

What we are going to learn...

- Rate of Dissolving ✓ *How Fast*
- Agitation ✓ *Stirring*
- How Agitation affects dissolving → *Dissolve faster*
- Movement of Particles - How fast they dissolve *outside Temp*
- Ways to *Change* manipulate rate of dissolving: Temperature, Agitation, Attraction of Particles (cleaning products)

Rate of Dissolving

rate

The rate of dissolving is the measure of how fast a solute dissolves in a solvent.

How do you think the Rate of Dissolving can be Changed?

Temperature

shaking

Particles are the same size

Agitation

What is agitation?

Agitation refers to stirring or shaking something

Particles are getting dissolved as they normally would be.

However, the RATE of DISSOLVING is faster.

How Fast

Dissolving

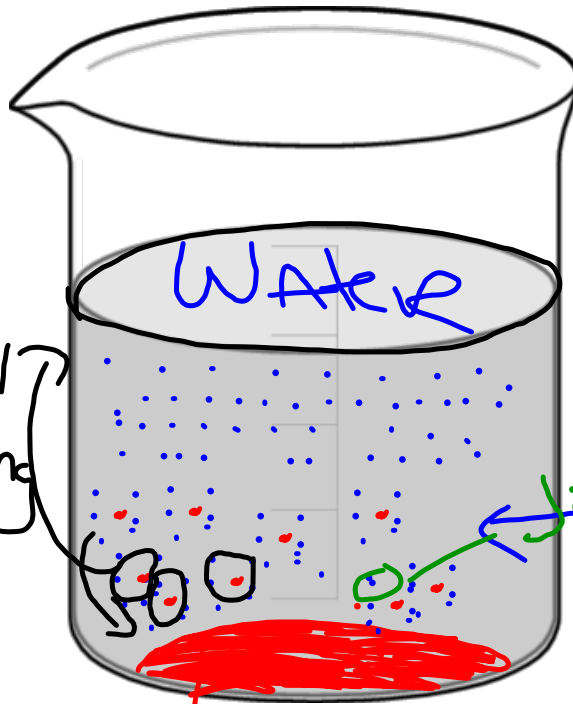
Occurs in 2 stages

1. Water particles pull solute particles loose. SUGAR
2. The motion of the particles carries the solute particles away. → FASTER

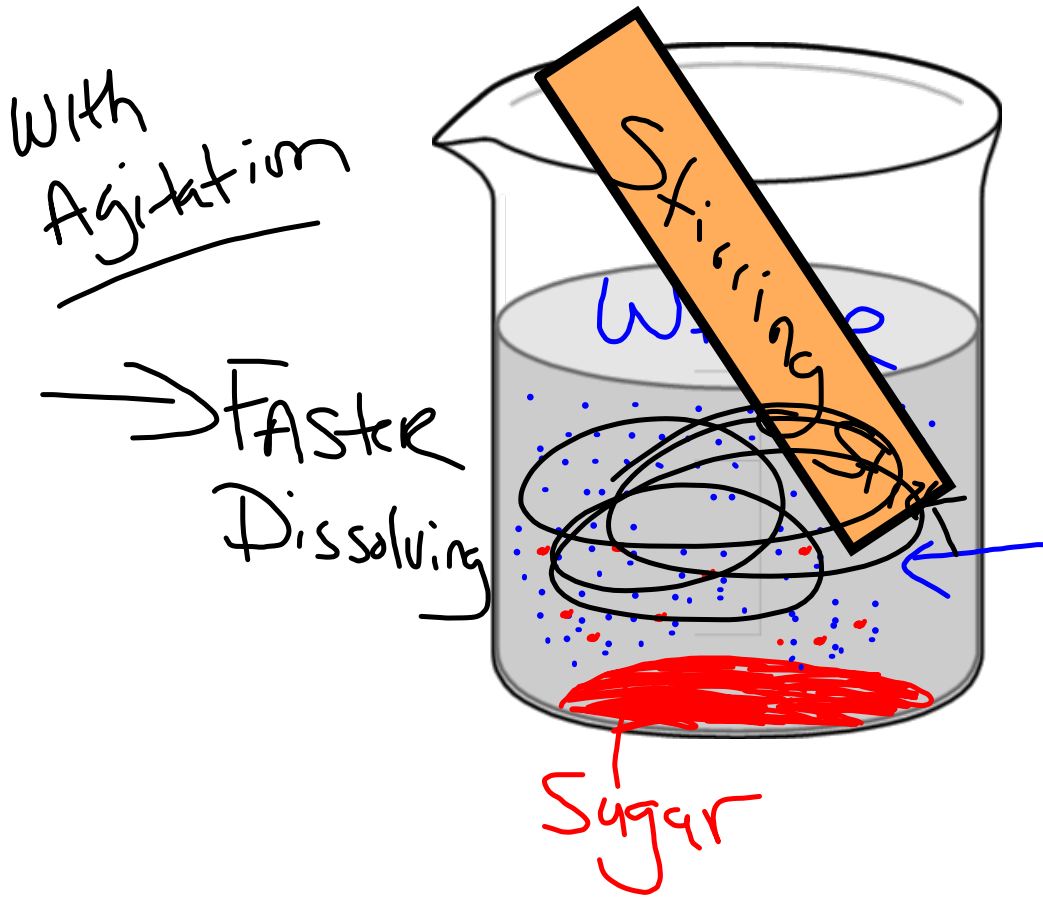
*Water particles near the pile of solute are very concentrated and approach saturation. As a result, most attractive forces are used up and it has a hard time pulling all of the solute apart.

Without Agitation

Normal Dissolving

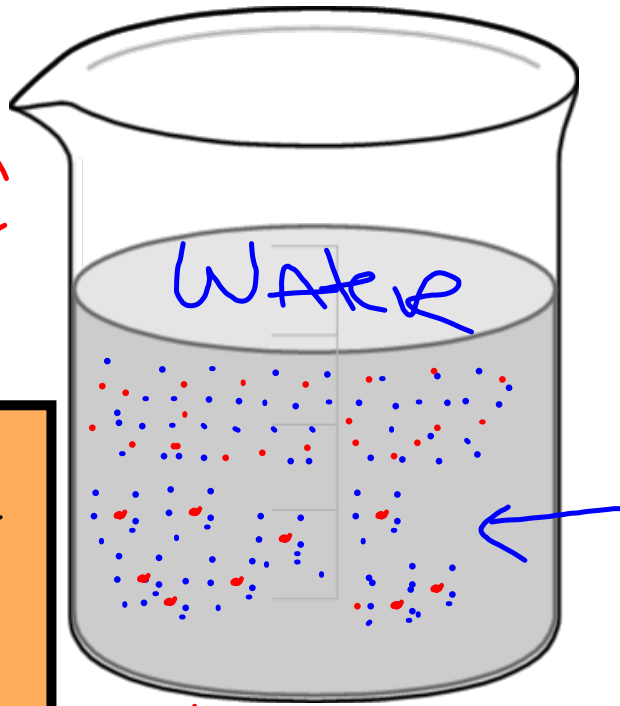


Sugar



*AFTER
Agitation*

*Result - Rate of
Dissolving is faster
with Agitation by
stirring stick*



Sugar

Predict how the following example will change with Agitation?

*Water particles near the pile of ^{SALT} solute are very concentrated and approach saturation. As a result, most attractive forces are used up and it has a hard time pulling all of the solute apart.



1. How will agitation Change the Rate of dissolving?

2. How will agitation change the # of Particles that get Dissolved?

Answers

1. How will agitation Change the Rate of dissolving?

It will dissolve faster after being agitated.

Answer

2. How will agitation change the # of Particles that get Dissolved?

It will still dissolve the same number of particles

Answer

Benefit of Agitation to Dissolving

The BIG change is the movement of the particles.

- The water particles are moving around and the concentration near the solute is more dilute. *becomes more dilute.*
- That allows the particles of water to use their attractive forces to bond with the solute particles.

rate of dissolving worksheet.tif

Complete this and solutions will follow

DATE:

NAME:

CLASS:

CHAPTER 6

VOCABLURY CHECK

Rate of Dissolving

BLM 6-13

Goal • Complete these activities to check your understanding of the terms related to the rate of dissolving.

What to Do

- Beside each statement on the left-hand side, place the letter representing the term on the right-hand side that best matches the statement. Two terms will not be used.

Statement	Term
_____ 1. speed	(a) surface
_____ 2. stirring or shaking	(b) rate
_____ 3. a measure of how fast a solute dissolves in a solvent	(c) solubility
_____ 4. the state of being compressed	(d) attractive force
_____ 5. the outer face of an object	(e) rate of dissolving
_____ 6. attraction between particles	(f) agitation
	(g) pressure
	(h) concentrated

- Complete each of the following sentences by filling in the blanks with vowels — a, e, i, o, u — to make true statements about dissolving.

1. Th__ h__gh__r th__ t__mp__r__t__r__ __f th__ s__bst__nc__, th__ f__st__r __ts p__rt__cl__s m__v__.
2. __g__t__t__n h__lps spr__d th__ p__rt__cl__s __r__nd.
3. D__ss__lv__ng __cc__rs __n th__ s__rf__c__ __f th__ p__c__s __f s__l__t__.
4. Th__r__ __s m__r__ s__rf__c__ __r__ wh__n th__ s__l__t__ __s br__k__n __nt__ sm__ll__r p__c__s.

What to Do

- Beside each statement on the left-hand side, place the letter representing the term on the right-hand side that best matches the statement. Two terms will not be used.

	Statement	Term
<u>b</u>	1. speed	(a) surface
<u>f</u>	2. stirring or shaking	(b) rate
E <u>c</u>	3. a measure of how fast a solute dissolves in a solvent	(c) solubility
<u>g</u>	4. the state of being compressed	(d) attractive force
<u>g</u>	5. the outer face of an object	(e) rate of dissolving
<u>d</u>	6. attraction between particles	(f) agitation
		(g) pressure
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<u>a</u> 5. the outer face of an object	(e) rate of dissolving
<u>d</u> 6. attraction between particles	(f) agitation
	(g) pressure
	(h) concentrated

- Complete each of the following sentences by filling in the blanks with vowels — a, e, i, o, u — to make true statements about dissolving.

- The higher the temperature of the substance, the faster its particles move.
- agitation helps spread the particles around.
- Dissolving occurs on the surface of the pieces of solute.
- The reis more surface area where the solute is broken into smaller pieces.

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- Th__r__ __s m__r__ s__rf__c__ __r__ wh__n th__ s__l__t__ __s br__k__n __nt__ sm__ll__r p__c__s.

Attachments

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