

Anatomy & Physiology

Musculoskeletal System Calendar

Monday	Tuesday	Wednesday	Thursday	Friday
September/October 2011				
26 Chapter 4 Review	27 Chapter 4 test	28 Finish up At the Clinic Presentations	29 Introduction to Skeletal System • Functions • Bone Markings • Bone Anatomy	30 Video: Musculoskeletal System HW: Read p120-124, 130
3 Bone Growth & Remodeling • Types of Bone Cells • Fractures HW: Read p124-138	4 Whack-a-Bone game	5 Axial Skeleton • Adult & Fetal Skull • Vertebral Column & Curvatures HW: Read p138-150	6 Appendicular Skeleton • Male vs Female Pelvis • Joints HW: Study for quiz	7 Skeletal System Vocabulary Quiz Video – Muscular System HW: Read p162-165
10 Muscular System • Muscle Functions • Muscle Cell Types Lab HW: Read p166-167	11 <i>At The Clinic</i> Research HW: Read p168-175	12 Muscle Anatomy • Connective Tissues • Microscopic Anatomy	13 <i>Action of Muscles</i> WebQuest	14 Muscle Contraction • Fast Twitch vs Slow twitch HW: Read p172-175
17 <i>Exercise & Respiration lab</i>	18 <i>At the Clinic</i> Research	19 Energy for Muscle Contraction • Creatine Phosphate • Lactate Fermentation Aerobic Respiration	20 Types of Muscle & Movement • Types of Muscles • Origin & Insertion HW: Read p175-179	21 Poke-a-Muscle Game
24 NO SCHOOL!	20 <i>Movement and ID of Major Muscles Lab</i> HW: Finish <i>At the Clinic</i>	26 <i>At the Clinic</i> Final Presentation work	27 <i>At the Clinic</i> presentations Test review	28 Review Day 1
31 Review Day 2	1 Musculoskeletal System TEST	2	3	4

Chapter 5 – Skeletal System Objective Checklist

Bones: An Overview

- Identify the subdivisions of the skeleton as axial or appendicular.
- List at least three functions of the skeletal system.
- Name the four main kinds of bones.
- Identify the major anatomical areas of a long bone.
- Explain the role of bone salts and the organic matrix in making bone both hard and flexible.
- Describe briefly the process of bone formation in the fetus and summarize the events of bone remodeling throughout life.
- Name and describe the various types of fractures.

Axial Skeleton & Appendicular Skeleton

- Describe how the skull of a newborn infant (or fetus) differs from that of an adult, and explain the function of fontanelles.
- Name the parts of a typical vertebra and explain in general how the cervical, thoracic, and lumbar vertebrae differ from one another.
- Discuss the importance of the intervertebral discs and spinal curvatures.
- Explain how the abnormal spinal curvatures (scoliosis, lordosis, and kyphosis) differ from one another.
- Identify on a skeleton or diagram the bones of the shoulder and pelvic girdles and their attached limbs.
- Describe important differences between a male and female pelvis.

Joints

- Name the three major categories of joints and compare the amount of movement allowed by each.

Chapter 6 – Muscular System Objective Checklist

Overview of Muscle Tissues

- Describe similarities and differences in the structure and function of the three types of muscle tissue and indicate where they are found in the body.
- Define *muscular system*.
- Define and explain the role of the following: *endomysium*, *perimysium*, *epimysium*, *tendon*, and *aponeurosis*.
- Describe the microscopic structure of skeletal muscle and explain the role of actin- and myosin-containing myofilaments.

Skeletal Muscle Activity

- Describe how an action potential is initiated in a muscle cell.
- Describe the events of muscle cell contraction.
- Define *graded response*, *tetanus*, *isotonic* and *isometric contractions*, and *muscle tone* as these terms apply to a skeletal muscle.
- Describe three ways in which ATP is regenerated during muscle activity.
- Define *oxygen debt* and *muscle fatigue* and list possible causes of muscle fatigue.
- Describe the effects of aerobic and resistance exercise on skeletal muscles and other body organs.

Muscle Movements, Types, and Names

- Define *origin*, *insertion*, *prime mover*, *antagonist*, *synergist*, and *fixator* as they relate to muscles.
- Demonstrate or identify the different types of body movements.
- List some criteria used in naming muscles.

Gross Anatomy of Skeletal Muscles

- Name and locate the major muscles of the human body (on a torso model, muscle chart, or diagram) and state the action of each.