

Resources for Year 3

A Recipe for Good Thinking and Learning

Can you remember the ingredients you discussed in the lesson? Use them to write a recipe below. The first few lines have been started for you ...

First, take a sprig of _____

and a spoonful of _____

Toss in one _____

and a handful of _____

Mix in five drops of _____

Stir, then add a dollop of _____

Add some _____

and you have made a _____!



Remember to ask 'Thinking Questions'!

'Thinking Questions' are questions that can lead to lots of different possible answers. These questions encourage us to think more deeply about what we are learning, which can help us to understand things better.

Why do you think that ...?

What do you think of ...?

How could ...?

What evidence do you have that ...?

How many different ...?

Why is ...? What might ...?

How do we know that ...?

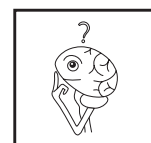
Can you give some reasons for ...?

How can we find out if ...?

What might happen if/when ...?

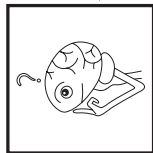
Is it possible that ...?

What if ...?



Can you think of any more Thinking Questions?

My Thinking Questions



Why do you think that ...

How could ...

What might happen if ...

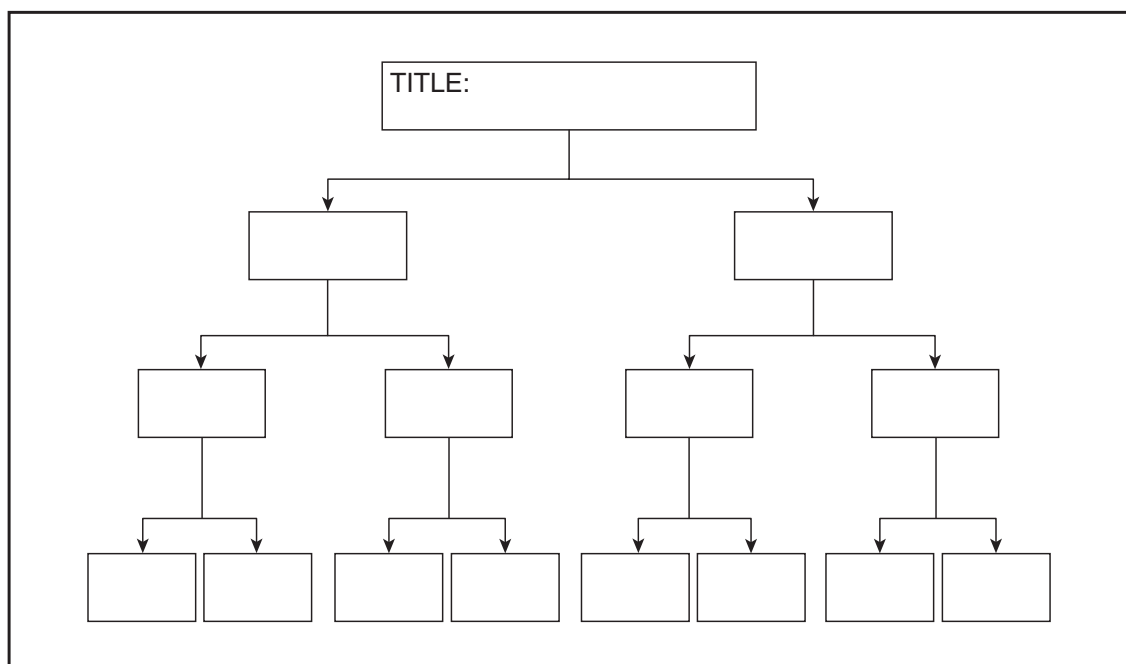
Tree Diagram Challenge

PREPARATION

Copy and cut up the Tree Diagram words, so that they are all on separate slips of paper. Each group should have 3 envelopes, one for each level.

INSTRUCTIONS

1. This is a game in 3 stages. Your class need to be divided up into teams of 2 or 3.
2. Give each team an envelope containing a set of the 14 words from Level 1 of the sheet 'Tree Diagram Challenge Words'. Don't tell them what the words have in common.
3. Their task is to arrange the words using the Tree Diagram format so the information is logically sorted into groups and sub-groups. Once they have done this, they should give their Tree Diagram a title. If needed, give a clue: the larger the font, the more 'important' the word is.
4. Allow time for the groups to work out the answer and briefly discuss the solution.
5. For round two, give out envelopes containing the Level 2 words. This time, the clue is colours: words on the same 'level' of the tree have the same colour, but the pupils have to work out which level each colour represents.
6. For the final round, use the Level 3 words. This time there is no clue given. You could make this round a competition between the groups to see who can organise the information the fastest.



Tree Diagram Challenge words

LEVEL 1

CAT

KENNEL

TUSK

SPOTS

WILD

PURR

GIRAFFE

PETS

TRUNK

TABBY

DOG

BARK

ELEPHANT

TALL

LEVEL 2

TRAIN

ROTOR-
BLADES

WHEELS

STATION

LAND

CAR

JET ENGINE

AIR

AEROPLANE

HELI-PAD

TRACKS

HELICOPTER

WINGS

BONNET

LEVEL 3

GARDENING

COSTUME

QUEEN

INDOOR

HOSE

TRAINERS

OUTDOOR

BOARD

MIME

CHESS

ACTING

FLOWERS

JOGGING

TRACKSUIT

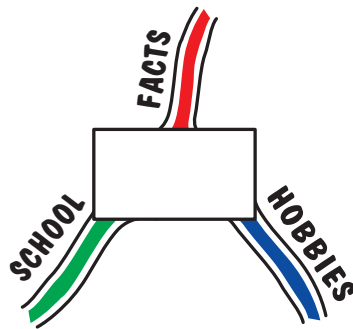
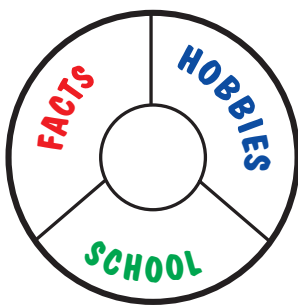
Make your own Mind Map[®] and Mandala

INSTRUCTIONS

Step One

Write the name of your topic 'All about me' in the circle in the middle of the Mandala and in the rectangle in the middle of the Mind Map[®].

Include a simple picture, such as your face, to represent your topic as well.



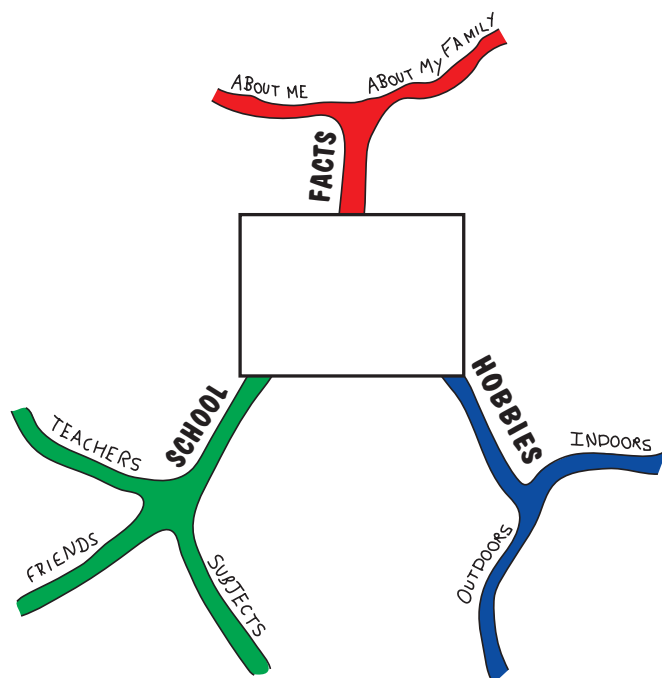
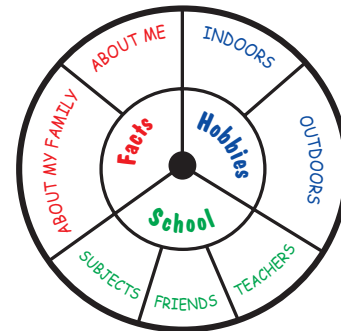
Step Two

The next stage is to choose the main areas on which to focus.

In this case, concentrate on the three sub-topics: 'Facts', 'Hobbies' and 'School'. These are written into the first circle of the Mandala and on top of the three main branches of the Mind Map[®]. Choose a different colour for each area. This will help to make the information easier to remember.

Step Three

Take one area at a time and think about how it could be divided up into smaller sections. For example, 'Facts' could be divided up into 'About me' and 'About my family'. Hobbies could be split into 'Indoors' and 'Outdoors'. School could be 'Subjects', 'Friends' and 'Teachers'. Emphasise that there are lots of other possible ways of doing this, but for the practice one, it may be easier if everyone does the same.



Step Four

Now pick each of the smaller sections in turn and repeat the process. Consider how they could be broken into sub-sections and add these within another circle of the Mandala or on new branches of the Mind Map[®]. At this stage, a simple way of doing this is to give two or three actual examples that fit within each of the categories, e.g. chess, swimming and reading might be three indoor hobbies.

This is likely to be enough detail for your class, but your more able pupils might like to add one more level of detail to the Mandala and Mind Map[®].

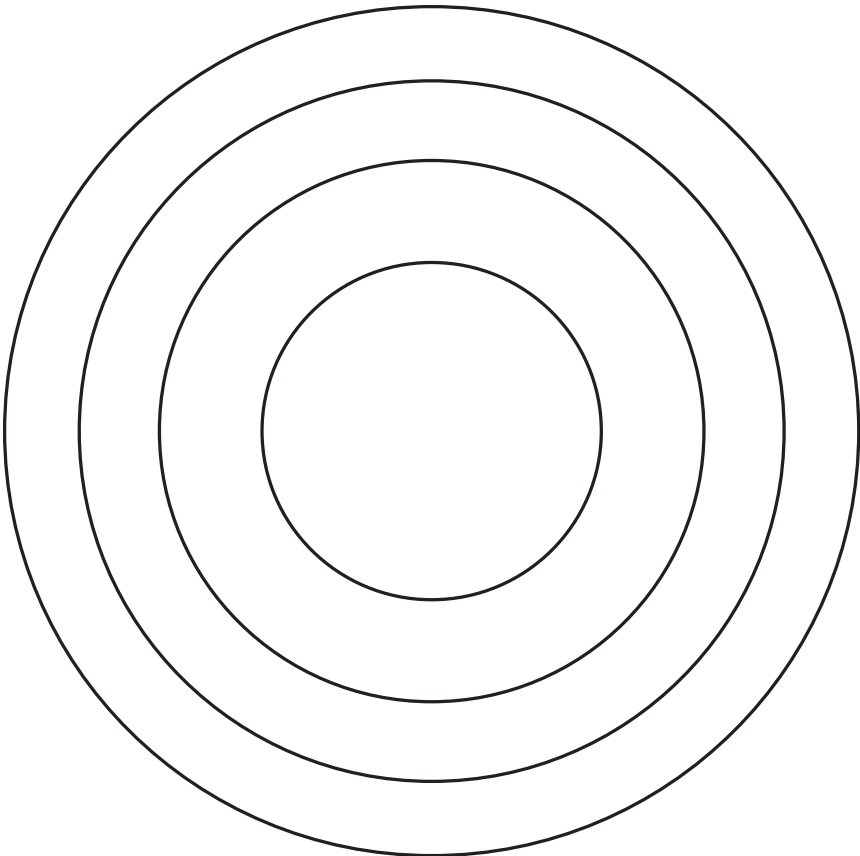
Remember always:

- Choose key words carefully
- Use the same colour for each section of the Mind Map[®] or Mandala
- Add pictures to illustrate the words within the sections of the Mandala or next to the relevant branches of the Mind Map[®].

Make your own Mind Map® and Mandala



Mandala



Mind Map



Su Doku Puzzles

INSTRUCTIONS

1. Draw the following Su Doku grid on the board.

		▲	
		■	●
▲			
■		◆	▲

2. Explain the three key rules:

Every row of four boxes should contain a triangle, a rectangle, a circle and a diamond – once and only once.

Every column of four boxes should contain a triangle, a rectangle, a circle and a diamond – once and only once.

















Every square of four boxes should contain a triangle, a rectangle, a circle and a diamond – once and only once.

The most important rule is that you should never guess with a Su Doku. Use logical thinking to work out what must be true; don't rely on what might be true.

3. Ask the class to look for a row, a column or a square that has only one box missing. For instance, you could use the following three steps to get started:
 - (a) Begin in top right quadrant and fill in a yellow diamond.
 - (b) Look at bottom row and fill in a red circle.
 - (c) Check the right hand column and fill in a blue rectangle.
4. When you reach the point where only the top left quadrant is empty, ask your pupils to suggest an alternative method to use next. They should work out that although there are two shapes missing in each row and column, by looking at the rest of the grid, it is easy to work out which way round the shapes must go.
5. Give out a copy of the sheet 'Su Doku Puzzles' and invite your class to try the first example, another shape Su Doku.

Su Doku Puzzle Answers

Answer: Beginners

6. Next, explain that the method is just the same for number Su Dokus, in that there must be one of each number in each row, column and section. For the second example on the sheet, you are dealing with numbers 1 to 6.

Answer: Intermediate

4	2	1	3	5	6
5	6	3	4	2	1
6	5	4	1	3	2
1	3	2	5	6	4
2	1	5	6	4	3
3	4	6	2	1	5

7. For those more able children who quickly pick up the method, a third much more challenging Su Doku is included, which is more like the ones they would find in magazines and newspapers. This deals with numbers 1 to 9.

Answer: Tricky

5	4	2	8	7	1	6	9	3
7	1	9	2	6	3	8	4	5
3	8	6	4	9	5	1	2	7
6	3	5	9	2	7	4	8	1
8	7	1	6	3	4	2	5	9
9	2	4	1	5	8	3	7	6
1	9	7	3	8	2	5	6	4
2	6	3	5	4	9	7	1	8
4	5	8	7	1	6	9	3	2

Su Doku Puzzles

1. Beginners: Shape Su Doku

●			
		▲	■
▲			◆

2. Intermediate: Number Su Doku

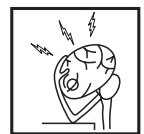
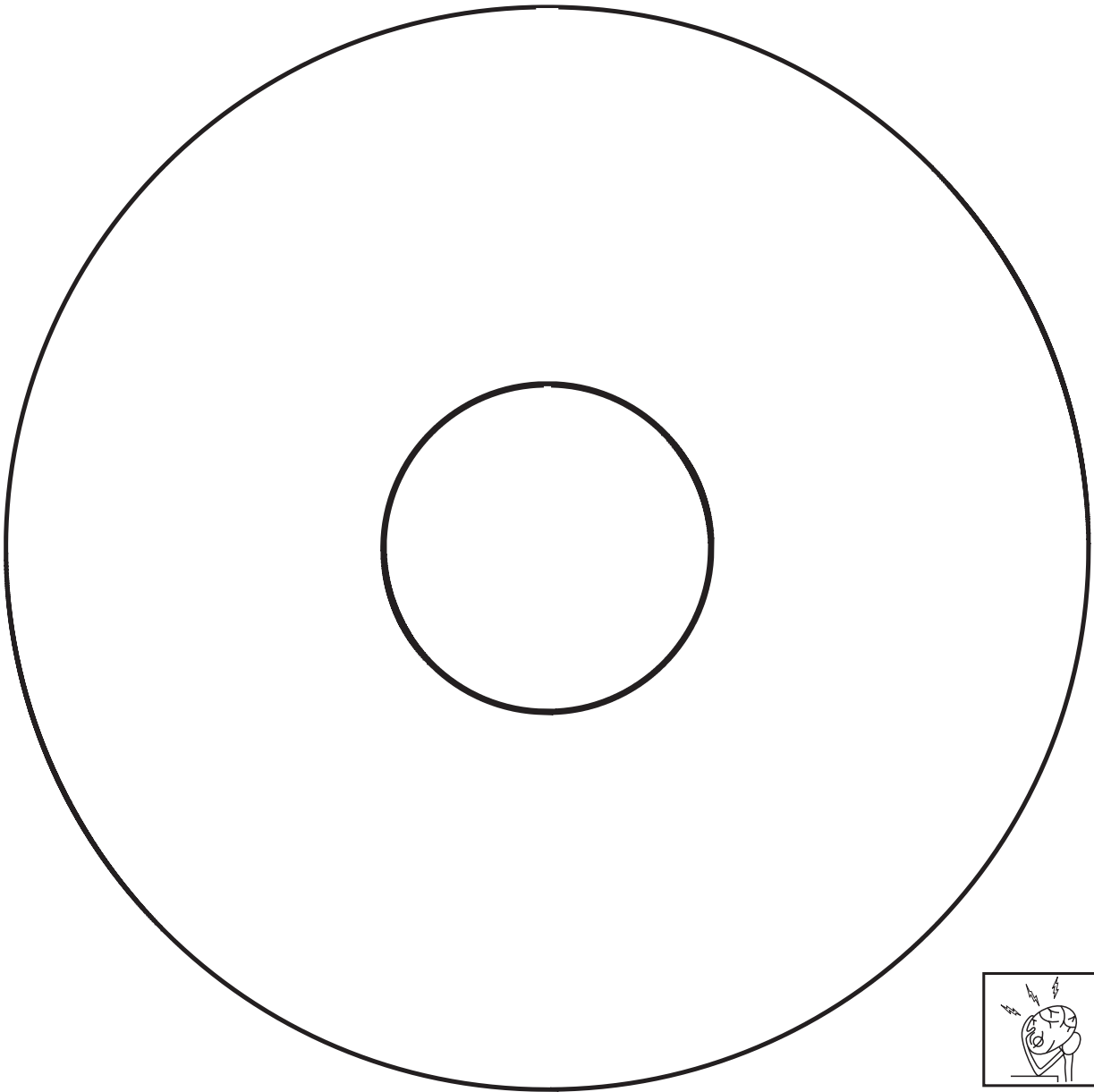
4		1	3	5	6
		3	4		
6				3	2
	3	2	5		
	1	5	6		
		6	2		5

3. Tricky: Number Su Doku

	4	2	8	7	1		9	
7	1				3	8	4	5
3	8	6				1	2	
6	3		9	2	7		8	
					4			9
9	2	4				3	7	
	9		3	8	2	5	6	4
2	6	3	5		9	7		8
	5	8	7	1	6	9		2



Define It!



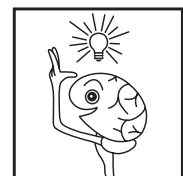
1. First note down lots of words and phrases that describe the subject you are considering.
2. Next, identify the characteristics that are *always true* of this subject and use one colour to draw lines out to these.
3. Finally, identify those characteristics that are *usually true* of the subject and use a different colour to draw lines out to these.

Definition:

Lateral Links

Write a different word in each of the spaces below. Draw arrows between the boxes to show where you have identified a link between two words. Briefly explain the link in a space next to the arrow.

My favourite links are: _____



Hidden Hypotheticals

INSTRUCTIONS

1. Give each pupil a piece of plain paper.
2. Invite them to write their own hypothetical 'starter sentence' at the top of the page. For example:

'If it were law that everyone should always wear pink, then ...'

'If humans discovered that aliens lived on the Moon, then ...'
3. Emphasise that the starter sentence can be as silly as they wish, but everyone should make up their own and not copy anyone else.
4. Each pupil should then stick their sheet to their own back with masking tape (they may need to help each other with this stage!).
5. The class should now be given 5 minutes during which each pupil should aim to write relevant consequences on as many pupils' sheets as they can. Coloured pens work best for this.
6. Afterwards, the pupils can look at their own sheets to see what has been written. Favourite consequences should be shared with the class.

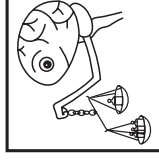


Consider the Consequences

Very likely consequences ...

Quite likely consequences ...

If we could live with our friends
instead of our family, then ...



Consequences that are possible, but
unlikely ...

On balance, I think that ...

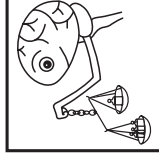
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Very likely consequences ...

Quite likely consequences ...

Consequences that are possible, but unlikely ...

On balance, I think that ...



Visual Images

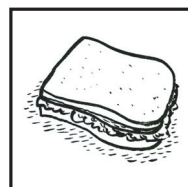
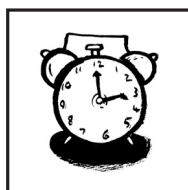
INSTRUCTIONS

ACTIVITY ONE

1. Give each pair of pupils sets of the Visual Images cards and tell them to lay them out, face down, in 6 rows of 4.
2. Each pupil takes it in turns to select 2 cards and turn them over.
3. If they match, the pupil keeps the cards. If they are different, the pupil turns them back over. It is important that both players get a chance to see the uncovered cards before they are replaced.
4. The winner is the player with the most cards once all have been matched up.

ACTIVITY TWO

1. The second activity uses the same set of cards, though only requires one set of 12 cards. These should again be turned face down, but can be spread out in any way on the table.
2. Use one pair of pupils as your demonstration group and invite one person to pick two cards and call out what they are.
3. As a class, try to work out a way of linking these two items to form a strong visual image that will help you to remember them. Point out that our brains find it much easier to remember things that are colourful, funny, embarrassing or scary than things that are more normal! For instance, 'toothbrush' and 'television' could be linked by picturing yourself scrubbing the television with a toothbrush.
4. Give your class a few minutes to try this for themselves in their pairs.
5. Repeat the activity with 3 cards at a time, then 4, then 5. Each time, emphasise the importance of being as imaginative as possible and taking the time to think of a really strong visual image that can be pictured clearly in the mind.



Visual Images cards

