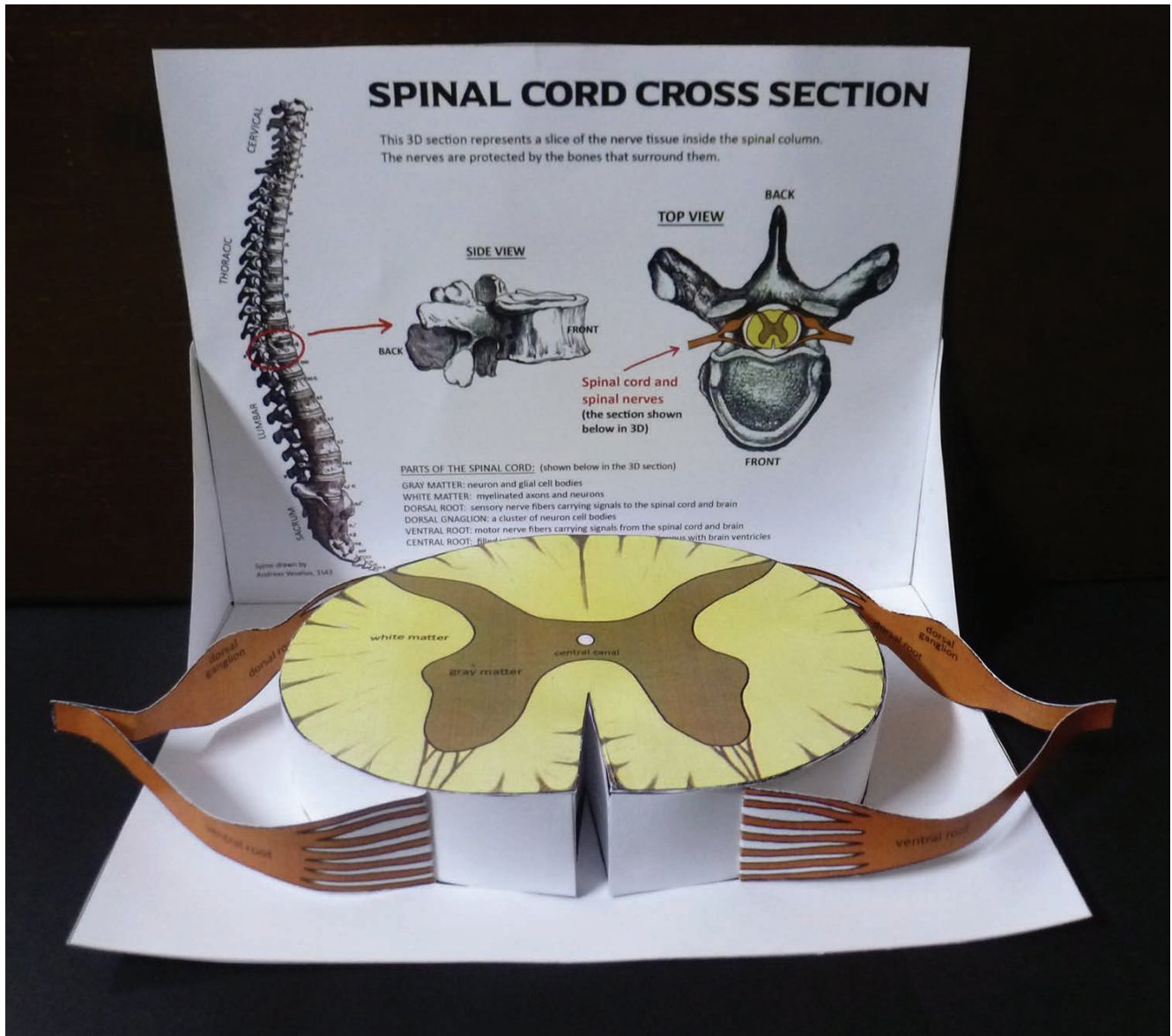


MAKE A CROSS SECTION OF THE SPINE



You will need:

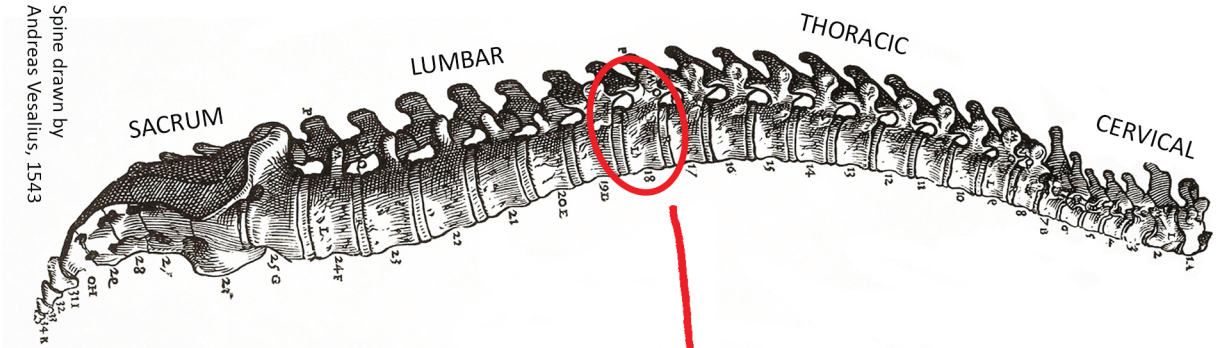
- Copies of the following 3 pattern pages printed onto card stock
- Scissors
- Sharp craft knife (ex: X-Acto knife)
- White glue or glue stick
- Clear tape (narrow is best)
- Ruler or straight edge for scoring fold lines

NOTE about scoring: Folding is much easier if you lay a straight edge along the dotted fold line and trace over it GENTLY with a sharp edge such as the back of the a craft knife, or a compass point. You want to scratch the paper without tearing or cutting it. Once the line is scored, you will be able to achieve a very neat and clean fold line quickly and easily.

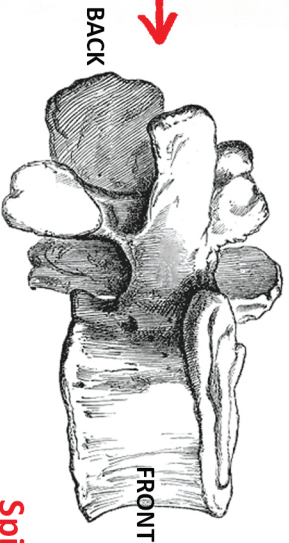
Cut on solid line (around entire rectangle. This will be the back of your model.

SPINAL CORD CROSS SECTION

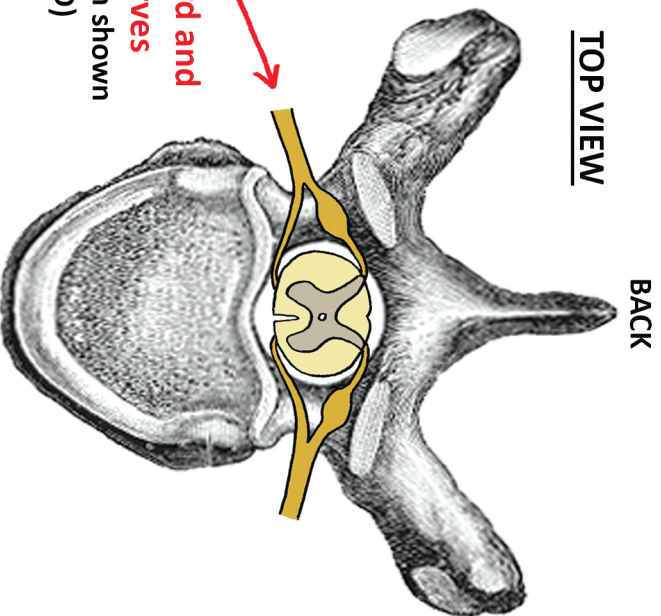
This 3D section represents a slice of the nerve tissue inside the spinal column.
The nerves are protected by the bones that surround them.



SIDE VIEW



TOP VIEW

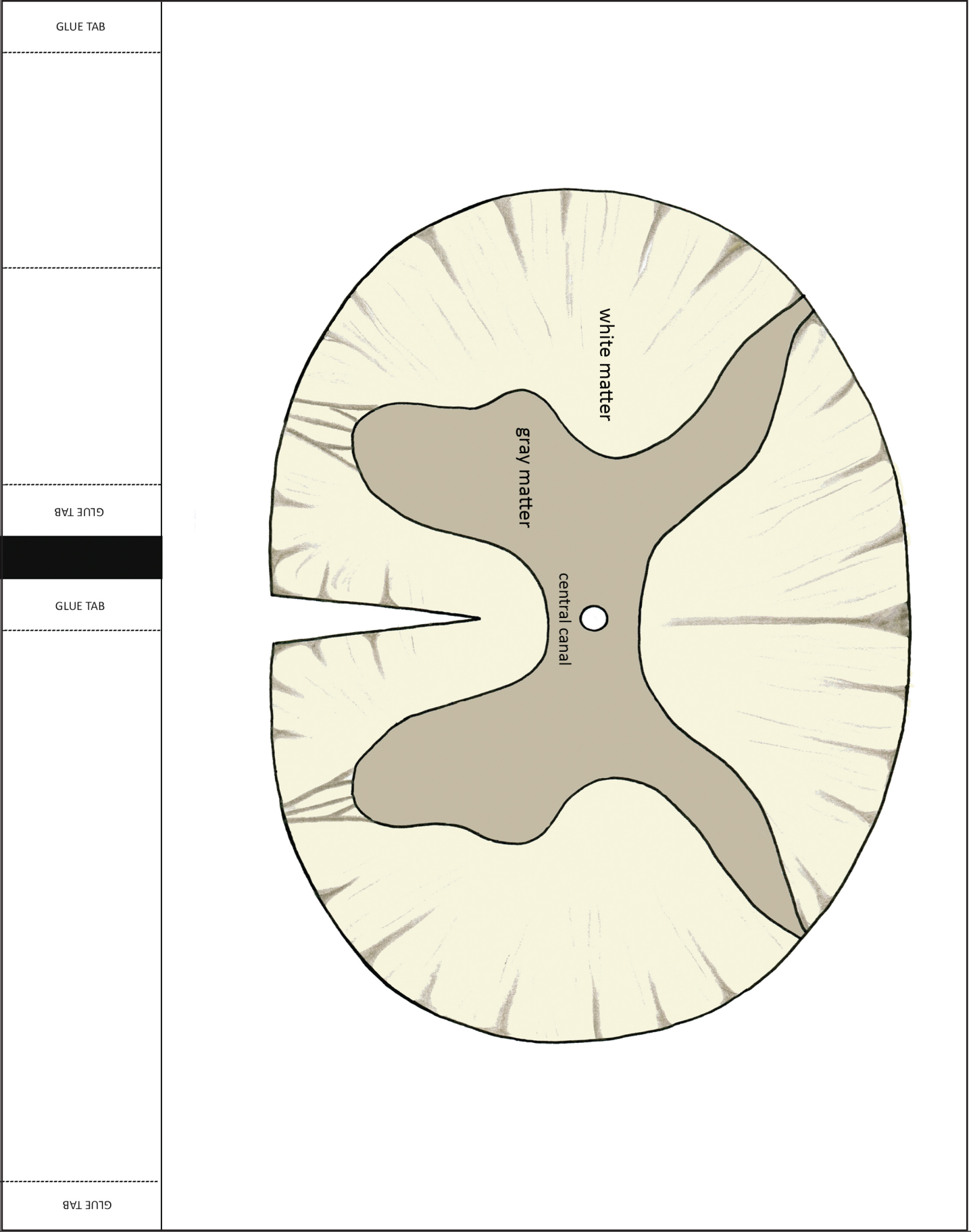


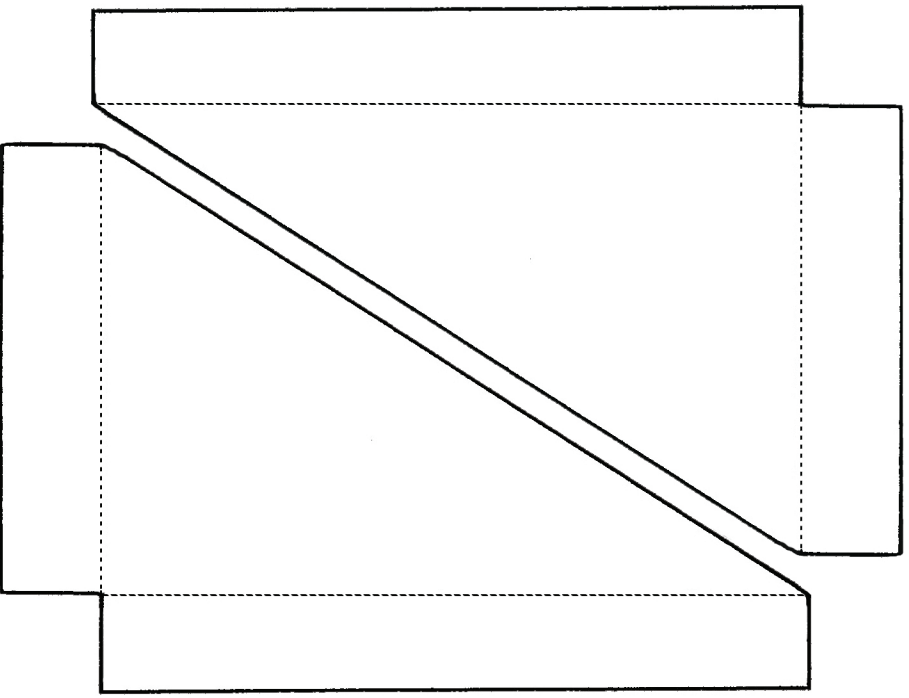
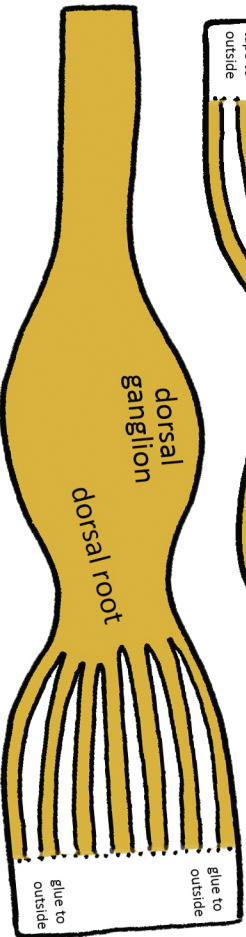
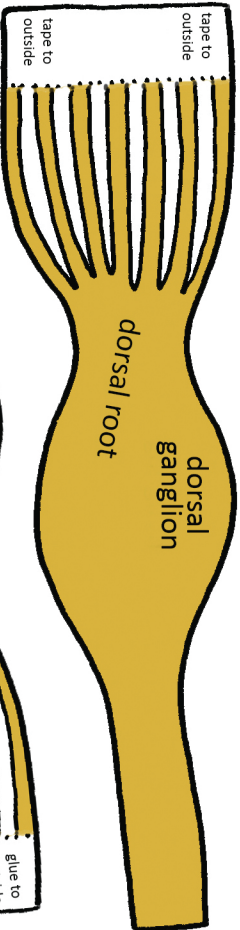
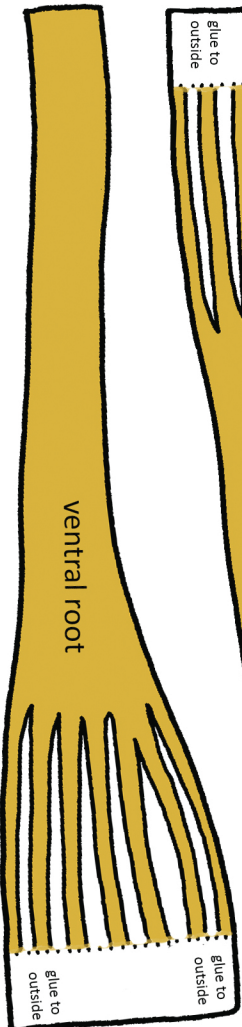
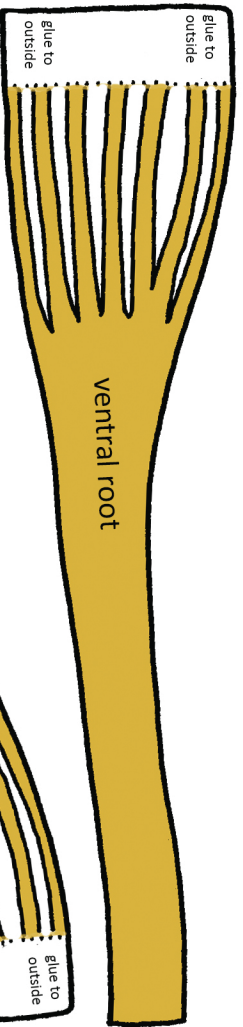
Spinal cord and
spinal nerves
(the section shown
below in 3D)

PARTS OF THE SPINAL CORD: (shown below in the 3D section)

- GRAY MATTER: neuron and glial cell bodies
- WHITE MATTER: myelinated axons and neurons
- DORSAL ROOT: sensory nerve fibers carrying signals to the spinal cord and brain
- DORSAL GANGLION: a cluster of neuron cell bodies
- VENTRAL ROOT: motor nerve fibers carrying signals from the spinal cord and brain
- CENTRAL ROOT: filled with cerebrospinal fluid (CSF) and continuous with brain ventricles

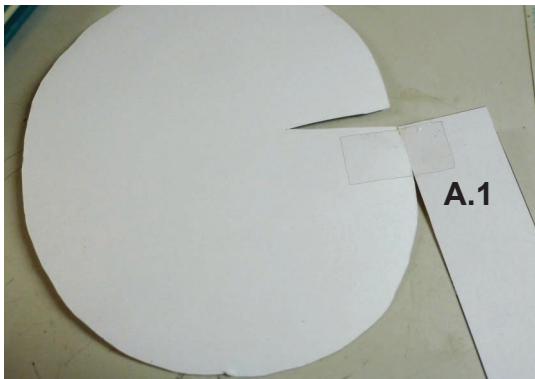
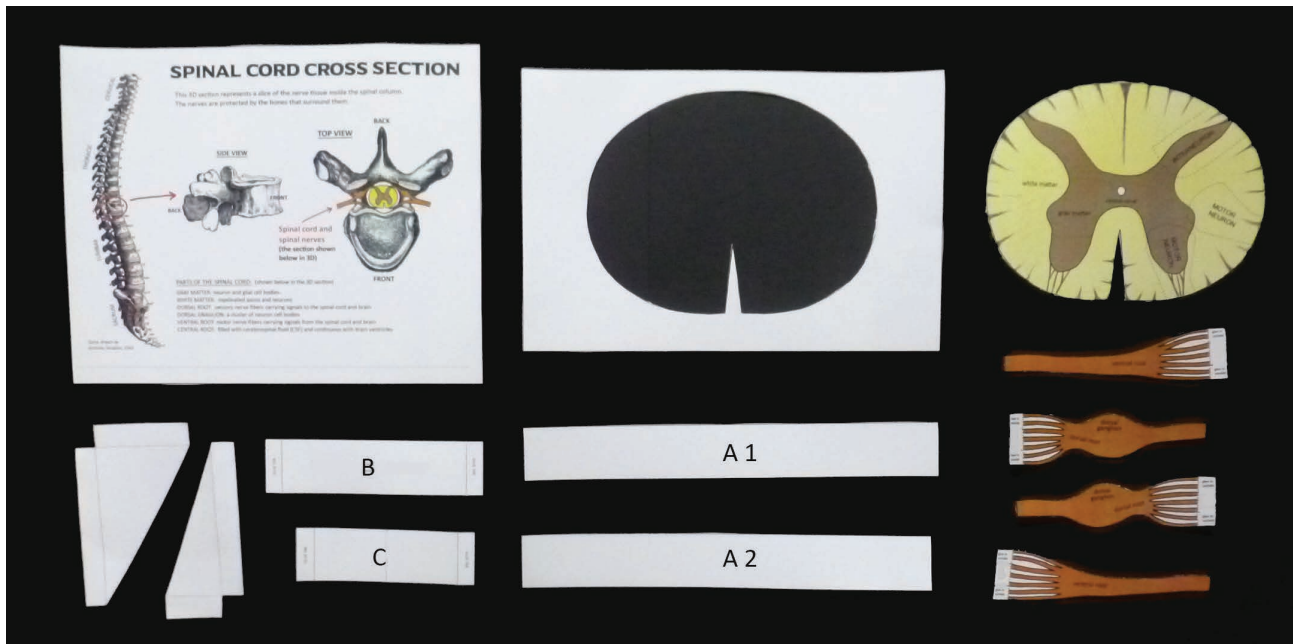
Cut on solid line (around entire rectangle. This will be the back of your model.



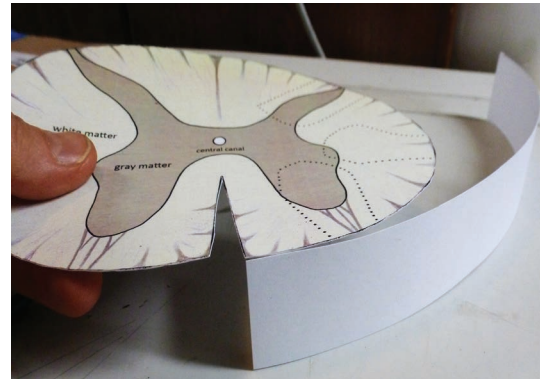


HOW TO ASSEMBLE SPINE CROSS SECTION

1) Cut out all parts. Use the guide below to make sure you cut them out correctly. **You will need a sharp craft knife (e.g. X-Acto) to cut out the yellow oval part.** The white page behind the oval is NOT scrap! It will become the “floor” of the model.



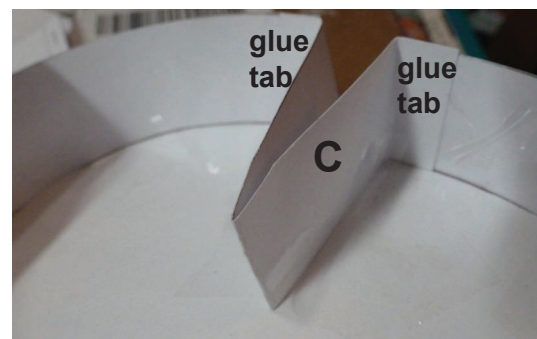
1) Place oval upside down. Place A.1 as shown and secure with tape, as shown.



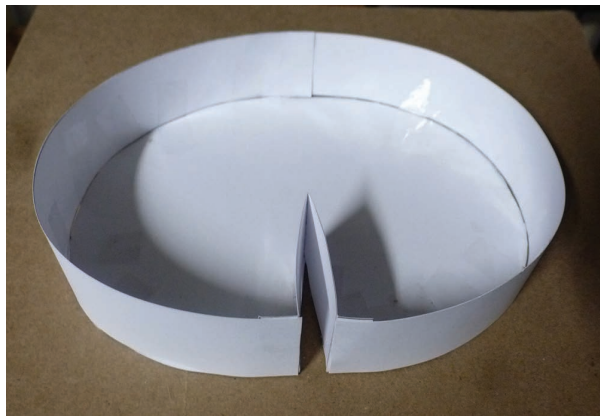
2) If you turn this over, you will see how A.1 will become the outside of the spine section. Continue to tape in place from the inside.



3) Continue to tape from the inside. When finished with A.1, start A.2 from the split, just like you did with A.1 and work toward the back. Overlap at the back.



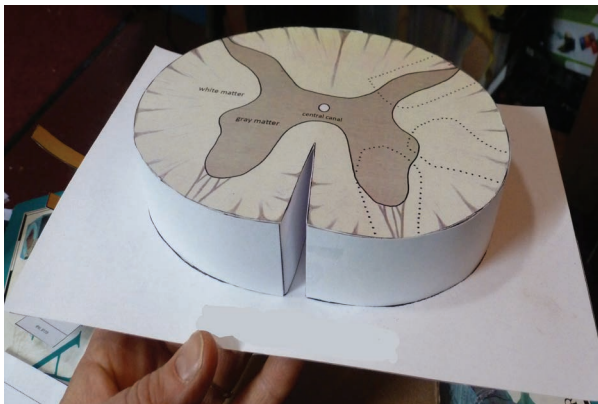
4) Fold piece C on the dotted lines. The GLUE TABS are glued or taped on the insides of pieces A.1 and A.2.



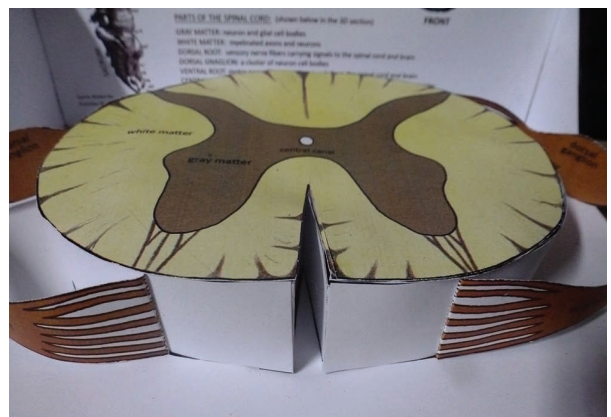
5) This is how the oval section will look from the bottom when finished. If you find for some reason that you need an extra support to help it keep its shape, you can use piece B or cut a piece from the scrap pieces.



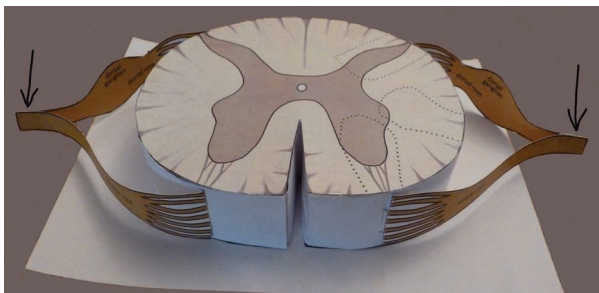
6) Now the oval piece will be put onto the base. The base is the piece that was leftover when you cut out the oval. Work from the inside, with the oval piece upside down. Fasten the front first, so that if you end up with any gaps they will be in the back.



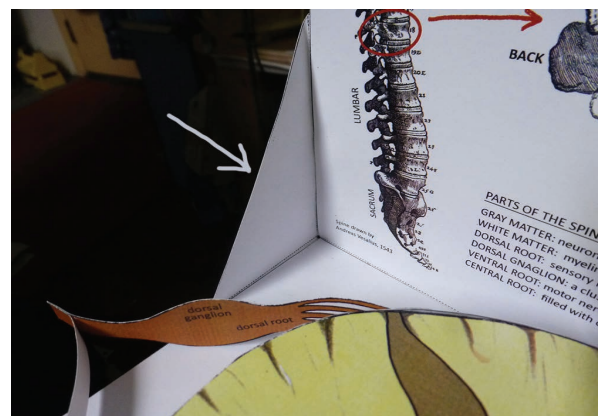
7) When done with step 6, it will look like this.



8) Add the ventral and dorsal nerve roots. Bend the ventral root glue tabs backwards so they don't show.



9) Glue on the rear dorsal roots using glue tabs. Once all nerve root tabs are on, glue the ends together as shown.



10) Glue the back onto the base using the glue tab at the bottom of the back piece. Then glue on the side triangles, as shown, with glue tabs hidden behind the back and base.