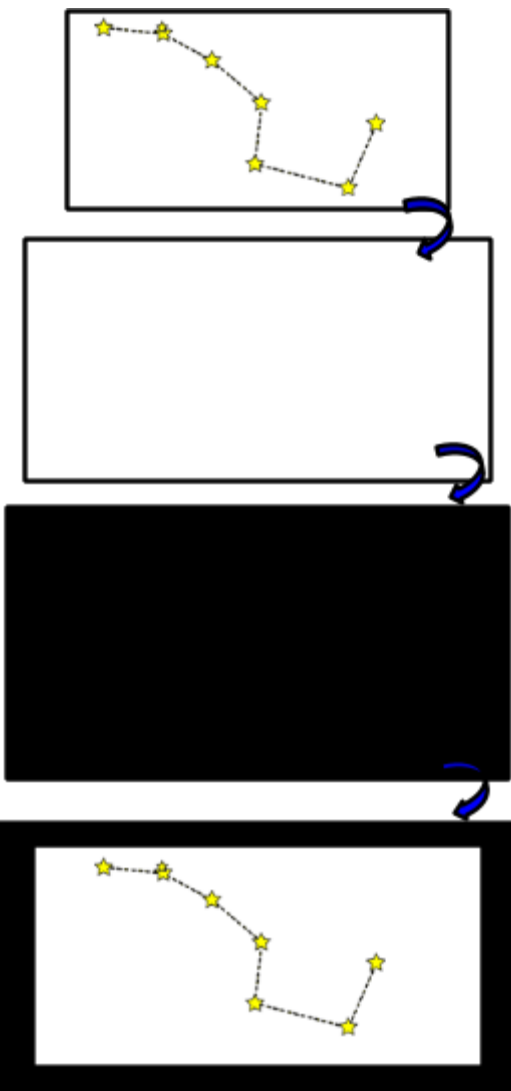


Shoebox Planetarium or Constellation Viewer

Directions - Part 1

1. You will need scissors, glue, 3x5 index cards, black construction paper, and one-sided constellation cards
2. Cut apart all of the constellation cards
3. Glue each constellation card to the center of the WHITE side of an index card
4. Cut out rectangles of black construction paper so that they are a little bigger than the index cards
5. Glue the LINED side of the index card to the black construction paper

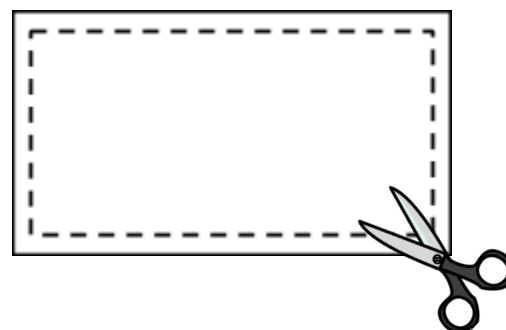


Part 2

1. You will need a piece of black foam board, the constellation cards, and a metal compass
2. Place the constellation card on top of the foam board, and using the pointed end of the compass, make a hole for each star in the constellation
3. The bigger stars can have larger holes so they shine brighter when viewed

Part 3

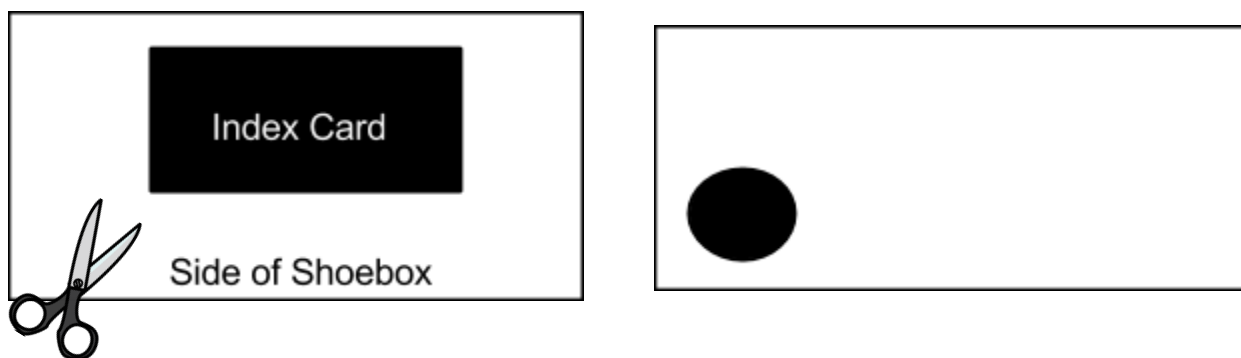
1. You will need a shoebox, scissors, ruler, and an index card
2. On an index card and measure $\frac{1}{2}$ inch on each side, draw lines as guides
3. Cut off the $\frac{1}{2}$ inch border from the index card



Shoebox Planetarium or Constellation Viewer

Directions - Part 4

1. You will need the cut index card, scissors, and a shoebox
2. Using the cut index card, use that as a template for the window you will cut out on one end of your shoebox
3. Place the index card about ½-1 inch from the top of the shoebox and trace the index card
4. Cut out the window carefully with scissors
5. Place the lid on the box and cut any part of the lid that covers the window
6. On the opposite end of the shoebox, cut out a small opening for you to look through



Part 5

1. You will need paper clips and the finished constellation cards for this part
2. Line up your constellation so that the **front** of the constellation card is facing **inside the box**, be sure that light can pass through all of the stars
3. If the card is too big, trim off just enough to fit inside the shoebox then clip into place
4. Place the lid on and view your constellation!
5. Change out the cards to view each constellation and learn to recognize their patterns in the night sky
6. Decorate your shoebox with duct tape, paper, or stickers

Part 6:

1. You will need scissors, the 2-sided constellation cards, and a paper clip
2. Cut out the constellation cards - one one side is the constellation, on the other side are facts about that constellation
3. Paperclip these together and store in your shoebox to help you identify the constellations as you view them