Capillary Action Quiz PDF

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Which properties of a liquid influence its capillary action? (Select all that apply)

- [ ] Density
- [ ] Surface tension
- [ ] Viscosity
- [ ] Boiling point

What are the characteristics of liquids that exhibit strong capillary action? (Select all that apply)

- [ ] High surface tension
- [ ] Low viscosity
- [ ] High density
- [ ] Strong adhesive forces

Which force is primarily responsible for capillary action?

- ◯ Gravitational force
- ◯ Magnetic force
- ◯ Cohesiveness force
- ◯ Nuclear force

Which factors affect the extent of capillary action? (Select all that apply)

- [ ] Tube diameter
- [ ] Liquid viscosity
- [ ] Surface material
- [ ] Temperature

Which of the following forces are involved in capillary action? (Select all that apply)

- [ ] Cohesion
- [ ] Adhesión

- [ ] Surface tension
- [ ] Friction

Which of the following liquids is most likely to exhibit capillary action in a glass tube?

- ◯ Mercury
- ◯ Oil
- ◯ Water
- ◯ Alcohol

What happens to the capillary rise when the diameter of the tube decreases?

- ◯ It decreases
- ◯ It remains the same
- ◯ It increases
- ◯ It stops completely

What is capillary action?

- ◯ The ability of a liquid to flow in narrow spaces without external forces
- ◯ The process of evaporation in plants
- ◯ The movement of solids in liquids
- ◯ The diffusion of gases in the air

Explain how capillary action is essential for the survival of plants.

Describe an experiment you could conduct to demonstrate capillary action using household materials.

How does surface tension contribute to capillary action? Provide a detailed explanation.

Discuss the role of adhesion in capillary action and give an example of where this can be observed.

Why does mercury exhibit a downward meniscus in a glass tube, contrary to water?

How can understanding capillary action be beneficial in designing medical devices?

What is the primary application of capillary action in plants?

- ◯ Photosynthesis
- ◯ Nutrient absorption
- ◯ Water transport from roots to leaves
- ◯ Seed dispersal

Which material is likely to show the least capillary action with water?

- ◯ Glass
- ◯ Plastic
- ◯ Metal
- ◯ Paper

In which of the following scenarios is capillary action observed? (Select all that apply)

- ☐ Water rising in a paper towel
- ☐ Oil spreading on water
- ☐ Ink flowing in a pen
- ☐ Water boiling

Which law describes the height to which a liquid will rise in a capillary tube?

- ◯ Boyles's Law
- ◯ Jurin’s Law
- ◯ Newton’s Law
- ◯ Archimedes’ Principle

What is the contact angle in the context of capillary action?

- ◯ The angle between two liquid surfaces
- ◯ The angle at which a liquid interface meets a solid surface
- ◯ The angle of refraction in a liquid

◯ The angle of incidence of light on a liquid

Which of the following are examples of capillary action in daily life? (Select all that apply)

- ☐ Blood moving through capillaries
- ☐ Water climbing up a straw
- ☐ Milk curding
- ☐ Water spreading on a tissue