

Lesson Plan Tie-In: Bones, Muscles and Joints

Grades 4 to 5 | **Movement Form: Creative Movement/Yoga**

Playing with mobility, strength and flexibility, this lesson allows students to put their understanding of their muscular and skeletal systems into immediate action.

OBJECTIVE: Experience how some of the 640 muscles in your body work. **MOVEMENT:** Sense the contrast between engaged muscles versus relaxed muscles.

- Engage muscles by having them push an imaginary refrigerator away, do wall or desk push-ups and squats or lunges.
- To rest muscles, have children shake out their limbs like Jell-o, bend from the waist, letting their arms and head dangle.



- Have them bend elbows and knees, explaining how simple hinge joints provide the most limited movement, like a door hinge.
- Next, have them rotate wrists and ankles to show how the multiple bones in complex hinge joints allow for circling.
- End with ball and socket joints, which allow for the fullest range of motion. Ask students to move their upper leg bone forward, back, and around to sense mobility in the hip joint. Do the same with the upper arm bones to sense mobility in the shoulder joint.

OBJECTIVE: Experience 640 muscles and 206 bones working together, allowing unlimited possibilities for movement.

MOVEMENT: Demonstrate how muscles move bones in different ways to build flexibility and strength through these yoga poses.

- Warrior pose—Stand as if holding a bow and arrow, bring one leg forward and bent at the knee and the other stretched long behind the bent leg. Stretch arms out over the legs, one in front and one behind. Hold the long lines of the body while slowing down the breath.
- **Tree pose**—Standing upright, bend one leg and bring the foot to rest on the opposite ankle, calf or thigh (whichever is most comfortable). Arms are raised above the head like branches reaching for the sky. Hold the pose while slowing down the breath. Alternate.

TIP! Play with speed of movements to increase balance and offer complexity.

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