on the skeleton.

**Question 3:** Answers will vary, but might include wobbling, turning further around, or moving in funny circles.

# Explore and Discover...

## Animal skeletons

### Rattle the bones quiz



#### You from the inside challenge

- Question 2:** The skeleton should have the skull, pelvis, right hand and left femur added.
- Question 3:** Parts should be correctly labelled.
- Question 4:** Spine – column, ribs – cage, pelvis – arch.
- Question 5:** The drawing should resemble one found in the gallery, in which a person is crumpled in a heap on the floor.



#### Skeletons challenge

- Question 2:** a) Indian python b) two-horned chameleon c) Japanese giant salamander d) tortoise.
- Question 3:** The crocodile skeleton should be labelled correctly.
- Question 4:** The skeletons help us understand how an animal moves. For example, the snake does not have any limbs so it can slither through the undergrowth, the tortoise has a shell so moves slowly.



#### Frog and tortoise challenge

- Question 2:** The skull and right leg need to be added to the diagram.
- Question 3:** Answers could vary, but should refer to the frog jumping long distances.
- Question 4:** The eye sockets are big because the frog has large eyes to see its prey.
- Question 5:** Tortoises have a hard shell for strength and protection from predators.
- Question 6:** A tortoise uses its limbs to walk on land. A turtle uses its limbs to swim in water.



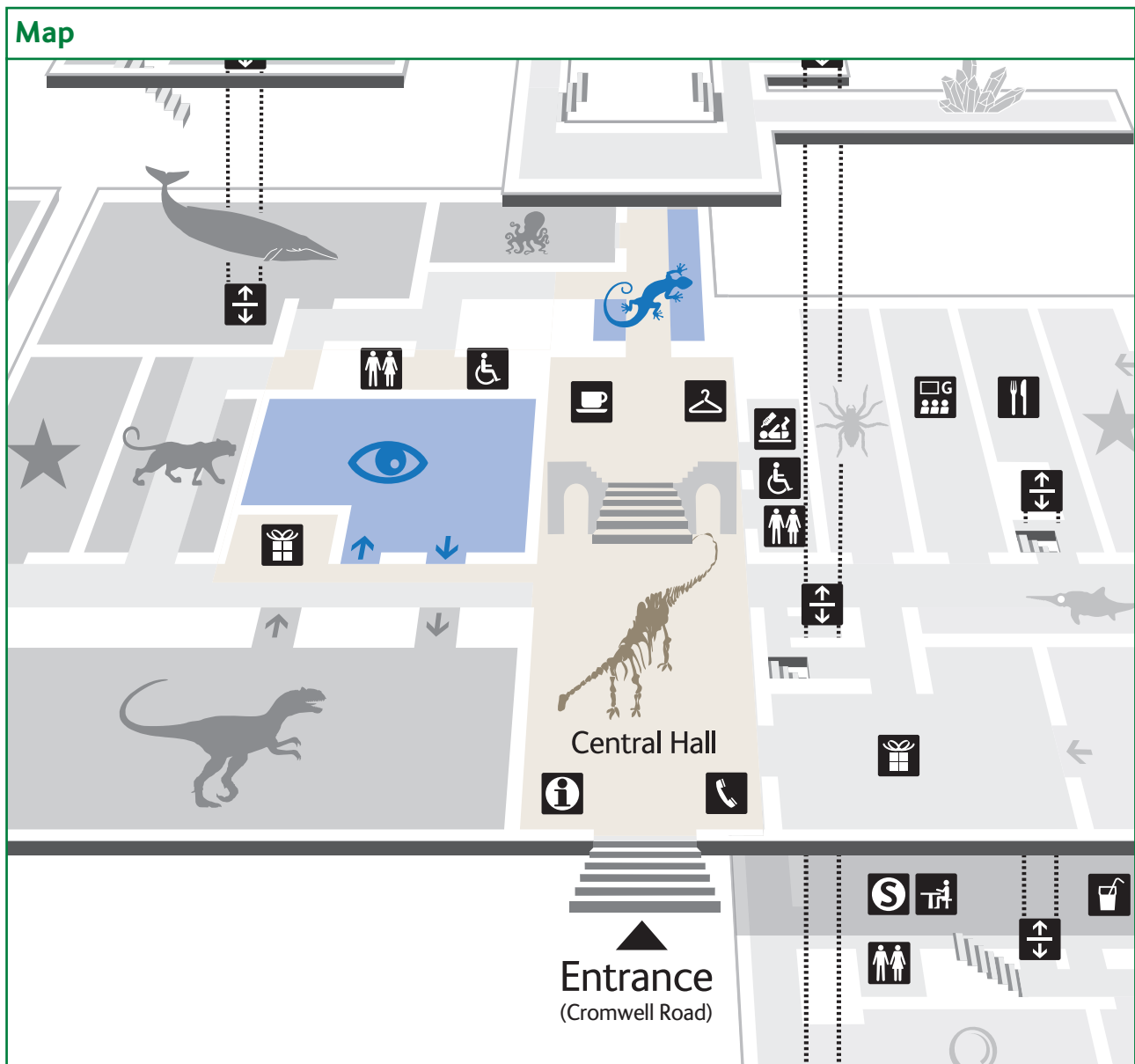
#### Star challenge skeletons

Answers will vary, depending on what animal is chosen. Check the children have drawn a skeleton inside the outline – they can discuss the skull, backbones, number and shape of limbs.

Explore and Discover...

Animal skeletons

**Rattle the bones quiz**



A larger, full-colour version of this map showing the whole Museum is available at reception when you arrive.

# Certificate

This is to certify that

---

became a

# researcher

in the Explore and Discover... Animal skeletons challenge

---

Teacher's name

Date



# Certificate

This is to certify that

---

became a

# scientist

in the Explore and Discover... Animal skeletons challenge

---

Teacher's name

Date



# Certificate

This is to certify that

---

became a

# professor

in the Explore and Discover... Animal skeletons challenge

---

Teacher's name

Date

