

Lesson Element

Unit 1: Body systems and the effects of physical activity

LO1: Understand the skeletal system in relation to exercise and physical activity

Learner Activity

Understanding the skeletal system and the effects of exercise

Activity 1 will help you to consolidate your knowledge of the different types of bone and the functions of the skeleton. It will also enable you to see a clear link between the type of bone (i.e. its structure and where it occurs in the body) and its function.

Activity 2 will require you to use your research skills to investigate a specific topic. By the end of the activity you should have a thorough understanding of the different synovial joints, including their structure, where they are found in the body and how they allow movement.

Activity 1

In the table below fill in the first column with the names of the different types of bones.

Now complete the second column in the table by suggesting which of the identified functions each type of bone is responsible for or involved with.

Finally, complete the third column by explaining how the type of bone carries out the function that has been linked to it.

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Learner Activity

Type of bone	Function	How this type of bone carries out this function

You may find the following website useful if you want to further explore this topic:

<http://learn.visiblebody.com/skeleton/types-of-bones>

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Learner Activity

Activity 2

Investigate a specific synovial joint from anywhere in the body. The information you collect should include the joint's:

- Name (type – e.g. ball and socket, gliding etc)
- Structure (including a diagram)
- Function/s
- Movement potential
- Main place/s in the body

Use these video clips:

<https://www.youtube.com/watch?v=yYEXQbPq5jM>

<https://www.youtube.com/watch?v=DLxYDoN634c>

Lesson Element

Unit 1: Body systems and the effects of physical activity

LO2: Understand the muscular system in relation to exercise and physical activity

Learner Activity

Understanding the muscular system and the effects of exercise

Activity 1 will help you to consolidate your knowledge of the main muscles of the body.

Activity 2 will enable you to explore the different types of muscle function (agonist, antagonist, synergist and fixator) in a practical setting, before recording the main muscles and their functions for a range of basic exercises.

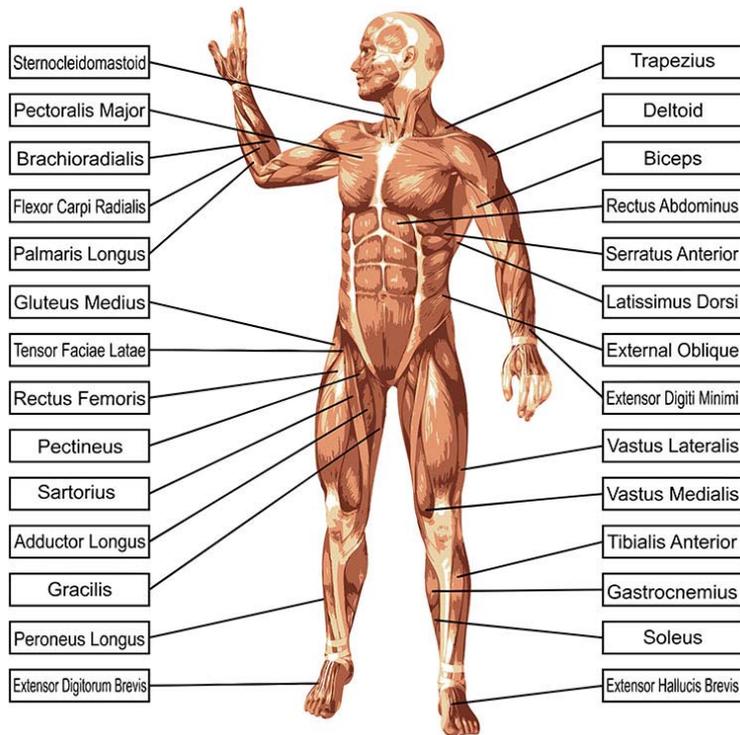
Activity 1

Look at the graphic below. Muscles are identified that you will be required to know for the exam. Over the holiday study and memorize the graphic and then see if you can identify the

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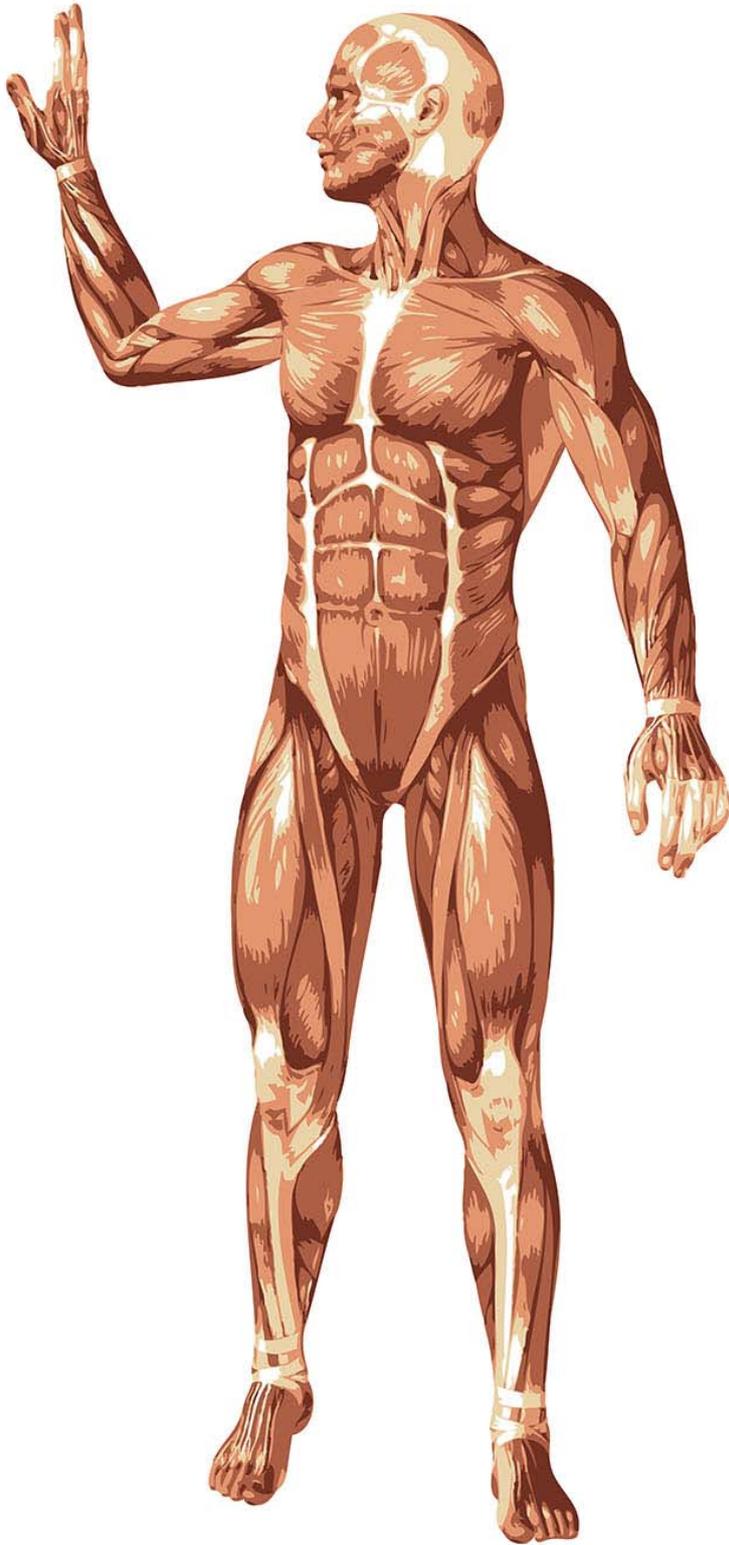
muscles on the non tabbed graphic. Try to use of system of study, memorize, cover then see how many muscles you can remember.



Load up your favourite search engine and experiment with different terms to see what finds the best musculoskeletal graphic. You might try, 'muscles of the human body', '3D musculoskeletal graphic' or 'skeletal muscles'. Thousands of images will come up, choose the best and use it to learn the muscles. This is essential for the course.

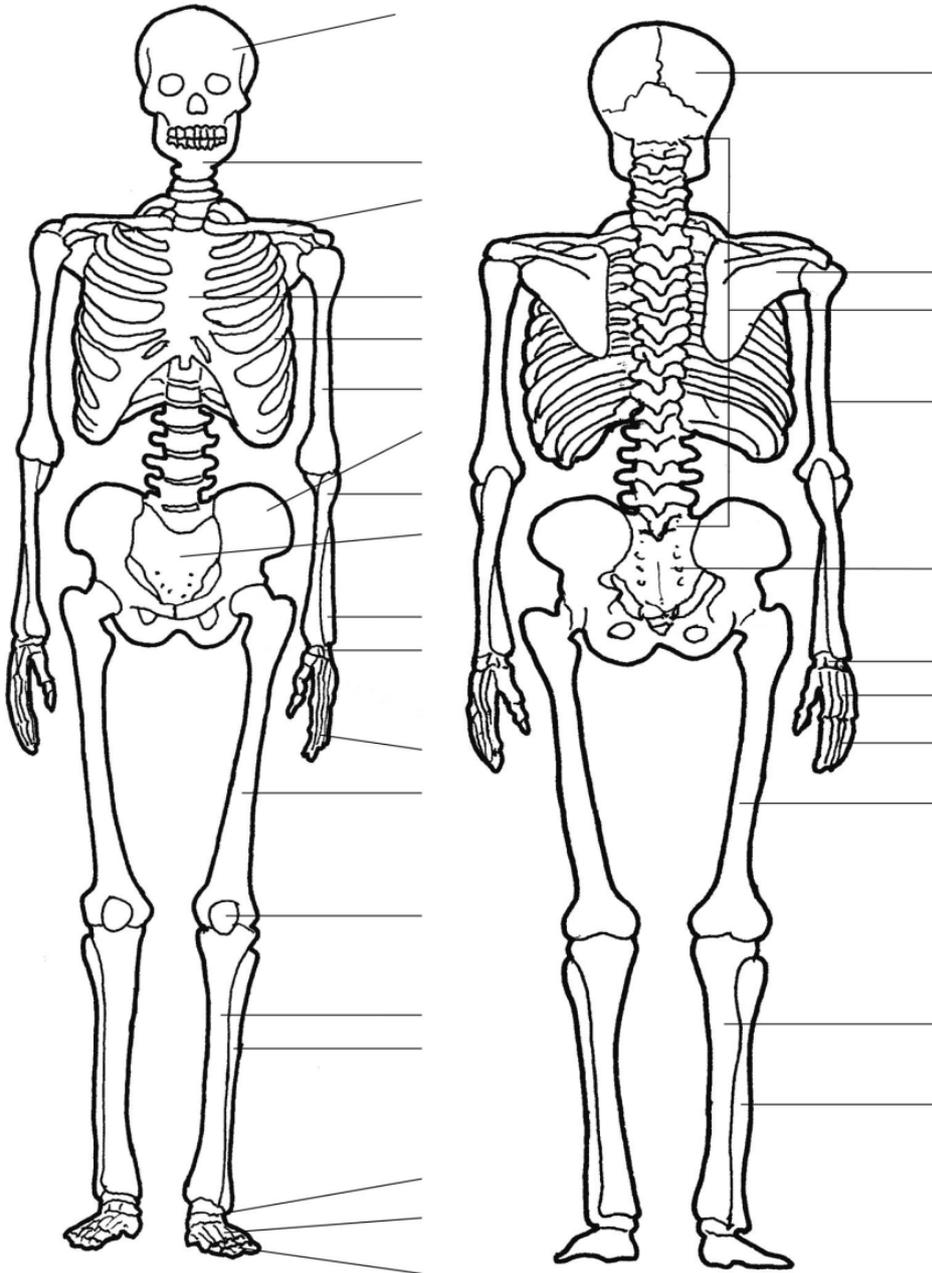
SPORT AND PHYSICAL ACTIVITY

Learner Activity



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Take a look at the two skeletons above. They are anterior and posterior views. Research them during the holiday and label all of the bones identified and then memorize them.

SPORT AND PHYSICAL ACTIVITY

Learner Activity

Select two different basic exercises or activities that you'd normally find in a fitness circuit. You will carry out each exercise in the circuit, but whilst you are carrying out the activities you must think about which muscle/s are taking on which function – which are acting as agonists, antagonists, synergists and fixators?

Information about the different types of muscle function (as well as types of muscle contraction) can be found here: <http://www.ptdirect.com/training-design/anatomy-and-physiology/skeletal-muscle-roles-and-contraction-types>

Exercise/activity	Agonist muscle/s	Antagonist muscle/s	Fixator muscle/s	Synergist muscle/s

SPORT AND PHYSICAL ACTIVITY

Learner Activity

Coaches in Action:

Look at these video clips (5-10 minutes in duration) of coaches working with relatively inexperienced performers, using a variety of activities:

<https://www.youtube.com/watch?v=uKpMfOqFQMA>

<https://www.youtube.com/watch?v=8zilkaN4IFw#>

https://www.youtube.com/watch?v=wITb-A_C-2Y

Please watch them all the way through. Please identify if you think the coaching was good. Please report on what was good and what could be done better. Write this down.

Coach Personality:

Personality impacts on being a coach and leader. Learners might consider that there is an ideal personality for being a coach or leader. This would be wrong. Please see the link below.

<http://believeperform.com/performance/personalityin-sport-everyone-is-different/>

Use your knowledge to contrast and compare two coaches, here are some examples but feel free to use your own examples:-

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Learner Activity

- Jose Mourinho v Alex Ferguson (Football)
- Bobby Knight v John Wooden (Basketball)
- Michael Cheika v Steve Hansen (Rugby)
- John Madden v Vince Lombardi (American Football)