

## Perspective Anatomy Assignment

1. Find a image of an athlete (YOU) performing a skill. Images with clear views of large limbs are preferred but do not use static (no action) images.



**Poor**

**Too similar to anatomical position**

**No "movement"**



**Better**

**But still very static**



**Best**

**Large limbs clearly visible**

**Action**



**Be careful with images with too much equipment**

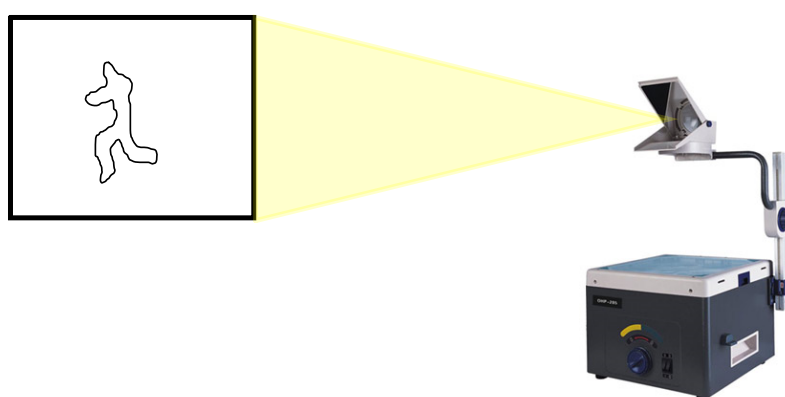
**Pose is good but pads hide outline of body making drawing more difficult**



2. Use a transparent overhead and a marker to create an outline of the image. Use half a page if possible to conserve materials.



3. From this transparency, project the image onto the wall where it can be traced onto a large piece of bristolboard.



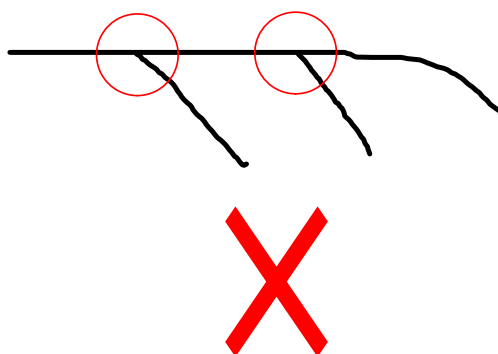
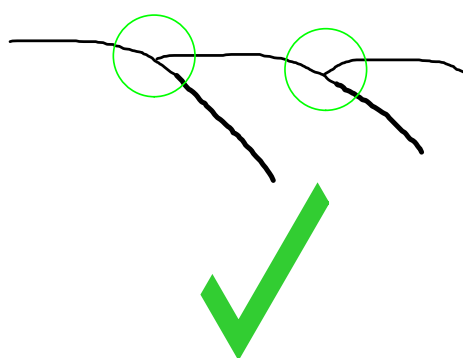
4. Use your anatomy colouring book as a reference to sketch a skinless action figure. Detail all the visible muscles and bones we have studied in class. Colour and detail your image as needed.

5. Include with the image a short paragraph that explains what the athlete is doing and the importance of the action within the sport. Discuss the major muscles and muscle groups which are active in the execution of the skill being depicted in your picture. Also include a list of the muscles which can be seen on the skinless figure.


# TIPS

Draw very lightly, these lines are easy to erase and will not mark up your page. **YOU WILL BE ERASING A LOT! I GUARANTEE IT!!**

Define the edge of muscles clearly. They never run into each other with a smooth line.



### PERSPECTIVE ANATOMY

EVALUATION CRITERIA	EVALUATION MARK	COMMENTS
<b>PERSPECTIVE / PLACEMENT:</b> Muscles are accurately depicted, sized and located on body.	1...5....10....15....20	
<b>ARTISTIC IMPRESSION:</b> Neatly coloured and presented.	1 2 3 4 5 6 7 8 9 10	
<b>CONTENT / EXPLANATION:</b> Complete muscle list and well written explanation of action.	1 2 3 4 5 6 7 8 9 10	
<b>OVERALL IMPRESSION:</b> Attractive neat presentation.	1 2 3 4 5 6 7 8 9 10	

**Devin Jibb**

**The Handstand**

In gymnastics, a strong handstand is one of the most essential for a gymnast to effectively perform on both the balance beam and the floor. To do a handstand, the gymnast must be sure to stay focused on the hands, and keep the back straight. An arched back results in a weaker handstand. The arms and legs should remain straight as the gymnast thinks about putting their feet toward the ceiling. Handstand push-ups are a great way of strengthening the upper body, as well as the back.

**Arms**

During a handstand, muscles in the superior aspect of the arms, such as the Biceps brachii, Brachialis and Deltoids extend to stabilize the body. Extension of the muscles in the inferior aspect of arm, such as the Flexor carpi radialis, Palmar longus and Flexor carpi ulnaris, also help to stabilize the body.

**Abdomen and Back**

The Trapezius helps to maintain a strong back and shoulders, essential while executing an effective handstand. Well-built abs help the body to steady itself, while strong Latissimus dorsi muscles in the lower back help to keep the back from arching. The more powerful these muscles are, the straighter the gymnast can keep their back.

**Legs**

Muscles in the anterior thigh, such as Rectus femoris and the Vastus lateralis extend and help to stabilize the bulk of the leg. With pointed toes, both the Tibialis anterior and the Gastrocnemius, as well as the Tendocalcaneus, must flex to keep a straight leg.

**Visible Muscles**

<p><b>Head</b></p> <ul style="list-style-type: none"> <li>• Temporalis</li> <li>• Masseter</li> </ul> <p><b>Neck</b></p> <ul style="list-style-type: none"> <li>• Anterior triangle</li> <li>• Sternocleidomastoid</li> <li>• Posterior triangle</li> </ul> <p><b>Lateral Upper Limb (Outer Arm)</b></p> <ul style="list-style-type: none"> <li>• Deltoid</li> <li>• Pectoralis major</li> <li>• Biceps brachii</li> <li>• Brachialis</li> <li>• Triceps brachii</li> <li>• Anconeus</li> <li>• Brachioradialis</li> <li>• Pronator teres</li> <li>• Extensor carpi radialis longus</li> <li>• Extensor carpi radialis brevis</li> <li>• Extensor digitorum</li> <li>• Extensor digiti minimi</li> <li>• Extensor carpi ulnaris</li> <li>• Abductor pollicis</li> <li>• Extensor pollicis longus</li> <li>• Extensor pollicis brevis</li> </ul> <p><b>Medial Upper Limb (Inner Arm)</b></p> <ul style="list-style-type: none"> <li>• Biceps brachii</li> <li>• Brachialis</li> <li>• Brachioradialis</li> </ul> <p><b>Abdominals</b></p> <ul style="list-style-type: none"> <li>• External Oblique</li> </ul>	<p><b>Back</b></p> <ul style="list-style-type: none"> <li>• Trapezius</li> <li>• Rhomboid major</li> <li>• Rhomboid minor</li> <li>• Serratus anterior</li> <li>• Latissimus dorsi</li> <li>• Infraspinatus</li> <li>• Teres minor</li> <li>• Teres major</li> <li>• Coracobrachialis</li> </ul> <p><b>Lateral Lower Limb (Outer Thigh and Leg)</b></p> <ul style="list-style-type: none"> <li>• Gluteus maximus</li> <li>• Tensor fasciae latae</li> <li>• Gluteus medius</li> <li>• Rectus femoris</li> <li>• Vastus lateralis</li> <li>• Biceps femoris</li> <li>• Semimembranosus</li> <li>• Gastrocnemius</li> <li>• Soleus</li> <li>• Tibialis anterior</li> <li>• Extensor digitorum longus</li> <li>• Fibularis (Peroneus) longus</li> <li>• Fibularis (Peroneus) brevis</li> <li>• Fibularis (Peroneus) tertius</li> <li>• Abductor digiti minimi</li> <li>• Extensor digitorum brevis</li> </ul> <p><b>Medial Lower Limb (Inner Thigh and Leg)</b></p> <ul style="list-style-type: none"> <li>• Iliac crest</li> <li>• Patella</li> <li>• Patellar ligament</li> <li>• Ischial tract</li> <li>• Tendocalcaneus (Achilles tendon)</li> </ul>
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**GYMNASTICS**



# Running

**Muscles Present in Diagram**

**Lower Leg**

- Tibialis Anterior
- Fibularis Longus
- Extensor Digitorum Longus
- Fibularis Brevis
- Fibularis Tertius
- Extensor Hallucis Longus
- Gastrocnemius
- Flexor Digitorum Longus
- Soleus

**Upper Leg**

- Sartorius
- Biceps Femoris
- Sartorius
- Gluteus
- Rectus Femur
- Vastus Lateralis
- Vastus Medialis
- Gluteus Maximus
- Gluteus Medius
- Adductor Longus
- Pectineus
- Iliopsoas

**Abdomen**

- External Oblique
- Rectus Abdominis (penetrating through External Oblique)
- Sartorius Anterior
- Lumbar Dorsi

**Upper Body**

- Pectoralis Major
- Trapezius
- Sternocleidomastoid

**Upper Arm**

- Deltoid
- Long Head of Triceps Brachii
- Lateral Head of Triceps Brachii
- Biceps Brachii (Long and Short Head)

**Lower Arm**

- Brachioradialis
- Brachialis
- Proximal Quadratus
- Abductor Pollicis Longus
- Extensor Pollicis Brevis
- Anconeus
- Flexor Carpi Ulnaris
- Palmaris Longus
- Flexor Digitorum Superficialis
- Extensor Carpi Radialis Longus

**Running**

Running is a movement that takes place in our everyday lives. We run to work, run to get to class, run for exercise, and for other such occurrences. In the photograph and diagram the man is attempting to sprint while dragging a weight behind him. This is a type of advanced fitness exercise as well. Adding a weight to the process of running allows for further strain on the leg muscles, making the upper leg muscles, in order for recreational running to be easier. The weight also allows for more muscles in the leg to be worked and exercised. The muscles in the lower leg are not usually under such stress as seen in the photograph and the weight contributes in order for all leg muscles to be exercised effectively. The gluteus and flexor muscles in the leg are what really get worked while running. We extend to push ourselves forward and flex to gain leverage while running. Depending on how hard it is to push yourself forward, your flexor and extensor muscles will get much more of a workout at the push/pull more resistance.

Running is critical in many sports. Basketball, Lacrosse, and track and field sports are all examples of running sports but vary in the use of different muscles. Basketball is a higher sport, allowing for the legs to move freely without resistance but the muscles must have long lasting endurance in order for a player to last the entire game. In lacrosse, leg muscles must have endurance as well as be prone to resistance. It is critical in lacrosse to push with your legs in order to move opposing players around the field. This is where running resistance drills come in handy. In track and field sports leg muscles gain in mass. Long distance runners must have lean muscles in order to reduce weight resistance as well as have endurance over power. Short track runners need power and therefore have massive upper leg muscles for leverage off the starting block. Running is key in life and everyone has performed this skill at some point.