


WM Net - Science Files	KS2	
Title— Moving and Growing 1—Bones	Y4	

Planning Links— QCA Unit 4A: Moving and growing Section 2: Bones and skeletons

Objectives:
Children should learn:

- *that humans (and some other animals) have bony skeletons inside their bodies and to raise questions about different bony skeletons*
- *to make and record relevant observations of bones and skeletons*

By the end of these sessions most children should: *identify similar parts of the skeleton in some other species*

Page descriptions:
Page 2
This page shows a girl and asks what do you know about your bones? Label this girl to show where you think important bones should be. There is then a click to check button to reveal some key answers.
Page 3
This page poses some more complex questions intended to be used as starting points for class discussion. Click on the question mark buttons to reveal each question.
Page 4
This page is a note making prompt page where children or an adult scribe should note points of interest which have arisen during group discussion and which the children may be interested in investigating further during the block of work.

Additional Notes:
These files are intended to supplement rather than replace alternate methods. As with all science work it is crucial to give the children the opportunity to involve themselves in hands on exploration wherever possible so a model skeleton or animal bones etc. would be useful during this session.

WM Net - Science Files	KS2	eastteach Files
Title— Moving and Growing 2—Comparing skeletons	Y4	
Planning Links— QCA Unit 4A: Moving and growing Section 3: Comparing skeletons		
<p>Objectives:</p> <p>Children should learn:</p> <ul style="list-style-type: none">to make observations and comparisons of relevant features <p>By the end of these sessions most children should: identify similar parts of the skeleton in some other species</p> <p>Page descriptions:</p> <p>Page 2</p> <p>This page shows a selection of images of animal skeletons. The children are asked to make a suggestion about which animals they belong to. They are then asked to annotate on the screen the features which they share.</p> <p>Page 3</p> <p>This page shows a selection of features of animal skeletons. It asks the children to sort them according to a pair of statements about them. Drag the features to sort them. Discuss your reasons.</p> <p>Page 4</p> <p>A think about it page. Four questions previously posed are repeated. Click on the question to reveal more information about it.</p> <p>Additional Notes:</p> <p>These files are intended to supplement rather than replace alternate methods. As with all science work it is crucial to give the children the opportunity to involve themselves in hands on exploration wherever possible so a model skeleton or animal bones etc. would be useful during this session.</p>		

WM Net - Science Files	KS2	eastteach Files
Title— Moving and Growing 3 — Growth	y4	
Planning Links— QCA Unit 4A: Moving and growing Section 3: Growing		
<p>Objectives:</p> <p>Children should learn:</p> <ul style="list-style-type: none">• <i>That human skeletons are internal and grow as humans grow.</i> <p>By the end of these sessions most children should: state that their skeleton grows from birth to adulthood</p> <p>Page descriptions:</p> <p>Page 2</p> <p>This page asks the children to look at a range of clothing appropriate to different age groups and make judgements about the relative sizes.</p> <p>Page 3</p> <p>This page asks the question "Does everyone grow at the same rate?". Children are asked to compare heights and shoe sizes of members of their class or group. They should compare the relative order of the two sets of measurements. Does being taller always mean you have bigger feet or are there discrepancies?</p> <p>Page 4</p> <p>A think about it page. We know our bodies get larger as they get older but are there other kinds of growth differences. Discuss and make notes.</p> <p>Additional Notes:</p> <p>These files are intended to supplement rather than replace alternate methods. As with all science work it is crucial to give the children the opportunity to involve themselves in hands on exploration wherever possible. A range of clothing and measuring equipment is essential to this task.</p>		

WM Net - Science Files	KS2	Eastteach Files
Title— Moving and Growing 4 — Body Size	Y4	

Planning Links— QCA Unit 4A: Moving and growing Section 5: Testing ideas about body size.

Objectives:
Children should learn:

- to identify a question and turn it into a form that can be tested making a prediction
- to decide precisely what body measurement to make, and to make it
- to use bar charts or pictograms to present measurements
- to say what the evidence shows and whether it supports the prediction

By the end of these sessions most children should: decide how to investigate the agreed question

- make measurements to the nearest centimetre and describe what they did
- construct bar charts or pictograms and make comparisons between them describing what they show

Page descriptions:
Page 2
An information page setting a data collection challenge and asking children to produce a hypothesis to test before investigation.
Page 3
A chart for the compilation of the data from the challenge. Children annotate onto the screen using pen tools.
Page 4
Task 2 A similar challenge regarding head circumference.
Page 5
A recording page for answers as sentences or labelled diagrams.

Additional Notes:
These files are intended to supplement rather than replace alternate methods. As with all science work it is crucial to give the children the opportunity to involve themselves in hands on exploration wherever possible. A range measuring equipment is essential to this task.

WM Net - Science Files	KS2	<i>eastteach Files</i>
Title— Moving and Growing 5 — Muscles & Bones	Y4	
Planning Links— QCA Unit 4A: Moving and growing Section 7: Muscles and Bones		
Objectives: Children should learn: <ul style="list-style-type: none">• that animals with skeletons have muscles attached to the bones• that a muscle has to contract (shorten) to make a bone move• that muscles act in pairs By the end of these sessions most children should: explain that in order to move a muscle, attached to a bone, has to contract <ul style="list-style-type: none">• relate this to other parts of their bodies• explain that as one muscle relaxes another contracts and this results in movement		
Page descriptions: Page 2 An information page explaining the differences between skeletal, smooth and cardiac muscle. Page 3 Diagrams of the most famous muscle pairing the bicep and tricep in action. There are two pairs of contracted/relaxed labels to drag onto the diagram so that it makes sense. Click the button to check answers.		
Additional Notes: These files are intended to supplement rather than replace alternate methods. As with all science work it is crucial to give the children the opportunity to involve themselves in hands on exploration wherever possible. A model skeleton and stretchy materials would be useful here as would the possibility of the children taking photographs or digital video of a muscle pair moving which they can then view on screen		

WM Net - Science Files	KS2	eastteach Files
Title— Moving and Growing 6 — Muscles & Exercise	Y4	
Planning Links— QCA Unit 4A: Moving and growing Section 8: Muscles and Exercise.		
<p>Objectives: Children should learn:</p> <ul style="list-style-type: none">• that when someone is exercising or moving fast, the muscles work hard• to make observations and comparisons relating to exercise and rest <p>By the end of these sessions most children should:</p> <ul style="list-style-type: none">• give descriptions showing they understand that their muscles work harder during exercise than when they are sitting still <p>Page descriptions:</p> <p>Page 2 Children note physical effects of PE session on screen. Prompts are given to support thinking in this area.</p> <p>Page 3 This page shows a table of three different kinds of activity. The children are asked to drag a range of physical effects into the table in the location which they think make most sense. Do you all agree about where to put each effect?</p> <p>Additional Notes: This file should be used in conjunction with a PE session in which children can focus on the physical effects which are manifested during exercise. They should not however be pushed to exert themselves beyond that which they would usually do during PE.</p>		