

# States of Matter

## Learning Objective:

Compare and group materials together according to whether they are solids or liquids.

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# How could we sort these objects into groups?



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**What about these objects? How could we group these into two different groups?**



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One way you could have organised these objects is to sort them into solids and liquids.



What do these words mean?

**Solids**

**Liquids**

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**How can we tell if a material is a solid or a liquid?**



**What is the difference between a solid and a liquid?**

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# Did you think of these differences?

- Solids keep their shape whereas liquids can change their shape to fit the container they are in.
- You can pour liquids but not solids.
- You can spill liquids but not solids.
- If you tilt a liquid the liquid will stay level in the container.



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One way of checking to see if a material is a liquid or a solid is to see if it will pour. You can pour milk, water or orange juice into a cup but you cannot pour a chair, a mug or a loaf of bread.

I know that liquids pour and solids don't, but what about a bag of rice, flour or sand? I can pour all these things. Does that mean they are liquids?

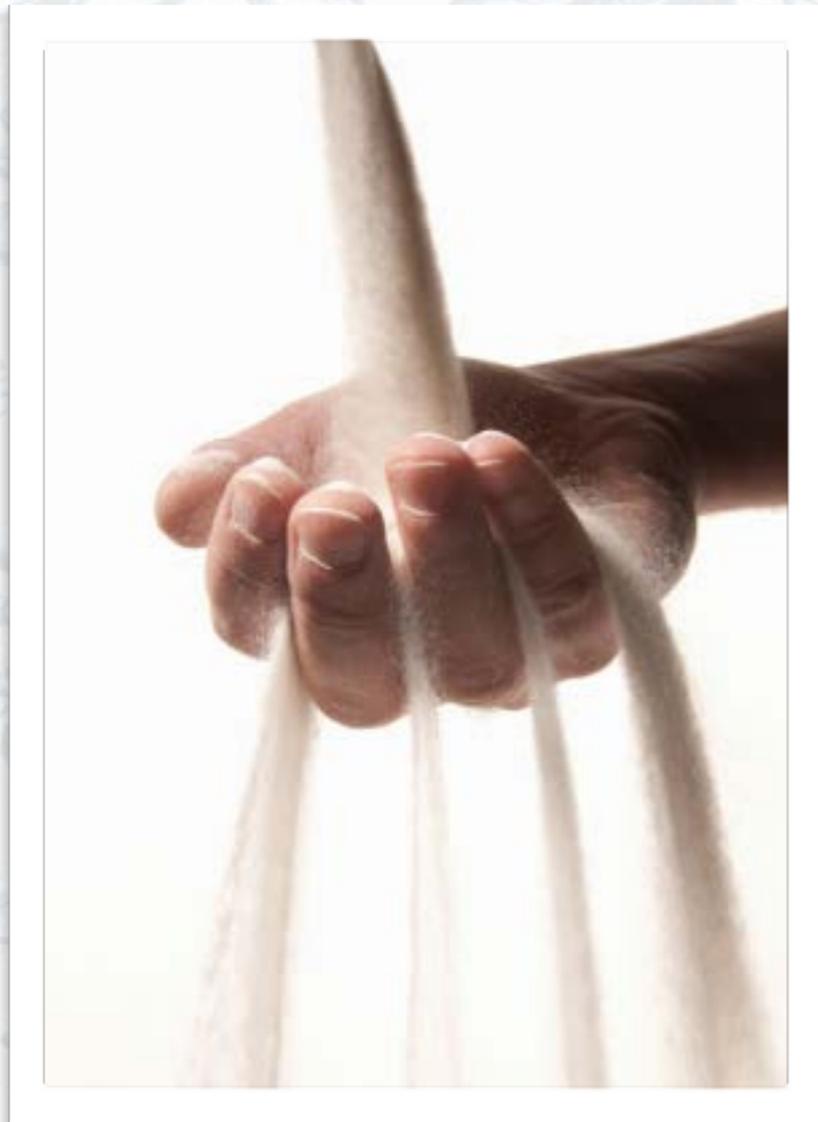


**What do YOU think?**  
**Discuss your ideas.**

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**Solids like this, such as grains of rice or sand, are made up of very small particles which is why they are able to pour. Powders like flour are the same.**



**This does not mean that they are liquids. Each particle is a solid and retains its shape. You cannot pour one grain of rice or one grain of sand. However, when you put lots of the little particles together they can pour like a liquid.**



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