

Exploring human joints

Designers, engineers and builders use joints or at least think about joints in a lot of their work. Have a look around the classroom. Do you see any joints in action?

- How about the classroom door?
- Or the cupboard door?
- Or the window?
- Or a book trolley?
- Or even your elbow?

The human body has a number of different joints that work in slightly different ways.

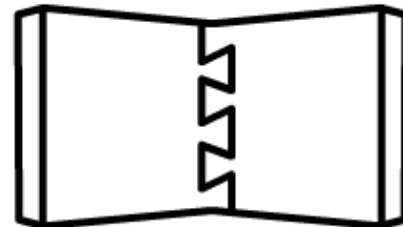
- Why does the human body need joints?
- Why does it need different types of joints and not just stick with the one type?

Time for you to explore:

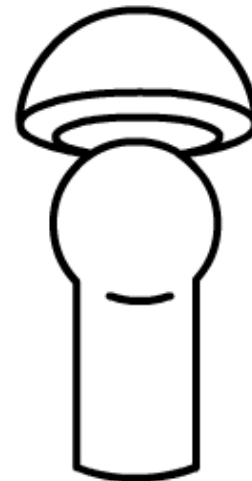
- How many types of joints can you find?
- How do each of these joints work?
- What is similar and different about each one?
- What types of movement do different joints allow?
- Where can you find examples of different types of joints in real life?
- Where can you find examples of different types of joints in the human body?
- What can humans do to help maintain their joints and keep them working well?
- What might happen if you tried to use a different type of joint than the type currently in use?

Pick a joint:

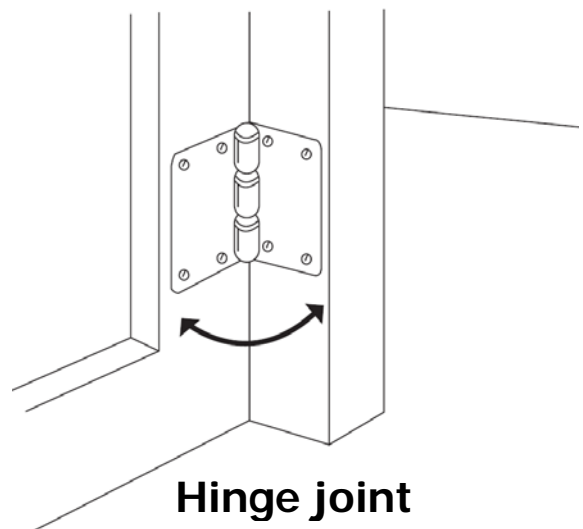
- Choose one type of joint to focus on.
- Can you think of examples in everyday life where you would find this type of joint?
- Develop a diagram explaining how it works and the benefits and limitations of this type of joint.
- Create and design something useful using this type of joint.
- Can you think of an adaptation for this joint or create a new type of joint? What would you use it for?



Fixed joint

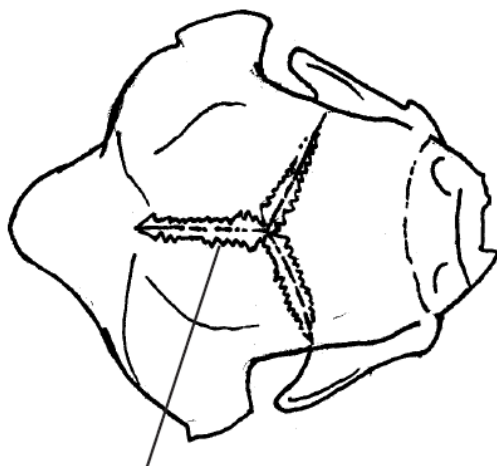
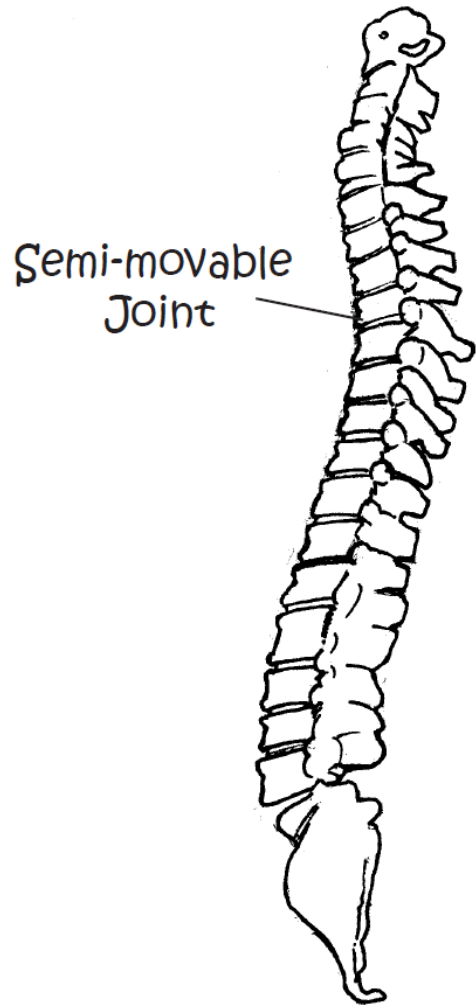
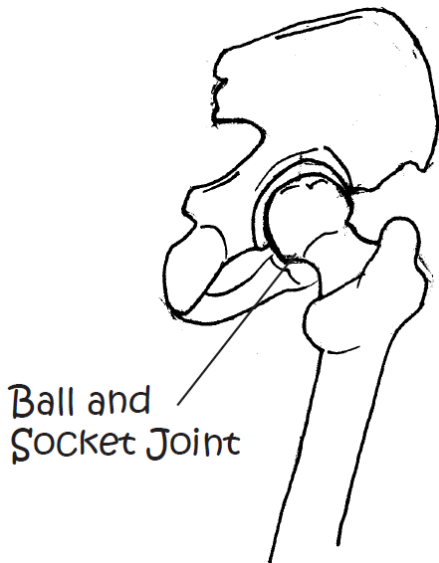
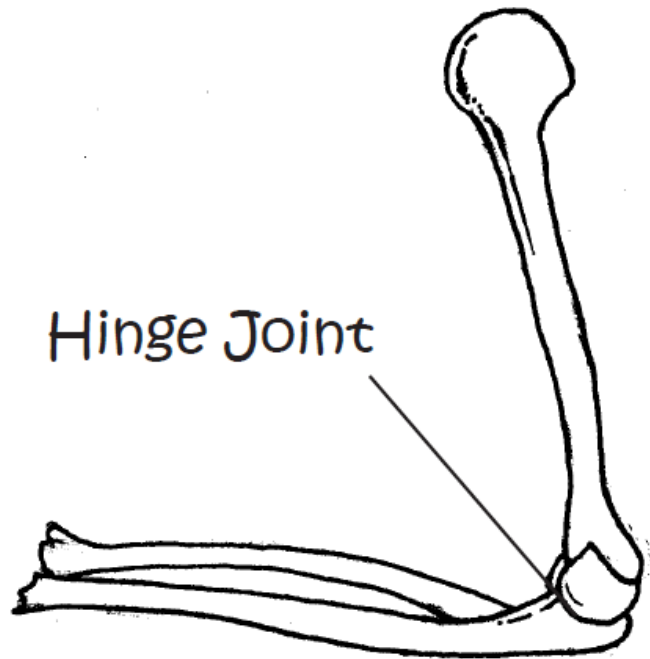
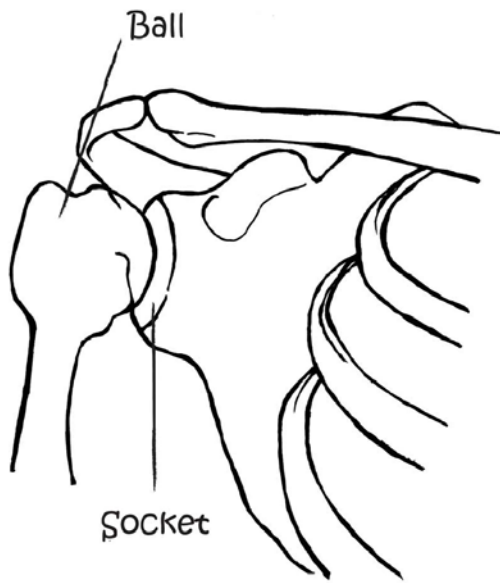


Ball-and-socket joint



Hinge joint

Joints used in the human body



Images from www.sciencewithme.com

Immovable Joint