Body Joints - Ball-Socket Joint

One of the many types of joints in the skeletal system: ball-and-socket joint.

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# INTRODUCTION

Using simple plastic materials: a couple of balls, a pipe, and a pencil, we make a ball-and-socket joint to represent certain joints in our skeletal system.

## TOOLS:
- Paper Cutter (1)
- Scissors (1)
- Glue (1)
- Sketch Pen (1)

## PARTS:
- Small Ball (2)
- Plastic Pencil (1)
- Ice Cream Stick (1)
— Precautions

⚠ Exercise caution while using scissors/cutter.

⚠ Work with the lit candle under adult supervision.

— Step 1 - Marking the Ice-cream stick

- Mark the Ice-cream stick at 3 cm from both the curved ends.
- Mark another line at 7 cm.

— Step 2 - Cutting the Ice-cream stick

- Cut the Ice cream stick into four different parts.

ℹ We will only use three parts out of four Ice cream stick parts.
— Step 3 - Gluing the Ice-cream sticks

- Place the two curved sticks at the bottom and the top of the Second Ice cream stick.
- Glue the sticks in a U shape.

— Step 4 - Marking on the ball

- Draw a line at the three fourth of the ball such that it joins the two ice-cream sticks holding the ball.
  - Holding the ball in between the sticks will help you to create a desired shape.
- Draw a line on the upper stick at exactly 1.5 cm from the curved line.
- Draw a line on the ball, directly below the line on the stick and also outline the curve of the stick on the ball.
— Step 5 - Drawing the outlines on the ball

- Trace the curved end of the stick on the ball, using a marker.
- You need to join two lines which you drew in the start.
- The third image shows the top view of the shape that we just drew.

— Step 6 - Cutting the ball

- Cut out the marked part from the ball.
- Glue the cut ball shape to the Ice cream stick.
- Let the glue dry for 5 to 10 minutes.
— Step7 - Making hole in smaller ball

- Make the hole using a scissor such that it is as big as the diameter of your pencil.
- Insert one end of the pencil in the hole and glue it in place.

— Play!

- Now insert the Orange ball, inside the Green half cut ball.
- The ball socket joint is ready.
— Troubleshooting

- The pencil should be glued firmly in the small ball, whose hole should not be much larger than the pencil diameter.

- Be very patient while cutting the ball.

- If the ball doesn't fit then scrape the extra bits and protrusions from another ball to make it as close to a "sphere" as possible.

— Variations

- Ball socket joint using Two different size balls.

- Ball socket joint made using two same sized balls and thread.

To learn variations for Body Joints - Ball-Socket Joint. Please visit this link [Body Joints - Ball-Socket Joint (Variations)](Body Joints - Ball-Socket Joint (Variations)).