



Name: _____ Class: _____ Date: _____

Consolidation Worksheet I

What Are Reversible and Irreversible Changes?

Write in the spaces provided whether the changes below are reversible or irreversible.

a. Freezing water to make ice



b. Boiling an egg



c. Baking a cake



d. Breaking glass



e. Adding salt to water



f. Making a salad





Name: _____ Class: _____ Date: _____

Consolidation Worksheet **2**

What Are Mixtures? / How Can We Separate Solid Mixtures?

1. What is a mixture?

2. Study the picture below and answer the questions that follow.



a. Does the picture show a mixture?

b. Explain your answer in 'a'.

3. The picture below shows a mixture of beads and flour in a bowl.



a. Tom wants to separate the beads from the flour in the bowl. What separation method can he use?

b. Explain your answer in 'a'.



Name: _____ Class: _____ Date: _____

Consolidation Worksheet 3

What Happens When Solids Are Mixed With Water?

1. Rita is making herself a cup of coffee. She adds in sugar to her coffee.



- a. Rita finds that the sugar is not dissolving well. What can she do to make it dissolve better?

- b. What will happen if Rita continues adding more coffee powder to her drink? Why?

- c. What will happen if Rita uses cold water to make the coffee?

2. For each statement below, write 'T' if the statement is true and 'F' if the statement is false.

a	Solids that can dissolve in a liquid are said to be soluble in that liquid.	
b	When a solid dissolves in a liquid, the resulting mixture is known as a solution.	
c	When a solid is added to a liquid and the liquid changes colour, it means that the solid is soluble.	
d	It is impossible to change the rate at which a solid dissolves in a liquid.	
e	Heating a solution can help the solid dissolve faster	
f	When no more solid can dissolve in a liquid, the liquid is not saturated.	
g	Solids that do not dissolve in a liquid are said to be insoluble in that liquid.	



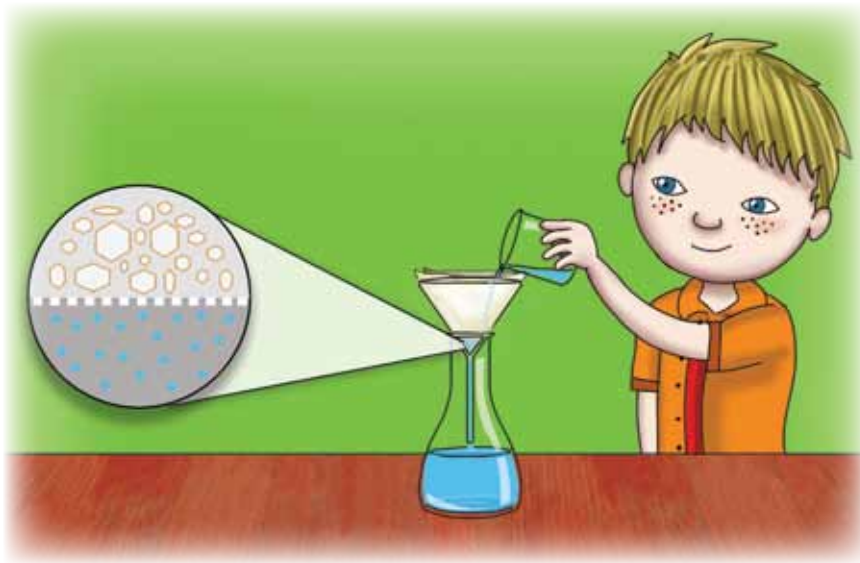


Name: _____ Class: _____ Date: _____

Consolidation Worksheet 4

How Do We Separate Insoluble Solids From Liquids? / How Can We Separate Soluble Solids From Liquids?

1. Study the picture below and answer the questions that follow.



- a. What is the name of the process taking place in the above picture?

- b. How does filtration help in separating a mixture?



2. The picture below shows a teabag in a glass of water.



What is the function of the teabag?

3. Name a mixture that can be separated by using filtration.

4. Fill in the blanks below using the helping words provided in the box. Each word can be used only once.

	filtration	soluble	
	permanent	substance	
	reversible	temporary	

a. When a sliced apple turns brown, a new _____ has formed.

b. Burning plastic is a _____ change.

c. We can separate insoluble solids from liquids by _____.

d. A _____ change takes place when a material that has undergone a change can return to its original form.

e. When a solid is able to dissolve in water, we say that it is _____ in water.

f. A change is _____ when no new substances are formed.





Name: _____ Class: _____ Date: _____

Fun and Games

Unscramble the Words!

Use the pictures below to help you unscramble the words! An example has been done for you.

a.  Cooking an egg is an _____ (brevierslei) change.

b.  A _____ (urtimex) is when different substances are combined and no chemical change occurs.

c.  When a tablet dissolves in water, it is said to be _____ (useboll).

d. 

A material that has undergone a temporary change and can return to its original form is known as a _____ (servaliber) change.

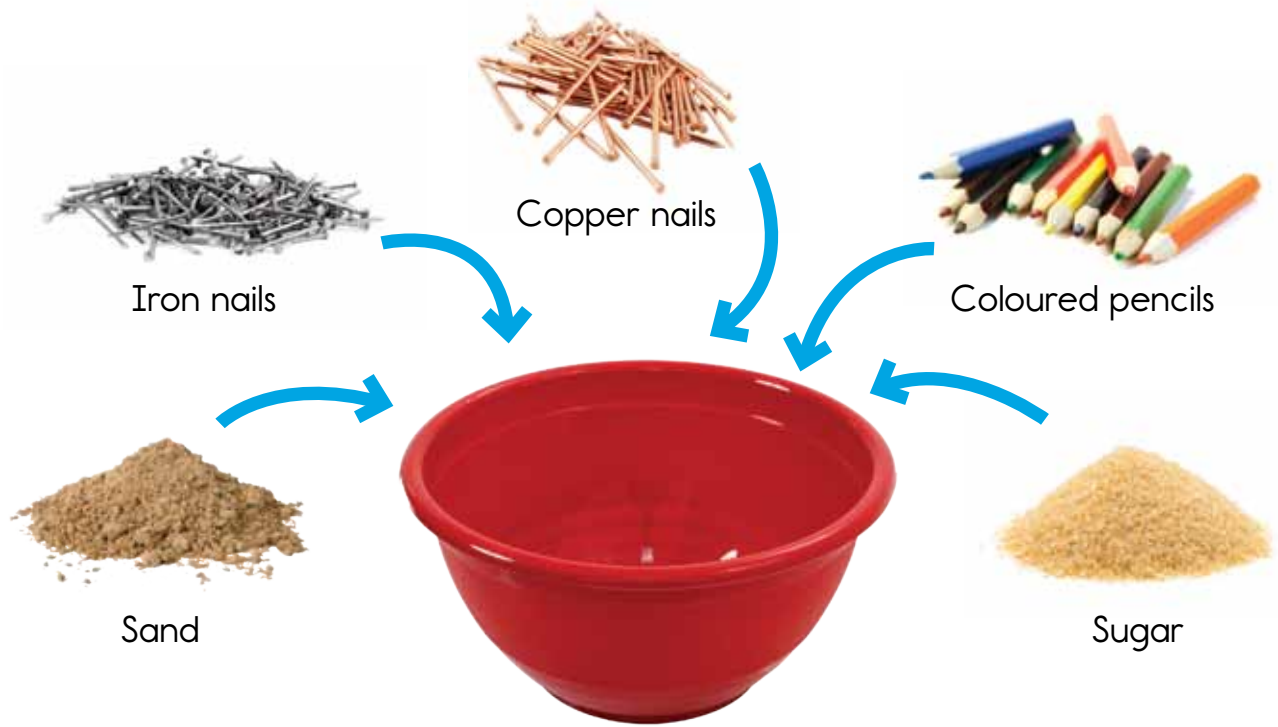


Name: _____ Class: _____ Date: _____

Exam Practice

Process skills: Observing, Analysing

Smarty mixed the following things in a bowl.



List the steps you would take to separate all the different substances in the mixture. [3 marks]

Hint: What are the different separation methods that you know of? Which of the substances in the mixture can be separated by these separation methods?

Reversible and Irreversible Changes

Name: _____ Class: _____ Date: _____

Consolidation Worksheet 1

What Are Reversible and Irreversible Changes?

Write in the spaces provided whether the changes below are reversible or irreversible.

a. Freezing water to make ice



Reversible

c. Baking a cake



Irreversible

b. Boiling an egg



Irreversible

d. Breaking glass



Reversible

f. Making a salad



Reversible

e. Adding salt to water



Reversible

Reversible and Irreversible Changes

Name: _____ Class: _____ Date: _____

Consolidation Worksheet 2

What Are Mixtures? / How Can We Separate Solid Mixtures?

1. What is a mixture?

A mixture is a combination of different substances where no chemical changes occur.

2. Study the picture below and answer the questions that follow.



a. Does the picture show a mixture?

Yes

b. Explain your answer in 'a'.

The picture shows a mixture of different substances such as milk, cereal and fruits. These individual substances, while mixed together, do not undergo any chemical change and no new substances are formed.



Name: _____ Class: _____ Date: _____

Consolidation Worksheet 3

What Happens When Solids Are Mixed With Water?

1. Rita is making herself a cup of coffee. She adds in sugar to her coffee.



a. Rita finds that the sugar is not dissolving well. What can she do to make it dissolve better?

She can add more hot water into the coffee or she can stir the solution well to help with the dissolving.

b. What will happen if Rita continues adding more coffee powder to her drink? Why?

The coffee powder will not dissolve in the water. The coffee solution will reach a stage where no more solid (coffee powder) can dissolve. The solution has become saturated.

c. What will happen if Rita uses cold water to make the coffee?

The coffee powder will not dissolve well or will dissolve very slowly in the cold water.

3. The picture below shows a mixture of beads and flour in a bowl.



a. Tom wants to separate the beads from the flour in the bowl. What separation method can he use?

He can use a sieve to separate the mixture.

b. Explain your answer in 'a'.

A sieve has small holes that will allow the flour to pass through. The beads, being larger in size, will be unable to pass through the small holes, thus allowing the mixture to be separated.

2. For each statement below, write 'T' if the statement is true and 'F' if the statement is false.

a	Solids that can dissolve in a liquid are said to be soluble in that liquid.	T
b	When a solid dissolves in a liquid, the resulting mixture is known as a solution.	T
c	When a solid is added to a liquid and the liquid changes colour, it means that the solid is soluble.	T
d	It is impossible to change the rate at which a solid dissolves in a liquid.	F
e	Heating a solution can help the solid dissolve faster.	T
f	When no more solid can dissolve in a liquid, the liquid is not saturated.	F
g	Solids that do not dissolve in a liquid are said to be insoluble in that liquid.	T



Name: _____ Class: _____ Date: _____

Consolidation Worksheet 4

How Do We Separate Insoluble Solids From Liquids? / How Can We Separate Soluble Solids From Liquids?

1. Study the picture below and answer the questions that follow.



a. What is the name of the process taking place in the above picture?

Filtration

b. How does filtration help in separating a mixture?

During filtration, the large particles of a substance cannot pass through the very tiny holes in the filter paper. These large particles will thus be trapped on the filter paper, effectively separating the mixture.

Fun and Games

Unscramble the Words!

Use the pictures below to help you unscramble the words! An example has been done for you.

a.   Cooking an egg is an irreversible (breviersrlei) change.

b.   A mixture (urtimex) is when different substances are combined and no chemical change occurs.

c.   When a tablet dissolves in water, it is said to be soluble (useboll).

d.   A material that has undergone a temporary change and can return to its original form is known as a reversible (serveliber) change.

2. The picture below shows a teabag in a glass of water.



What is the function of the teabag?

The teabag acts as a filter which allows water to pass through, but keeps the tea leaves in the bag.

3. Name a mixture that can be separated by using filtration.

(Accept all possible answers.)

4. Fill in the blanks below using the helping words provided in the box. Each word can be used only once.



a. When a sliced apple turns brown, a new substance has formed.

b. Burning plastic is a permanent change.

c. We can separate insoluble solids from liquids by filtration.

d. A reversible change takes place when a material that has undergone a change can return to its original form.

e. When a solid is able to dissolve in water, we say that it is soluble in water.

f. A change is temporary when no new substances are formed.





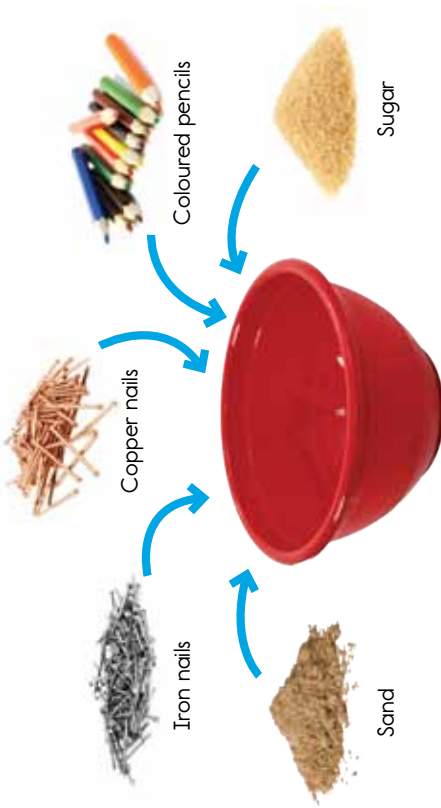
Reversible and Irreversible Changes

Name: _____ Class: _____ Date: _____

Exam Practice

Process skills: Observing, Analysing

Smarty mixed the following things in a bowl.



List the steps you would take to separate all the different substances in the mixture. [3 marks]

Hint:

What are the different separation methods that you know of? Which of the substances in the mixture can be separated by these separation methods?

Step 1: Remove the pencils by sorting them by hand.

Step 2: Use a magnet to separate the iron nails.

Step 3: Remove the copper nails by sorting by hand,
or by using a sieve.

Step 4: Pour water into the mixture of sand and sugar.

Step 5: Use filtration to separate the sand.

Step 6: Use evaporation to obtain the sugar.

(Answers may vary. Accept all possible answers.)

Glossary

Chapter 6:

Reversible and Irreversible Changes

Chemical change	A permanent change where a new substance is formed and cannot return to its original form
Dissolve	When a solid mixes and becomes part of a liquid
Filtration	A process of separating an insoluble solid from a liquid
Insoluble	Being unable to dissolve in a liquid
Irreversible	A process where an original substance cannot be changed back to its original form
Mixture	A combination of two or more substances that produces no chemical change
Physical change	A temporary change where a material can return to its original form
Reversible	A process where an original substance can be changed back to its original form
Saturation	A stage where no more solid can dissolve in a liquid
Sieving	A process of separating particles of different sizes
Soluble	Being able to dissolve in a liquid
Solution	A liquid in which a substance has been dissolved