


Key concept (age 11-14)

BCL2.3: The human skeleton and muscles

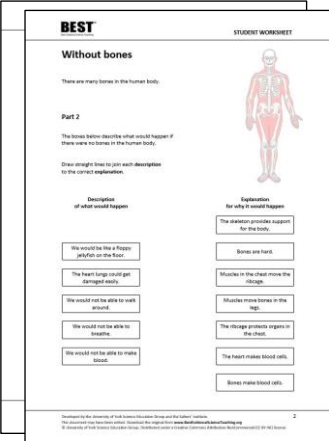
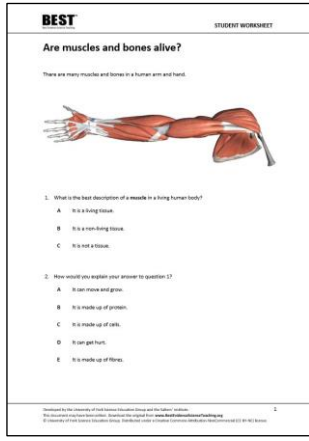
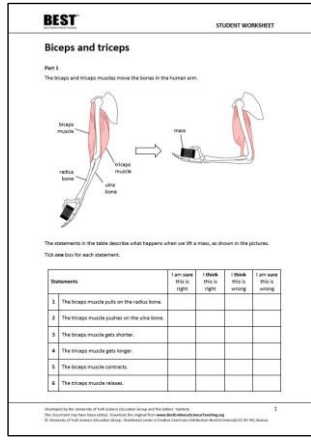
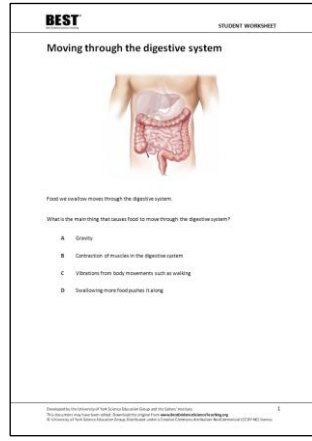
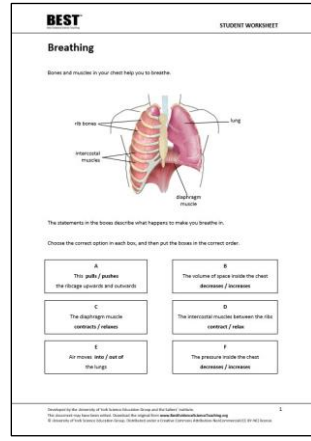
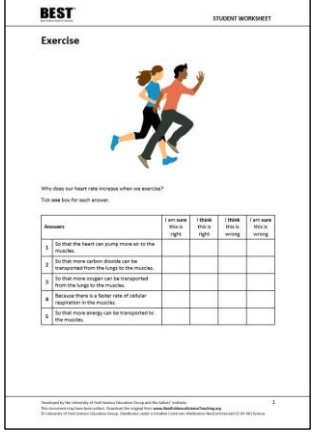
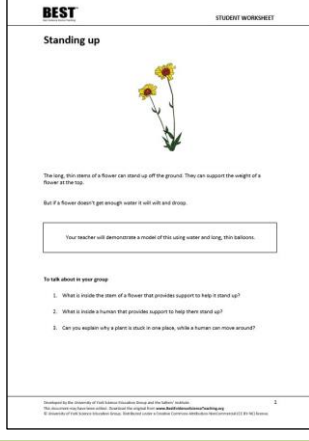
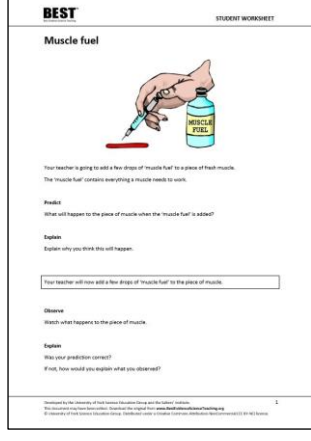
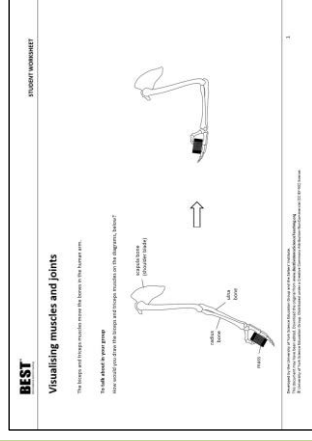
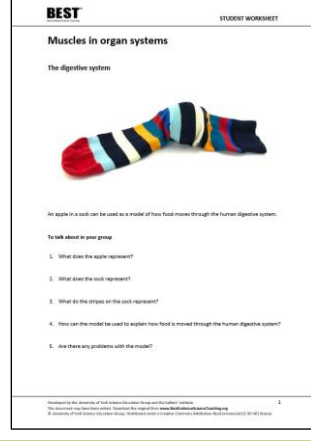
Progression toolkit: The human skeleton and muscles

Learning focus	Bones and muscles are tissues that work together with organs in organ systems to support the life processes of cells to keep organisms alive.				
As students' conceptual understanding progresses they can:					
As students' conceptual understanding progresses they can:	Recall that the human body contains a skeleton and muscles for support, protection and movement. P	Recall that bones and muscles are living tissues made up of cells.	Recognise that muscles, including antagonistic muscles, move bones by contracting.	Explain the presence and roles of muscles in organs and organ systems.	Explain why heart rate increases when we exercise.
Diagnostic questions	Without bones	Are muscles and bones alive?	Biceps and triceps	Moving through the digestive system Breathing	Exercise
Response activities	Standing up		Muscle fuel Visualising muscles and joints	Muscles in organ systems	

Key:

P Prior understanding from earlier stages of learning

B Bridge to later stages of learning

<p>Without bones</p>  <p>Confidence grid, linking ideas</p>	<p>Are muscles and bones alive?</p>  <p>Two-tier multiple choice</p>	<p>Biceps and triceps</p>  <p>Confidence grid</p>	<p>Moving through the digestive system</p>  <p>Simple multiple choice</p>	<p>Breathing</p>  <p>Ordering/sequencing</p>
<p>Exercise</p>  <p>Confidence grid</p>	<p>Standing up</p>  <p>Challenge to thinking, discussion</p>	<p>Muscle fuel</p>  <p>Predict, explain, observe, explain (PEOE)</p>	<p>Visualising muscles and joints</p>  <p>Discussion, modelling</p>	<p>Muscles in organ systems</p>  <p>Critiquing a representation, discussion</p>