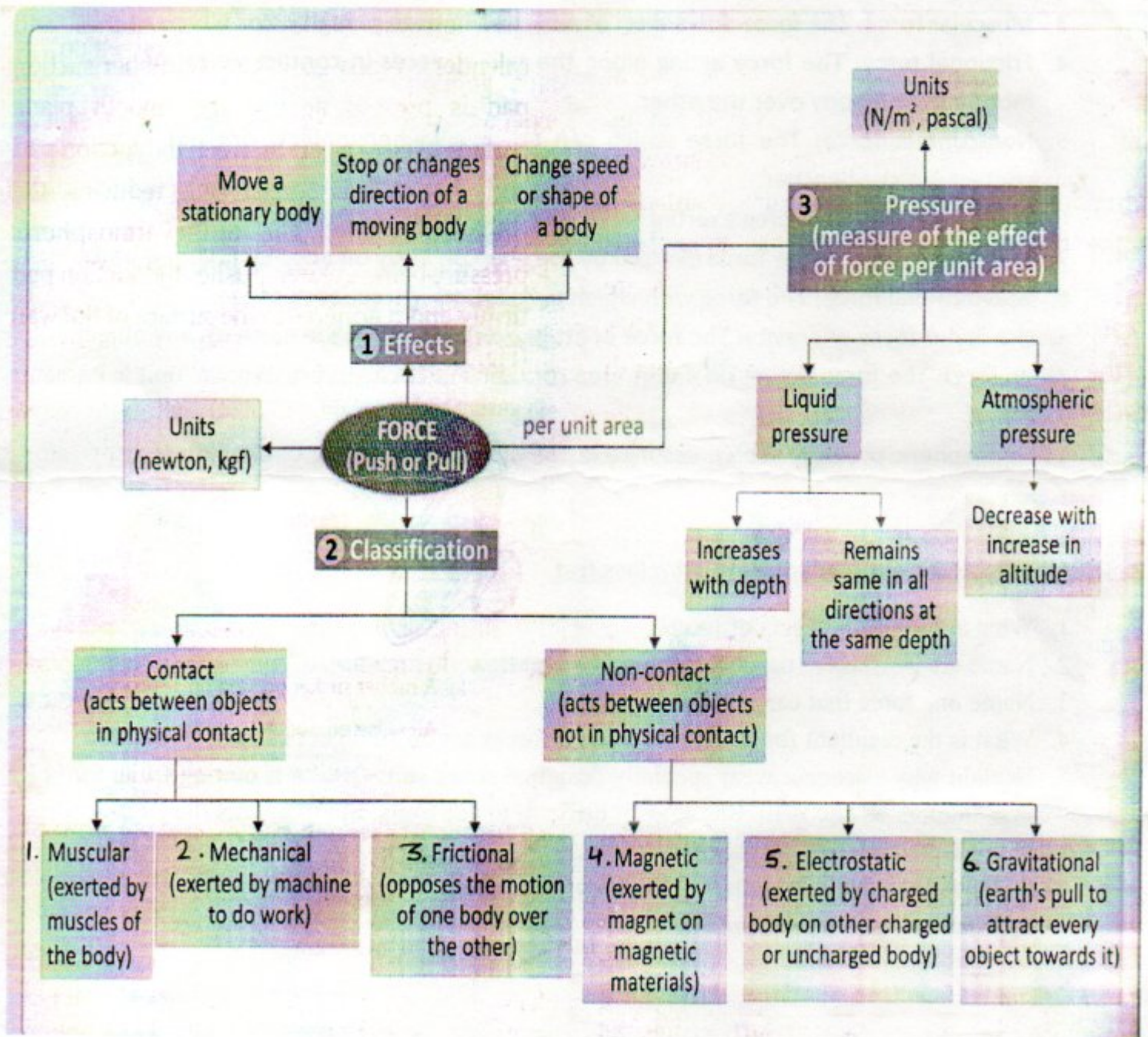


CHAPTER AT A GLANCE: FORCE AND PRESSURE



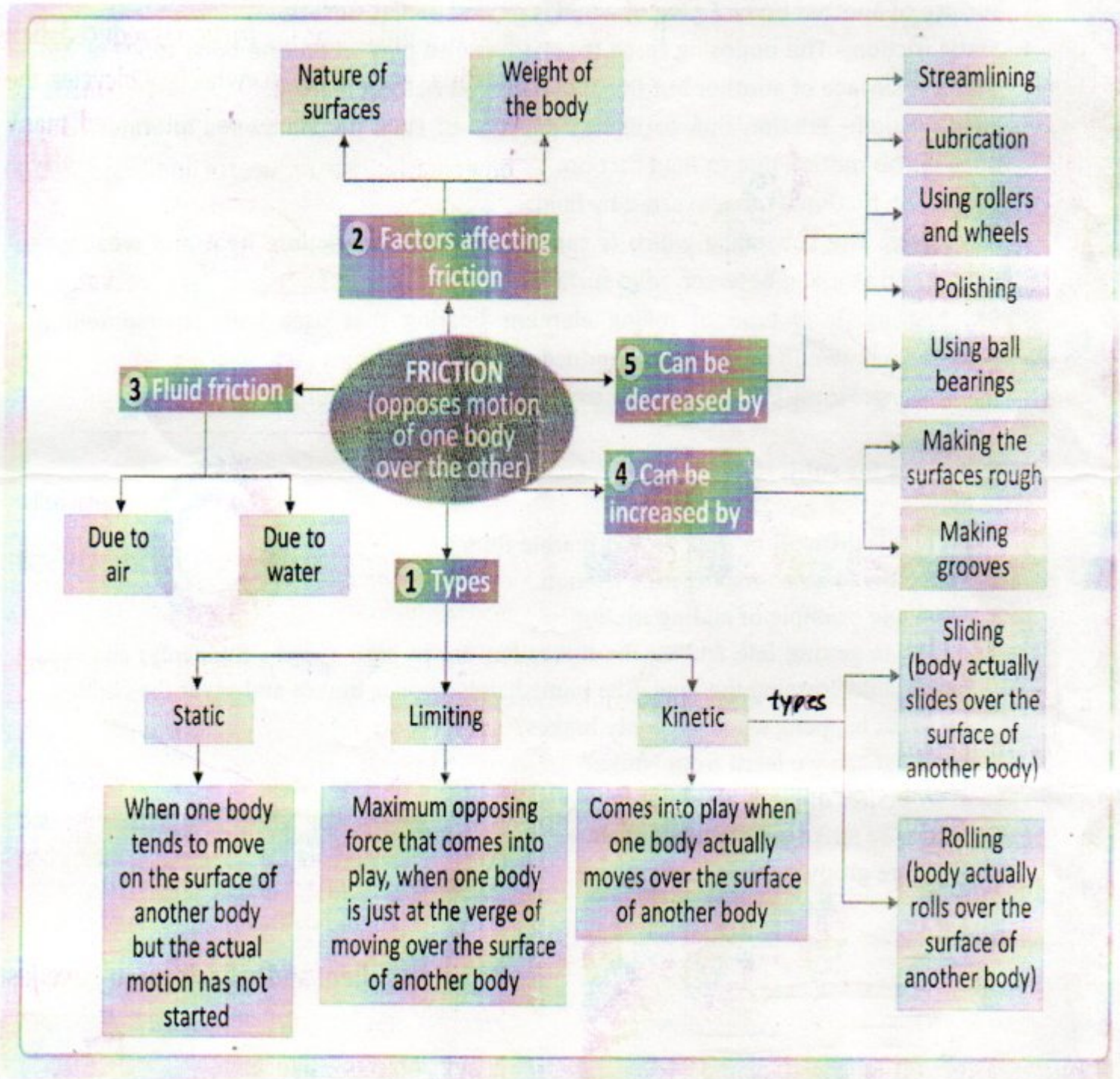
Key words

1. Force: A pull or push on an object is called force.
2. Contact force: The force which acts only when objects are in contact with each other. eg muscular force.
3. Muscular force: The force due action of muscles. Eg oxen plough fields.
4. Frictional force: The force acting along the two surfaces in contact which opposes the motion of one body over the other.
5. Non-contact force: The force which can act even when objects are not in physical contact with each other.
6. Magnetic force: The force exerted on magnetic substances due to magnet.
7. Electrostatic force: The force exerted by the charged body on another charged body.
8. Gravitational force: The force with which two objects attract each other.
9. Gravity or force of gravity: The force of attraction exerted by the earth on any object.
10. Pressure The force acting on a unit area of a surface is called pressure. SI unit is Pascal. $P = F/A$
11. Atmospheric pressure: The pressure exerted by the atmosphere or envelop of air.

Questions for subject enrichment /class test

1. What are the five effects of force?
2. Name the instrument used to measure the atmospheric pressure.
3. Name one force that can act from a distance.
4. What is the resultant force when two equal forces act on an object in same direction?
5. Explain why astronaut wear specially designed space suits .Nitika is cutting fruits for her grandmother as she is ill. She finds it difficult to cut fruits. She sharpens the cutting edge of the knife and then cut the fruits easily.
 - a) How does sharpening the knife help in cutting the objects easily?
 - b) What can you learn from Nitika?

CHAPTER AT A GLANCE: FRICTION



Keywords:

1. Friction: It is resistance to motion of one object moving relative to another.
2. Rolling friction:- The opposing force that comes into play when one body is actually rolling over the surface of another body. Eg log of wood rolls over a flat surface.
3. Sliding friction:- The opposing force that comes into play when one body slides over the surface of another body. Eg log of wood is moved on flat surface.
4. Static friction:- The opposing force that comes into play when one body tends to move over the surface of another but the actual motion has not started.
5. Fluid friction:- Friction due to liquids and gases. Eg a person swims in water, water opposes his motion due to fluid friction.
6. Drag:- The frictional force exerted by fluids.
7. Lubricants: The substance which is capable of reducing friction, heat and wear when introduced as a film between solid surfaces. Eg oil
8. Ball bearing: It is type of rolling element bearing that uses balls to maintain the separation between races used to reduce rotational friction.
9. Interlocking: Firmly joined together especially by one part fitting into another.

Questions for subject enrichment /class test

1. Why it is difficult to walk on wet marble floor?
2. Name the two factors affecting friction.
3. Give one example of sliding friction.
4. Nitika is getting late and so she drives her car in high speed . Suddenly, she sees a small child crossing the road. She immediately applies brakes and saves the child.
 - a) What happens when we apply brakes?
 - b) What can we learn from Nitika?
5. Why bodies of birds are streamlined?
6. When we strike a matchstick against the rough surface, it catches fire. Why?
7. Why are grooves made in the tyres?