

## Bones & Muscles In-A-Box

The Bones and Muscles In-A-Box features five stations plus multiple supplemental activities on bones and muscles. At each station, students answer questions on their station notes, which can be collected for assessment or simply used to keep students on task. Supplies listed for stations are all included in the Box.

### Bones & Muscles station activities:

1. **Anatomy** – Students draw three types of muscle (skeletal, cardiac, and smooth) and the components inside of bone after examining graphics.
2. **Bone health** – Students learn what bone density means; how exercise and gravity enhance bone density; and how professionals examine bone-density x-rays to evaluate a person's bone health.
3. **Sports injury** – Students play the sports-injury game show to learn what sports commonly lead to injuries. One student is host and the others in the group are contestants.
4. **Bone and muscle disorders** – Students play the memory game to learn about bone and muscle disorders, their treatment, and the professionals who treat them.
5. **Muscle geography** – Students learn several muscles of the body by examining posters, making movements, and locating the list of muscles on each other using sticky notes.

### Extensions to the bones and muscles stations include:

- **Bones and Muscles In-A-Box DVD** – This is a 20-minute video of interviews with a sports medicine doctor and a massage therapist who work at Oregon Health & Science University.
- **Bill Nye Bones and Muscles** – DVD and curriculum
- **Emmanuel's Gift DVD** – The true account of an African athlete who continued his amazing involvement in sports with a prosthetic leg while inspiring all of those who watched him.
- **Foot model** – This is for use before, during, or after station activities
- **Clever Catch inflatable ball** – see extensions on page 5 of the Teacher Handbook.
- **Orthosis brace** – This is for use before, during, or after station activities
- **Muscle elbow model** – Use this to present the difference between nerves (the yellow), tendons and ligaments (clear), muscle (red), and bone (white). The legend is on the bottom of the model.
- **X-ray set** – Students can identify bones on the x-rays after learning some of the names in the station activities. Activity ideas are included at the end of the teacher guide. This makes a fun extension activity.
- **Country Doctors video** – This one-hour PBS video was made in rural Oregon about the need for local health care providers.
- **Books:**
  - *Bones*

- *Muscles*
  - *Understanding your Bones and Muscles*
  - *Molly the Pony*
- **NIH Curriculum *Looking Good, Feeling Good, from the Inside Out*** – This seven-lesson curriculum created by the National Institute of Health offers many extensions for lessons about bone health, muscle use, and dietary needs, as well as lessons about skin health and anatomy.