

GRADE 5 LEARNING PACK

Materials: Solutions, Mixtures & Separation

Investigate dissolving, mixtures, separation methods and reversible/irreversible changes using properties and safe procedures.

LEARN • PRACTISE • CREATE • REFLECT

Original BrightPencil Kids resource - adult-led where appropriate

A4 edition • 12 purposeful pages • review copy

Print. Learn. Grow.

Grown-up guide

Learning objective

Investigate dissolving, mixtures, separation methods and reversible/irreversible changes using properties and safe procedures.

Use this pack well

- Model the first example aloud, then let the learner try.
- Ask “How do you know?” more often than “Are you finished?”.
- Use real objects, talk, movement or observation when the activity suggests it.
- Stop or shorten the session if attention or enjoyment drops.
- Open-ended pages can have many successful answers.

Quality note

This resource was written originally for BrightPencil Kids. Curriculum sources informed scope and progression only; no third-party worksheet or story text is reproduced.

Learn the idea

- 1** Dissolving forms a solution but does not mean the solute has disappeared from existence.
- 2** Separation methods depend on differences in particle size, solubility, magnetism, boiling/evaporation behaviour or other properties.
- 3** Some changes are reversible; others create new materials or cannot easily be reversed.

Talk about it

Explain one idea in your own words. Give an example from real life, a drawing or an object if that helps.

Distinguish dissolving from melting in original examples.

Choose filtration, sieving, magnetism or evaporation conceptually for safe mixtures.

Plan how to recover salt conceptually from salt water without child handling of hot apparatus.

Classify familiar changes with evidence rather than appearance alone.

Explain why a clear solution can still contain dissolved material.

Try it beyond the page

Real-world / hands-on connection

With adult supervision, make a safe room-temperature salt/sugar solution and compare what is visible before and after dissolving; do not taste experimental mixtures.

Before you finish

What did you notice?

What evidence, object or example helped you?

What would you change if you tried again?

Create something

Your project

Design a separation flowchart for a fictional mixture of safe materials.

Use this space for planning, drawing, mapping, designing or notes.

CHALLENGE

Think deeper

1. Does dissolved salt cease to exist?

2. What property makes a magnet useful in separation?

3. Is every colour change proof of a new substance?

Quick review

1. In one sentence, explain the big idea of “Materials: Solutions, Mixtures & Separation”.

2. Draw or write one example that shows you understand.

3. Choose one activity from this pack and explain the strategy you used.

4. Write one question you still have.

Answer & discussion notes

Use these as guidance, not scripts. Open questions can have different successful responses when the reasoning is sensible and evidence-based.

1. Suggested response

No.

2. Suggested response

Magnetic attraction of suitable materials.

3. Suggested response

No.

Review before publication

Check age fit, factual accuracy, clarity, accessibility, rights provenance and whether the activity works in practice. This file remains a review copy until those checks are signed off.

FINISH

My learning reflection

I finished this BrightPencil learning pack.

One thing I understand better now:

A strategy that helped me:

Something I created or noticed:

My next small question or goal:

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