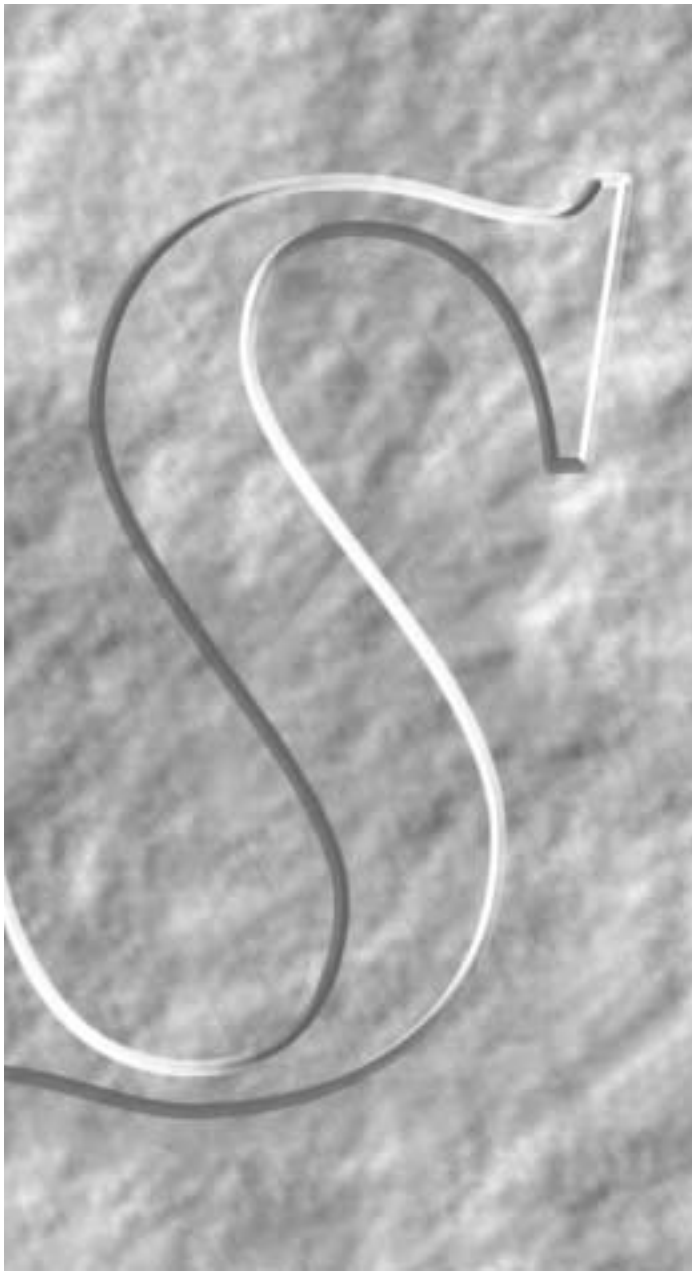
# ISLE *of* WIGHT



SCIENCE SPECIFIC TOPICS

FOR KEY STAGE 2

AGED 7 - 11

IN YEAR GROUPS 3 - 6

DINOSAURS

science WORK PACK

# ISLE *of* WIGHT
# SCIENCE

## NOTES FOR TEACHERS

SCIENCE-SPECIFIC TOPICS FOR KS2 CHILDREN
AGED 7-11 IN YEAR GROUPS 3-6

**Life Processes and Living Things**

- variation and classification
- life processes
- living things in their environment

**Mathematics / numeracy**

- arithmetic - addition
- reasoning

**English / literacy**

- vocabulary extension

**General:**

The worksheets require:

- observational skills
- reading skills
- arithmatic skills

- The pupils need to apply some prior knowledge, but all the information required is on the sheets, posters or the actual exhibit, facilitating use on site or at school.

- Specifically from the Dinosaur Family Tree worksheet, they will learn that organisms can be classified on the basis of their similarities, and that elementary arithmatic can be used to support (through quantification) observational (qualative) classification schemes.

- Like with human families, family trees can be constructed over time periods. The Family Tree worksheet enables the children to place fifteen well known dinosaurs into a simplified Dinosaur Family Tree, by identifying (numerically) which line each individual sits on, and using the date given, its position on that line.

- The tree also introduces the concept of geological time, and the large numbers used in its construction. Additionally, they will notice that geological time is divided and names given to those divisions.

- The work can be extended, some children will notice that four distinct groupings of dinosaurs are formed as time blocks (Triassic, Late Jurassic, Early Cretaceous and Late Cretaceous). The children could find out what each of the individual dinosaurs ate, find out about other contemporary dinosaurs, and construct food chains for each of those periods.

- The Family Tree is aimed at older children, however, by you providing the total scores as part of the exercise, it may become suitable for younger children.

- You may also find that inserting the first 1 or 2 letters of each name in the appropriate block will make it easier for the younger children to complete the exercise.

*The author Martin Munt is assistant curator of the Geology Museum at Sandown*

NAME: _____

DATE: _____

# ISLE *of* WIGHT
## *Dinosaurs*
## *Study Sheet 2*
# *Iguanodon*
*(pronounced ig-waa-nuh-don)*

### LOOKING AT DINOSAURS

1 Look at the picture of the dinosaur, estimate how long and how tall the animal was when it was alive. _____ _____
2 Did the animal stand on two or four legs? _____
3 How many toes are there on one foot? _____
4 Does the animal have more or less fingers on one hand than one foot, how many fingers are there? _____
5 Can you think of any living animals which the dinosaur foot resembles, if so which group? _____

### WHAT DID IT EAT?

We can tell what type of food dinosaurs ate by looking at their teeth and claws, look closely at the mouth, hands and feet of the dinosaur and answer the following questions.

1 What shape are the teeth? _____
2 What shape are the claws on its feet? _____
3 From the shape of the teeth and claws, suggest what the animal used to eat? _____
4 From the way we have recreated the dinosaur do you think that it was slow and sluggish or fast and agile? _____

Tooth of Iguanodon

0 1 metre



### HOW LONG AGO?

From the Dinosaur Family Tree find out, and write in figures how long ago the dinosaur lived.

_____

### LABEL YOUR DINOSAUR

On the picture draw lines and labels to identify the following parts of the body.

| | |
|---|---|
| 1 head | 7 legs |
| 2 teeth | 8 claws |
| 3 backbone | 9 shoulder |
| 4 hips | 10 ribs |
| 5 tail | 11 hands |
| 6 arms | 12 feet |



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NAME: _____

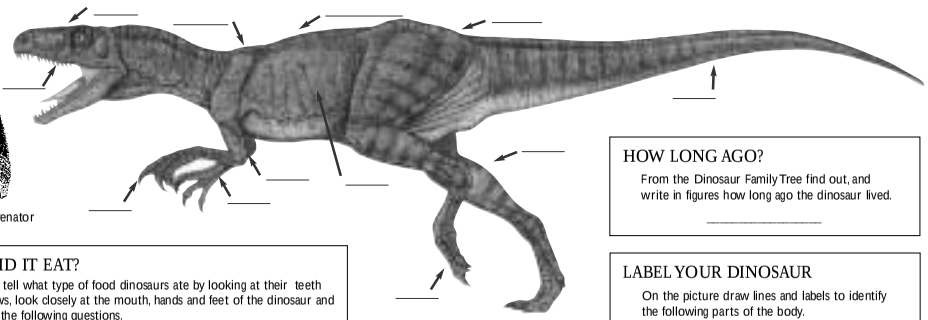
DATE: _____

# ISLE *of* WIGHT
## *Dinosaurs*
## *Study Sheet 1*
# *Neovenator*
*(pronounced knee-o-ven-a-tor)*

### LOOKING AT DINOSAURS

1 Look at the picture of the dinosaur, estimate how long and how tall the animal was when it was alive. _____ _____
2 Did the animal stand on two or four legs? _____
3 How many toes are there on one foot? _____
4 Does the animal have more or less fingers on one hand than one foot, how many fingers are there? _____
5 Can you think of any living animals which the dinosaur foot resembles, if so which group? _____

Tooth of Neovenator



0 1 metre

### WHAT DID IT EAT?

1 We can tell what type of food dinosaurs ate by looking at their teeth and claws, look closely at the mouth, hands and feet of the dinosaur and answer the following questions.
2 What shape are the teeth? _____
3 What shape are the claws on its hands and feet? _____
4 From the shape of the teeth and claws, suggest what the animal used to eat. _____
5 From the way we have recreated the dinosaur do you think that it was slow and sluggish or fast and agile? _____

### HOW LONG AGO?

From the Dinosaur Family Tree find out, and write in figures how long ago the dinosaur lived.

_____

### LABEL YOUR DINOSAUR

On the picture draw lines and labels to identify the following parts of the body.

| | |
|---|---|
| 1 head | 7 legs |
| 2 teeth | 8 claws |
| 3 backbone | 9 shoulder |
| 4 hips | 10 ribs |
| 5 tail | 11 hands |
| 6 arms | 12 feet |



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NAME: _____

DATE: _____

# ISLE *of* WIGHT — DINOSAUR FAMILY TREE

The following are well known dinosaurs which lived at different times, use the information provided to work out which ones are related, and place them into the dinosaur family tree.

| | | | |
|---|---|---|---|
| Iguanodon | BH | BP | O |
| Polacanthus | BH | QP | O |
| Tyrannosaurus | LH | BP | B |
| Diplodocus | LH | QP | O |
| Triceratops | BH | QP | O |
| Neovenator | LH | BP | B |
| Apatosaurus | LH | QP | O |
| Allosaurus | LH | BP | B |
| Velociraptor | LH | BP | S |
| Coelurus | LH | BP | S |
| Stegosaurus | BH | QP | O |
| Hadrosaurus | BH | BP | O |
| Coelophysis | LH | BP | S |
| Plateosaurus | LH | QP | O |
| Heterodontosaurus | BH | BP | O |

**CODING SCORES**

| | | |
|---|---|---|
| BH | 5 | (Bird-hipped) |
| LH | 10 | (Lizard-hipped) |
| BP | 1 | (Bipedal) |
| QP | 2 | (Quadrupedal) |
| S | 3 | (Small) |
| B | 4 | (Big) |
| O | 5 | (Not appropriate) |

**CLASSIFICATION**

Scientists can work out relationships between different dinosaurs by looking at their skeletons. Dinosaurs are divided into Lizard-hipped (Saurischian) and bird-hipped (Ornithischian) dinosaurs. They can be further divided by whether they walk on two (bipedal) or four legs (quadrupedal).
Using the information provided, score the coding, and carry-out the calculations below, (following the example shown) to work out which dinosaurs are related to each other. (NB those dinosaurs which have the same total score are related).

| DINOSAUR | SCORES | TOTAL SCORE | AGE |
|---|---|---|---|
| Iguanodon | 5 + 1 + 5 = | 11 | EC |
| Polacanthus | 5 + 2 + 5 = | 12 | EC |
| Tyrannosaurus | 10 + 1 + 4 = | 15 | LC |
| Diplodocus | 10 + 2 + 5 = | 17 | EC |
| Triceratops | 5 + 2 + 5 = | 12 | LC |
| Neovenator | 10 + 1 + 4 = | 15 | EC |
| Apatosaurus | 10 + 2 + 5 = | 17 | LJ |
| Allosaurus | 10 + 1 + 4 = | 15 | LJ |
| Velociraptor | 10 + 1 + 3 = | 14 | LC |
| Coelurus | 10 + 1 + 3 = | 14 | LJ |
| Stegosaurus | 5 + 2 + 5 = | 12 | LJ |
| Hadrosaurus | 5 + 1 + 5 = | 11 | LC |
| Coelophysis | 10 + 1 + 3 = | 14 | TRI |
| Plateosaurus | 10 + 2 + 5 = | 17 | TRI |
| Heterodontosaurus | 5 + 1 + 5 = | 11 | TRI |

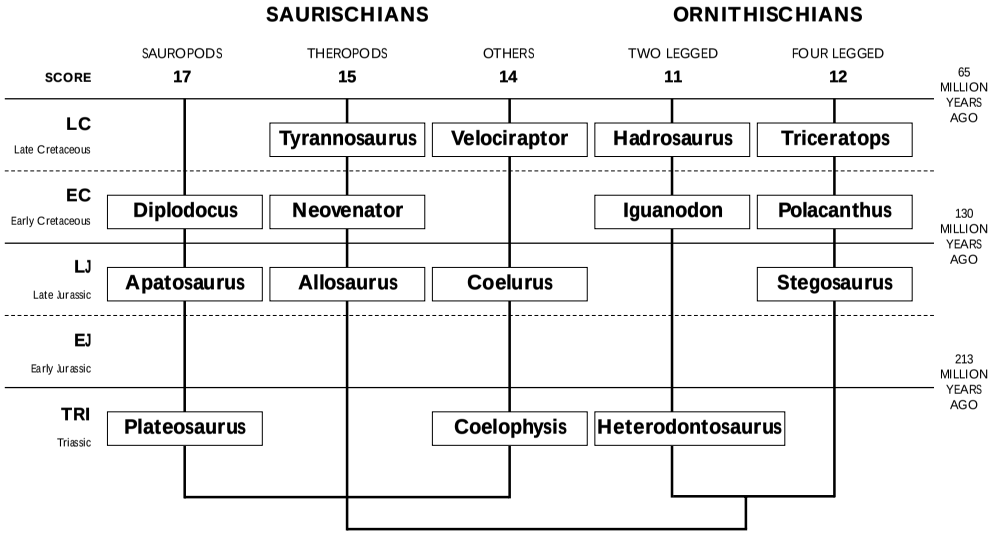
NAME: _____

DATE: _____

# ISLE *of* WIGHT — DINOSAUR FAMILY TREE

**EVOLUTION**

Over time animals change, and new species can arise from old ones. Use the age and total score to place each dinosaur into the Dinosaur Family Tree.



NAME: _____

DATE: _____

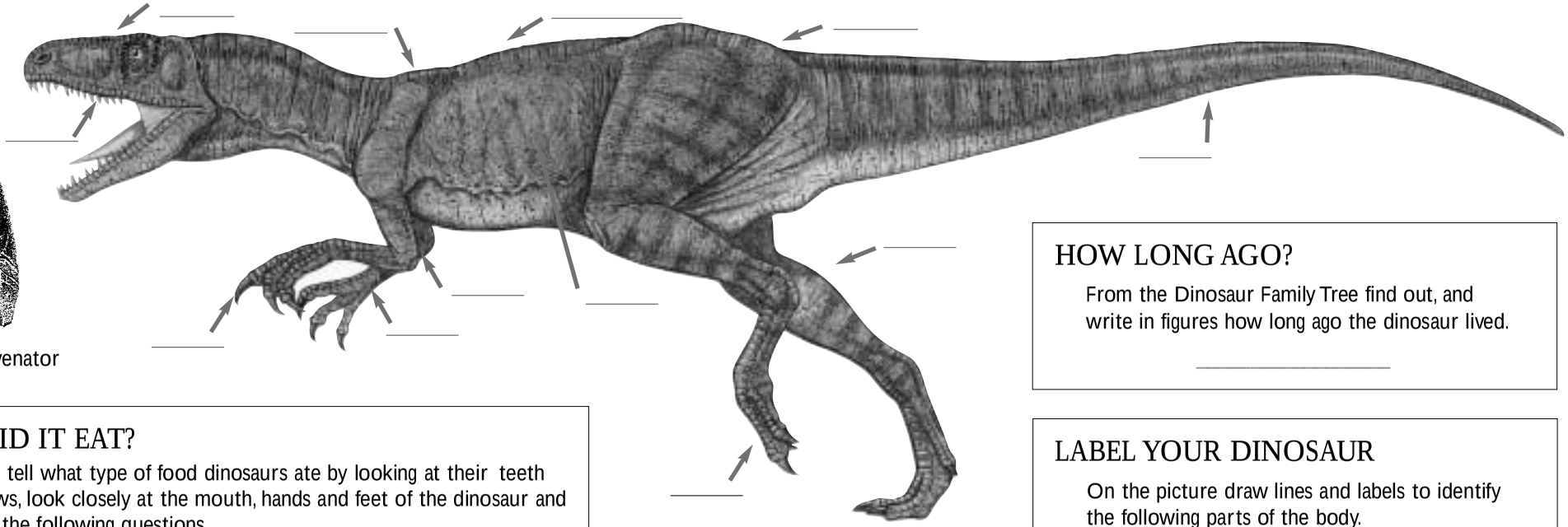
# ISLE *of* WIGHT
# *Dinosaurs*
# *Study Sheet 1*
# *Neovenator*

*(pronounced knee-o-ven-a-tor)*

## LOOKING AT DINOSAURS

1. Look at the picture of the dinosaur, estimate how long and how tall the animal was when it was alive. _____ _____
2. Did the animal stand on two or four legs? _____
3. How many toes are there on one foot? _____
4. Does the animal have more or less fingers on one hand than one foot, how many fingers are there? _____
5. Can you think of any living animals which the dinosaur foot resembles, if so which group? _____

Tooth of Neovenator



0 1 metre



## HOW LONG AGO?

From the Dinosaur Family Tree find out, and write in figures how long ago the dinosaur lived.

_____

## WHAT DID IT EAT?

1. We can tell what type of food dinosaurs ate by looking at their teeth and claws, look closely at the mouth, hands and feet of the dinosaur and answer the following questions.
2. What shape are the teeth? _____
3. What shape are the claws on its hands and feet? _____
4. From the shape of the teeth and claws, suggest what the animal used to eat. _____
5. From the way we have recreated the dinosaur do you think that it was slow and sluggish or fast and agile? _____

## LABEL YOUR DINOSAUR

On the picture draw lines and labels to identify the following parts of the body.

1. head
2. teeth
3. backbone
4. hips
5. tail
6. arms
7. legs
8. claws
9. shoulder
10. ribs
11. hands
12. feet

NAME: _____

DATE: _____

# ISLE *of* WIGHT

## *Dinosaurs*

## *Study Sheet 2*

# *Iguanodon*

*(pronounced ig-waa-nuh-don)*

### LOOKING AT DINOSAURS

**1** Look at the picture of the dinosaur, estimate how long and how tall the animal was when it was alive. _____ _____

**2** Did the animal stand on two or four legs? _____

**3** How many toes are there on one foot? _____

**4** Does the animal have more or less fingers on one hand than one foot, how many fingers are there? _____

**5** Can you think of any living animals which the dinosaur foot resembles, if so which group? _____

### HOW LONG AGO?

From the Dinosaur Family Tree find out, and write in figures how long ago the dinosaur lived.

_____

### WHAT DID IT EAT?

We can tell what type of food dinosaurs ate by looking at their teeth and claws, look closely at the mouth, hands and feet of the dinosaur and answer the following questions.

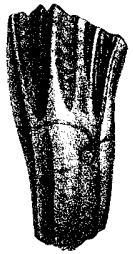
**1** What shape are the teeth? _____

**2** What shape are the claws on its feet? _____

**3** From the shape of the teeth and claws, suggest what the animal used to eat? _____

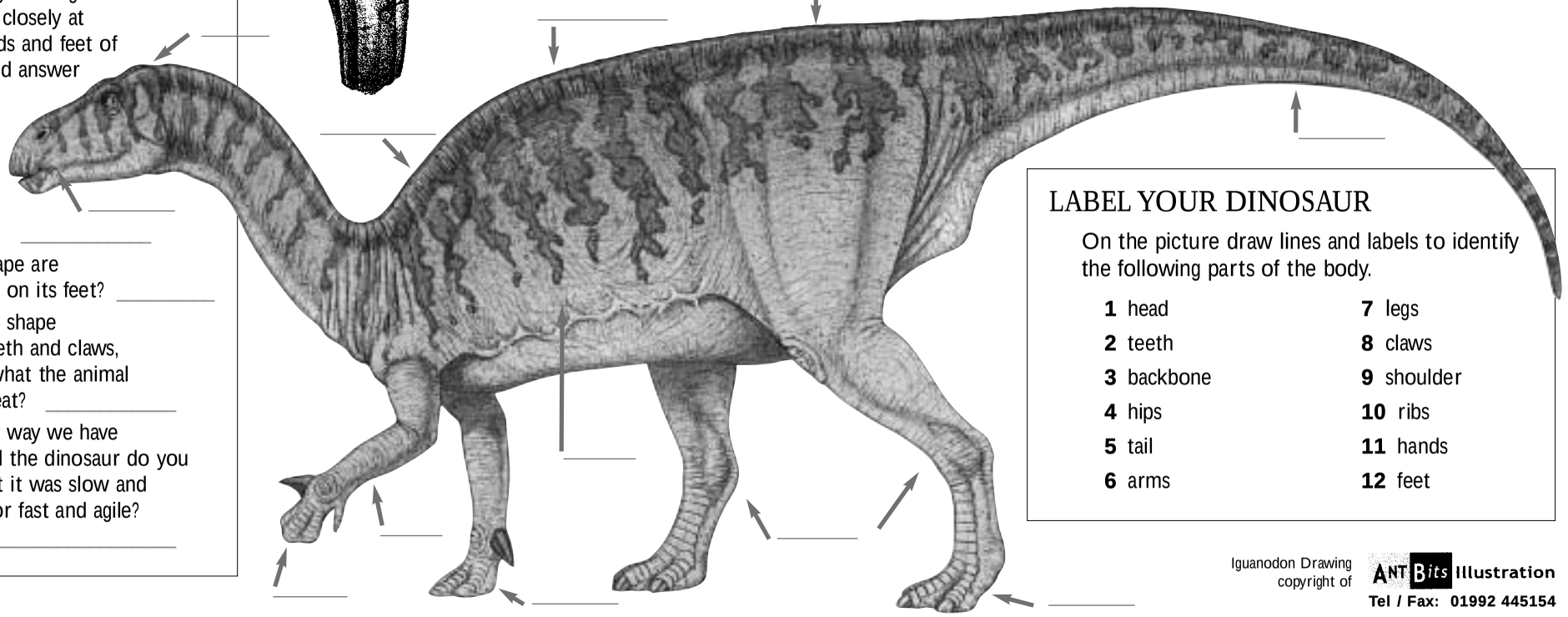
**4** From the way we have recreated the dinosaur do you think that it was slow and sluggish or fast and agile?

_____



Tooth of Iguanodon

0 1 metre



### LABEL YOUR DINOSAUR

On the picture draw lines and labels to identify the following parts of the body.

**1** head
**2** teeth
**3** backbone
**4** hips
**5** tail
**6** arms
**7** legs
**8** claws
**9** shoulder
**10** ribs
**11** hands
**12** feet

NAME: _____

DATE: _____

# ISLE *of* WIGHT DINOSAUR FAMILY TREE

## CLASSIFICATION

Scientists can work out relationships between different dinosaurs by looking at their skeletons. Dinosaurs are divided into Lizard-hipped (Saurischian) and bird-hipped (Ornithischian) dinosaurs. They can be further divided by whether they walk on two (bipedal) or four legs (quadrupedal).

Using the information provided, score the coding, and carry-out the calculations below, (following the example shown) to work out which dinosaurs are related to each other. (NB those dinosaurs which have the same total score are related).

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| | | | |
|---|---|---|---|
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| Diplodocus | LH | QP | O |
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| Neovenator | LH | BP | B |
| Apatosaurus | LH | QP | O |
| Allosaurus | LH | BP | B |
| Velociraptor | LH | BP | S |
| Coelurus | LH | BP | S |
| Stegosaurus | BH | QP | O |
| Hadrosaurus | BH | BP | O |
| Coelophysis | LH | BP | S |
| Plateosaurus | LH | QP | O |
| Heterodontosaurus | BH | BP | O |

### CODING SCORES

| | | | |
|---|---|---|---|
| BH | = | 5 | (Bird-hipped) |
| LH | = | 10 | (Lizard-hipped) |
| BP | = | 1 | (Bipedal) |
| QP | = | 2 | (Quadrupedal) |
| S | = | 3 | (Small) |
| B | = | 4 | (Big) |
| O | = | 5 | (Not appropriate) |

| DINOSAUR | SCORES | TOTAL SCORE | AGE |
|---|---|---|---|
| Iguanodon | 5 + 1 + 5 = | 11 | EC |
| Polacanthus | + + = | | EC |
| Tyrannosaurus | + + = | | LC |
| Diplodocus | + + = | | EC |
| Triceratops | + + = | | LC |
| Neovenator | + + = | | EC |
| Apatosaurus | + + = | | LJ |
| Allosaurus | + + = | | LJ |
| Velociraptor | + + = | | LC |
| Coelurus | + + = | | LJ |
| Stegosaurus | + + = | | LJ |
| Hadrosaurus | + + = | | LC |
| Coelophysis | + + = | | TRI |
| Plateosaurus | + + = | | TRI |
| Heterodontosaurus | + + = | | TRI |

NAME: _____

DATE: _____

# ISLE *of* WIGHT DINOSAUR FAMILY TREE

## CLASSIFICATION

Scientists can work out relationships between different dinosaurs by looking at their skeletons. Dinosaurs are divided into Lizard-hipped (Saurischian) and bird-hipped (Ornithischian) dinosaurs. They can be further divided by whether they walk on two (bipedal) or four legs (quadrupedal).

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| Neovenator | LH | BP | B |
| Apatosaurus | LH | QP | O |
| Allosaurus | LH | BP | B |
| Velociraptor | LH | BP | S |
| Coelurus | LH | BP | S |
| Stegosaurus | BH | QP | O |
| Hadrosaurus | BH | BP | O |
| Coelophysis | LH | BP | S |
| Plateosaurus | LH | QP | O |
| Heterodontosaurus | BH | BP | O |

### CODING SCORES

| | | | |
|---|---|---|---|
| BH | = | 5 | (Bird-hipped) |
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| Plateosaurus | + + = | | TRI |
| Heterodontosaurus | + + = | | TRI |