States of Matter

Talk to a Teacher
http://spoken-tutorial.org
National Mission on Education through ICT
http://sakshat.ac.in

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Learning Objectives

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We will learn about,

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We will learn about,

- **States of Matter, an interactive PhET simulation**

Pre-requisites

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- **Learners should be familiar with topics in high school science**

System Requirement

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- **Ubuntu Linux OS v 14.04**

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- **Java v 1.7.0**

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- **Ubuntu Linux OS v 14.04**
- **Java v 1.7.0**
- **Firefox Web Browser v 53.02.2**

Learning Goals

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- **Describe the characteristics of states of matter**

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- **Predict how change in temperature or pressure changes the behavior of particles**

Learning Goals

- Describe the characteristics of states of matter
- Predict how change in temperature or pressure changes the behavior of particles
- Study Melting, Freezing & Boiling points of different substances

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- **Compare particles in three different phases**

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- **Compare interactions between particles in solids, liquids & gases**

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- **Compare particles in three different phases**
- **Compare interactions between particles in solids, liquids & gases**
- **Study the relation between temperature & Kinetic Energy of molecules**

States of Matter

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- **Matter around us exists in 3 states Solid, Liquid and Gas**

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- **These states arise due to intermolecular forces between the particles**

States of Matter

- Matter around us exists in 3 states Solid, Liquid and Gas
- These states arise due to intermolecular forces between the particles
- Change of state occurs, on the application of heat and pressure

Link for PhET simulation

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http://phet.colorado.edu

Assignment

1. **In *Phase Changes* screen, select *Adjustable Attraction* from *Atoms & Molecules* list**
2. **Use the slider to change *Interaction Strength* from weak to strong**
3. **Study the effect of temperature and pressure on these molecules**

Assignment

Using *Phase Changes* screen,

1. **Determine which substance has strongest inter atomic or molecular forces**

Summary

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We have learnt,

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We have learnt,

- **How to use States of Matter interactive PhET simulation**

Summary

Using this simulation we have learnt about,

- **Characteristics of States of Matter**
- **How variation in temperature or pressure changes the behavior of particles**

About the Spoken Tutorial Project

- **Watch the video available at http://spoken-tutorial.org /What_is_a_Spoken_Tutorial**
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- Choose the minute and second where you have the question
- Explain your question briefly
- Someone from our team will answer them

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- More information on this Mission is available at

  http://spoken-tutorial.org/NMEICT-Intro