



Orthopaedic Implants and Regenerative Medicine

Lesson plan

<p>Starter activity</p> <p>Lead a class discussion, asking students first to share any stories they have where they have damaged their joints, and what the treatment involved. Then, ask students if they can define the following terms:</p> <ul style="list-style-type: none"> • Joints • Arthritis • Trauma <p>Definitions given in Step 1.2 will be useful for eliciting correct answers (ensure that the different types of joint are covered).</p>	<p>Learning objectives</p> <ul style="list-style-type: none"> • To define relevant terms related to orthopaedic injury and treatment. • To describe different types of joint replacement in the human body. • To investigate biocompatibility and produce an informative leaflet.
<p>Main activities</p> <p>Watch the video in Step 1.3 (What joints can be replaced?). In small groups, students then work through the exercise in Step 1.3. Collect the exercise PDF (or close devices) and do a quick verbal quiz, asking students to give information on the various joint replacements.</p> <p>In their groups, students now research 'biocompatibility' in order to create an information leaflet for a hypothetical joint replacement patient. Leaflets should include a definition of biocompatibility, considerations in designing implants, and information on at least four different types of materials used in replacements.</p> <p>Information in Step 1.4 may be useful, but students should research more widely first.</p>	<p>Resources required</p> <ol style="list-style-type: none"> 1. Devices to watch video and perform research. 2. Device for exercise in Step 1.3 or PDF print out of exercise. 3. Materials for creating information leaflets. <p>Assessment for Learning Verbal quiz, information leaflets.</p> <p>Differentiation SEND: Videos have subtitles. Low ability: Peer-learning. Gifted and Talented: Peer-teaching.</p> <p>Plenary Groups present their leaflets to each other. In doing this, other groups should consider the leaflet from a patient's point of view, and ask any relevant questions they think a patient might ask.</p>