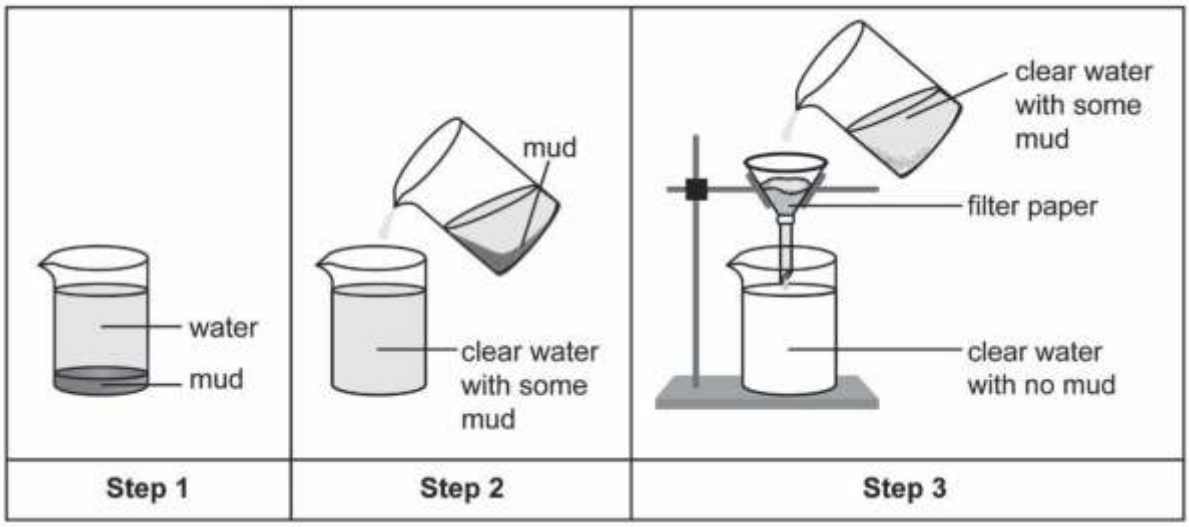
Curriculum Aligned Competency Based Test Items
Science
Class 6 – Chapter 5
Separation of Substances

Saroj collected muddy water from a pond.
He separated the water from the mud in three steps as shown in the pictures below.



SAS21S060501

1 Which separation method did Saroj use at each step?
Select the correct row.

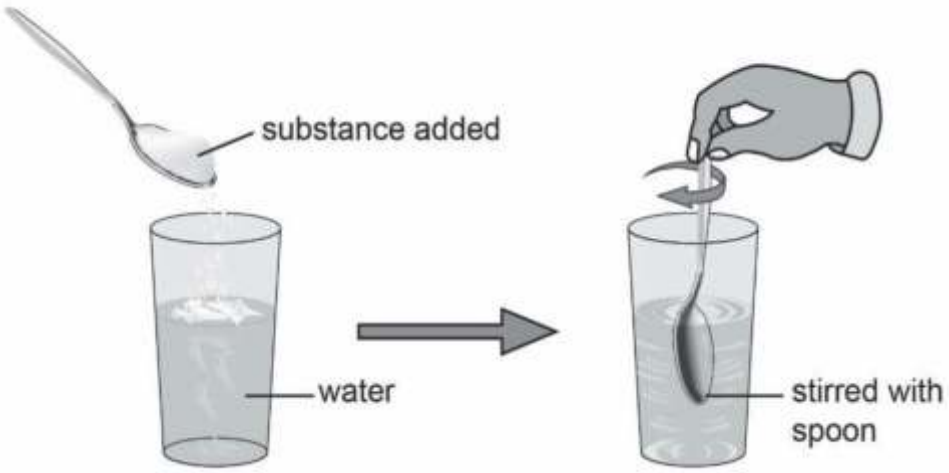
	Step 1	Step 2	Step 3
A.	Evaporation	Sedimentation	Decantation
B.	Sedimentation	Decantation	Filtration
C.	Decantation	Sedimentation	Condensation
D.	Sedimentation	Filtration	Decantation

SAS21S060502

2 Did Which of these properties did Saroj use to separate mud from water?

A. Mud floats on water.
B. Mud dissolves in water.
C. Mud turns water cloudy.
D. Mud is heavier than water.

Anu adds sugar and salt to two separate glasses of water.
She stirs the mixture in each glass every time she adds salt or sugar to it.



She notes her findings in a table.

	Number of spoons added	Did the substance dissolve in water?
Sugar	1	yes
	2	yes
	3	yes
Salt	1	yes
	2	yes
	3	no

SAS21S060503

3 What can Anu conclude from her activity?

A. Sugar and salt dissolve equally in water.
B. Sugar is more soluble than salt in water.
C. Stirring helps in dissolving all substances in a liquid.
D. Sugar forms a saturated solution in water but salt does not.

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4 Anu used two spoons of the same size to add sugar and salt to water.
What else did Anu need to keep the same for her activity?

_____

_____

SAS21S060505

5 Anu repeats the activity using hot water.
Will the results in the table remain the same? Explain your answer.

_____

_____

SAS21S060506

6 Which of these processes could be used to separate the salt dissolved in the glass of water?

A. Filtration
B. Evaporation
C. Condensation
D. Sedimentation

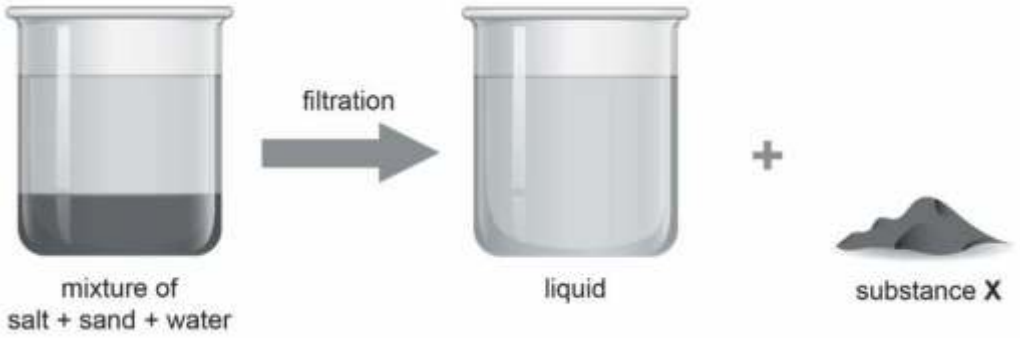
Tea leaves are separated with a strainer while pouring tea.

SAS21S060507

7 What property of tea leaves is used to separate them from the tea?

A. Size
B. Mass
C. Shape
D. Thickness

A beaker contains a mixture of salt, sand and water.
The mixture is filtered using filter paper.



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8 What is substance X?

_____

_____

SAS21S060509

9 Write a single separation method by which water can be separated from a mixture of salt, sand and water.

_____

_____

1 kg wheat grains are mixed with 1 kg mustard seeds.

SAS21S060510

10 Write a suitable method to separate the mustard seeds from wheat grains.

_____

_____

Answers

Item Number	Question 1
Question Code	SAS21S060501
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Method of Separation (Sedimentation, Decantation and Filtration)
Competency	Evaluating and Designing Scientific Enquiry
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Sedimentation Decantation Filtration
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21S060502
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Method of Separation (Properties of substances to be separated)
Competency	Explaining Phenomena Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Mud is heavier than water.
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21S060503
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Can Water Dissolve any Amount of a Substance?
Competency	Interpreting Data and Evidence Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Sugar is more soluble than salt in water.
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21S060504
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Can Water Dissolve any Amount of a Substance?
Competency	Evaluating and Designing Scientific Enquiry
Item Type	Constructed Response
Full Credit (Full Score)	Mentions that the amount of water in the glasses must be same For example • The two glasses must have the same amount of water.
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21S060505
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Can Water Dissolve any Amount of a Substance?
Competency	Evaluating and Designing Scientific Enquiry
Item Type	Constructed Response
Full Credit (Full Score)	Mentions that all three spoons of salt would dissolve in water because larger quantities of salt can be dissolved in water on heating it
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21S060506
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Evaporation
Competency	Explaining Phenomena Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Evaporation
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21S060507
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Method of Separation(Filtration)
Competency	Explaining Phenomena Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. size
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21S060508
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Method of Separation(Filtration)
Competency	Evaluating and Designing Scientific Enquiry
Item Type	Constructed Response
Full Credit (Full Score)	Mentions that substance X is sand
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21S060509
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Evaporation
Competency	Explaining Phenomena Scientifically
Item Type	Constructed Response
Full Credit (Full Score)	Mentions the process of evaporation
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21S060510
Grade & Chapter Name	Grade 6 | Separation of Substances
Concept | Sub-concept	Physical Science | Method of Separation (Sieving)
Competency	Explaining Phenomena Scientifically
Item Type	Constructed Response
Full Credit (Full Score)	Mentions sieving as a suitable method
No Credit (No Score)	Any other response or missing response