

Bend Me-Shape Me!

Teacher's Guide

The Initial View (Introducing the Activity)

We all take movement for granted, at least those of us who can move sure do! Some folks can't move, or have trouble moving because of joint problems. This activity lets kids understand a little more about how the joints work and function.

Take a Deeper View! (More Science)

The kind of **Joint** the kids just made is called a **Ball and Socket Joint**, similar to the hip and shoulder joints in our body. There are other kinds of joints in our body, but this kind of joint is quite important because it allows for the large **Range of Movement** of our arms and legs. (Range of movement is how far we can move the arms and legs around.) When joints are injured or **Disease** sets in, this range of movement could be greatly curtailed and very painful. (Just ask anyone who has **Arthritis**, or has ever had a joint injured!)

More and Bigger Views! (Additional Classroom Ideas)

1. Make a bulletin board of different body joints and where they're located. Use pictures you have drawn or traced, diagrams, and pictures from old magazines or books.
2. Research on the Internet or in reference books diseases which attack joints.
3. Find out what **Quadriplegia** and **Paraplegia** is, what causes them, and how we can prevent ourselves from becoming victims to them.
4. Learn more about knee, hip, and finger joint replacement surgeries. If someone has had any of these surgeries, have them tell the kids about it.
5. What kinds of special materials are in these artificial joints? If a local surgeon has demonstration models of replacement joints, borrow some for the class to examine.
6. Research how muscles move bones at the joints. How do muscles **Contract**? Muscles can only **Pull** or contract. However, this pull can also **Push** a joint away from you!
7. Find out what kinds of special surgeries are done to fix joint problems. Many students will have heard of their favorite athletes having these surgeries to correct injuries. Let them write letters to the athlete and find out how they rehabilitated themselves.
8. What is medicine doing to help with **Arthritis**? Get on the internet and find out more about this serious problem and what is being done to fight it.
9. Alternative medicine involves unusual treatments for diseases. **Acupuncture** is one of these unique ways of helping people. Find out how acupuncture works. Look back into history to find out how old this Chinese medical treatment actually is. Research massage therapy and other unique methods of helping heal serious problems.
10. Research safety ideas to help prevent joint injuries, especially neck injuries. Start a school campaign to make people aware of how to prevent joint injuries. Make a set of safety posters which tell about helmets, diving safety, and other ways to prevent serious injuries!
11. What is the special fluid in joints called? (**Synovial Fluid**) Dissect a whole grocery store chicken. Look specifically for joints, observe how they move, and find synovial fluid. Locate and observe the smooth shiny white **Cartilage** which lines joints for smooth movement.
12. Have the kids learn more about wheelchair athletes and the sports they compete in.

Answers

none, the model itself shows what the kids have learned.