

**Spine Project**

For this project, you will work in pairs with a person from your study/support group. We encourage you to meet as a group to discuss strategies and details of the spine. However, the final design and construction of your model should be done with your partner.

Your overall goal is to construct a working model of four vertebrae—complete with muscles, bones, tendons, cartilage, and ligaments. There are many muscles that connect to the vertebrae. For this project, focus exclusively on the muscles that connect vertebrae to vertebrae.

**Rules of the Project**

1. **THIS IS NOT AN EXPRESSIVE PIECE.** The purpose is to demonstrate where and how the muscles are attached to the bones, how they act on the bones during movement, and how the bones are connected. However, there is quite a bit of room for creativity in terms of the materials you use and how you use them.
2. Total maximum expenditure on your model is \$15.00.
3. Your model must be approximately life-size or larger.
4. The model must include all the major structures and you must use a unifying theme for each type of tissue. This means that all the bones should be made of the same material and should be the same color. This also applies to the muscles, tendons, ligaments, cartilage, etc.
5. You must prepare a key or legend for your model identifying the various tissue types. For example, your key may show that all the blue rubber bands are skeletal muscles.
6. **Before You Start Construction.** With your partner, you must outline a detailed design plan for your model and both agree on it.
7. As you build and test your model, your design may be modified. You must document the construction-modification-redesign process, as well as outlining the changes to your initial design.

**The Final Result**

1. The final product will consist of your working model, a key to the tissue types, and a one-page summary of the process. Both the key and process summary should be neatly printed to be easily readable at a distance of three feet.
2. **Your model is due on Wed, Oct 19<sup>th</sup>.** All the models will be displayed and the entire class will walk around and evaluate the models.

**Evaluation Criteria**

1. How well does it demonstrate the anatomy of the spine? Specifically, does it show the interplay between bone, ligaments, muscles, and tendons?
2. Are the origins and insertions of the muscles easy to distinguish?
3. Are the different tissue types easy to distinguish from one another? Is the key or legend clear and concise?
4. How detailed is the model? Does it show the interactions/connections between the various types of tissues?