This diagram will help you complete station #7. Use the clues provided on the other side of this sheet to label all of the ancestors in the diagram. In order to finish this station you will need to follow ALL OF THE INSTRUCTIONS listed on the back of this sheet.

**Things that stayed the same:**

**Things that changed:**
Steps for station number 7:

1. Label the diagram that you have been given. (This particular diagram is actually called a cladogram). To help you with this, you are being given the following clues...
   - Hyracotherium was the first of the horse ancestors shown in the diagram. It lived approximately 55 million years ago.
   - Mesohippus is ancestor #3 in the diagram. It was a direct descendent of Orohippus.
   - Megahippus is ancestor #6 in the diagram. It was a direct descendent of Hypohippus.
   - Miohippus lived approximately 25 million to 32 million years ago. Parahippus and Archaeohippus both descended directly from it.
   - Kalobatippus provided a link between Mesohippus and Hypohippus.
   - Parahippus is ancestor #8 on the diagram. Merychippus was a direct descendent of Parahippus.
   - Pliohippus is ancestor #12 on the diagram.
   - Neohipparion was a direct descendent of ancestor #9.
   - Equus (the modern horse) is a direct descendent of Dinohippus which was descended from Pliohippus. It has no descendents on the diagram, but it is obviously far from extinct.
   - The Hippidion may have gone extinct as recently as 10,000 years ago. It has no descendents on the diagram.

2. Discuss your answers for the cladogram with the people at your table. Then fill out the color copy of it that you’ve been given. (Be sure to use the vis-à-vis marker.) Your teacher or Mr. Vincelette will check your answers to be sure they are correct.

3. Once you have the correct answers for the diagram, open up your Ziploc bag and take out the images of the horse ancestor fossils. Now arrange the images to re-create the cladogram on your tabletop. Once they are arranged in the proper order, study them and look for changes that occurred during evolution. You should be able to identify several body structures that stayed pretty much the same, as well as ones that changed. On the other side of this sheet, list at least three things that stayed the same, and three body structures that changed as horses evolved.