

Activity Number- 8

Body Movements

Class :VI

Subject: Science

Duration – 30 minutes

Nature of activity : Individual

Learning Outcome: Students will be able to

-**identify** the locations where two or more bones meet.

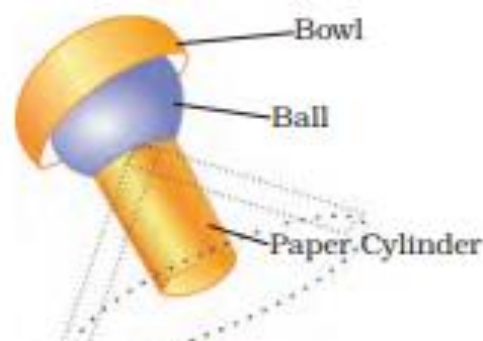
- **categorize** each type of joint and its function and also will be able to **differentiate** between them.

What I have to do ? To find out the difference between the functioning of ball and socket joint and hinge joint.

What I require ? Ball , rolled paper , bowl/small cup , pencil , A-4 size sheets, thick chart paper.

What do I need to know ? There are two types of joints:

1. **Fixed joints:** The joints where no movement of bones is possible are called fixed joint. The joints in the skull bone (cranium) are examples of fixed or immovable joints.
2. **Moveable joint:** Movement is possible in these joints. There are two types of movable joints:
 - Freely movable joints and
 - Partially movable joints.



How will I proceed ?

Case 1:

Teacher's Activity: The teacher will

1. guide the students to arrange the ball and rolled paper .

2. ask them to imagine that the paper cylinder is their arm and the ball is its end. The bowl is the part of the shoulder to which their arm is joined.

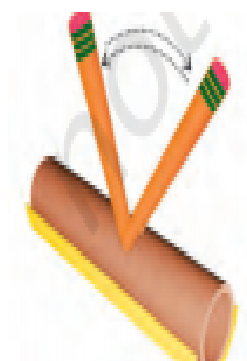
Student's Activity: Students will :

- (1) roll a strip of paper into a cylinder .
- (2) make a small hole in the plastic or rubber ball
- (3) push the paper cylinder into it.
- (4) try to rotate the ball into the bowl/small cup.

Case 2:

Teacher's Activity: The teacher will

1. guide the students to arrange the rolled papers and pencil.
2. tell that this model will illustrate the direction in which the hinge allows movements.



Student's Activity: Students will

1. make a cylinder with thick chart paper.
2. attach a small pencil to the cylinder by piercing the cylinder at the center.
3. make a hollow half cylinder from cardboard such that the rolled up cylinder can sit inside it.
4. now try to move the rolled up cylinder sitting in the hollow half cylinder.

What have I observed ?

Case 1:

S.No.	After performing the activity :	Yes/No(with reason)
1.	Does the ball freely rotate inside the ball?	
2.	Does the paper cylinder also rotate?	

Case 2:

How is this movement different from what we saw with our constructed ball and socket joint(case 1) ?

What have I learnt ?The rounded end of one bone fits into the _____ of the other bone. This type of joint is known as ball and socket joint.

The elbow has a hinge joint that allows _____ and _____ movement.

What I would be interested / curious about ?To find out the examples of such joints that allows movements in all directions and back and forth movements.

Extended learning worksheet

1.Which of the following is NOT an example of a ball and socket joint?

- a) Shoulder and upper arm b) Upper leg and pelvis c) Upper and lower legs
d) All are examples of ball and socket joints.

2.Which type of joint has the greatest range of motion?

- a) Hinge b)Ball and socket c)Immovable d)Pivot

3.The location where two skeletal bones come together is called _____.

- a) Joint b) Union c) Ligament d)cartilage

4.Find out some examples of ball and socket joint and hinge joint

5.Dhoni tried to bend his elbow backward like he could do with his shoulder .He found he could not.Why?
