

Scribbly Gum

In the classroom



Welcome! This document will introduce you to Scribbly Gum, describe how it can be played in the classroom, and suggest ways the game can be incorporated into other learning activities. We have also included a set of task cards that can expand the way students engage with the game. We hope Scribbly Gum enriches your lessons and provides a fun experience for your students. Thanks for playing, and if you have any questions or feedback, please get in touch!

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About Scribbly Gum

Did you know Australia's scribbly gum trees get their beautiful scribbles from baby moths burrowing through the bark? In this game, each player has their own tree diagram and every turn gets to draw a line that leads to food for your baby moth to eat. Collect sets of food to score points. Whoever scribbles their way to the most valuable food wins the game! Scribbly Gum is recommended for ages 6 and up and takes around 20 minutes to play. It can accommodate any number of players at once. The game was designed by Phil Walker-Harding with illustrations by Meredith Walker-Harding.

Why play Scribbly Gum in the classroom?

- It is an engaging activity that the whole class can participate in together.
- It can be used in a variety of situations - for small group activities and even for solo play.
- The gameplay helps students develop their strategic thinking, problem-solving, and mathematical skills.
- The game can be used as a tool to bolster existing lessons as it supports elements of the new NSW curriculum.

How to play Scribbly Gum in the classroom

You can play Scribbly Gum with any number of players, even a whole classroom. Play the game as usual, with the teacher acting as the mother moth. The mother moth flips a movement tile as usual on each turn, but they will need to announce what it is out loud to all the players. If you have an interactive whiteboard, you can use our digital tiles instead. This will make it easier for everyone to see them. To help the game run smoothly, ask each player to raise their hand when they have completed drawing their line. When all players have their hands up, the mother moth will know it is time for the next turn.

The rules of play booklet, extra tree diagrams, and the digital movement tiles are all available at www.joeygames.com.au/scribblygum.

Learning Outcomes



We have worked closely with current classroom teachers to develop ways in which Scribbly Gum can best support students at a range of ages and abilities. We have aligned our classroom task cards with the new NSW curriculum being rolled out in schools in 2023 and 2024. Playing Scribbly Gum supports students in their Working Mathematically skills; an area of Mathematics upon which all other skills are based. Scribbly Gum helps students develop an understanding and fluency in Mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems and communicating their thinking and reasoning coherently and clearly.

Playing Scribbly Gum also assists students to develop skills in the following content areas of Mathematics:

Stage 1: Positional language (MAE-GM-01)

Playing the game will help consolidate knowledge of positional language. Each turn as a movement tile is flipped, the student must recognise the directional symbol on it (up, down, left, or right) and draw a line in accordance with this direction. Some tiles give the student a choice between two directions and they must choose the one that is most advantageous for them by examining their tree diagram.

Stage 1: Addition (MA1-RWN-02, MA1-CSQ-01)

Playing the game requires students to do some simple addition. During play, the student must be aware of how many of each symbol they need to collect in order to complete full meals. At the end of each round, the student adds up their current score by looking at their food tracker and marking it on their sheet. At the end of the game, the student must sum up their score from all three rounds to find their total score.

Stage 1 - Chance (MA1-CHAN-01)

The game is an engaging demonstration of the concept of chance. As a movement tile is flipped each turn, the chances of various directions coming up during the round changes. The student must make decisions based on the probability of different movement tiles being revealed. Over multiple games, the student can learn to respond well to this element of chance.

Stages 2 and 3 - Problem solving (MA2-2WM)

Older students will love the opportunity to strengthen their problem solving skills by playing Scribbly Gum with a more developed sense of strategy. After playing a few times, we recommend using the advanced game rules, which add achievement tiles to the game. These introduce new ways to score points and add another layer of complexity to the planning and reasoning required.

Classroom Task Cards

The following classroom task cards offer a range of activities for students to engage with Scribbly Gum in new ways. Each of them can be used by a single student or as a small group activity. We have given each card a ranking from 1 to 3 larvae, which corresponds to the complexity of the task from lowest to highest. At each level there are 3 cards that provide mathematical or logic activities and 1 card that provides a research activity.

Count 'em Up

Scribbly Gum Classroom Task Card 1.1



After you have finished a game, look at your tree diagram and answer these questions:

1. How many lines did you draw on your tree?
2. How many circles did you fill in on your tree?
3. How many circles did you fill in on your meal tracker?

Check Out the Tree

Scribbly Gum Classroom Task Card 1.2



Look at an unused tree diagram on the Kuringgai side and answer these questions:

1. How many water drops are on the tree?
2. How many gum nuts are on the tree?
3. How many gum leaves are on the tree?
4. How many gum blossoms are on the tree?

What's the Difference?

Scribbly Gum Classroom Task Card 1.3



Look at an unused tree diagram on the Kuringgai side and answer these questions:

1. How many more gum nuts are there than water drops on the tree?
2. How many more solid lines are there than dotted lines on the tree?

Now compare the Kuringgai side to the Mooloolah side of the tree diagram.

3. How many more dotted lines are there on the Mooloolah side than the Kuringgai side?

Scribbly Gum Investigator

Scribbly Gum Classroom Task Card 1.4



Have a look at page 10 of the Scribbly Gum rules of play booklet.

1. Look at the photo of the real scribbly gum tree. Take a blank sheet of paper and a pencil and copy this photo. Once you have drawn your tree, add some of your own scribbles to it!
2. Look at the life cycle diagram. This shows how a scribbly gum moth grows from an egg. Take a blank sheet of paper and a pencil and copy this diagram. Can you name three other animals that grow from eggs?

Race to the Corners

Scribbly Gum Classroom Task Card 2.1



Look at an unused tree diagram on the Kuringgai side, and answer these questions.

1. What is the fewest number of lines you can trace (solid or dotted) to get from one of the starting circles to the top-left circle on the tree?
2. What is the fewest number of lines you can trace (solid or dotted) to get from the top-right circle to the bottom-left circle on the tree?
3. What is the fewest number of lines you can trace (solid or dotted) to get from one of the starting circles to all four of the corner spaces on the tree?

Now look at the tree diagram on the Mooloolah side, and answer the same questions.

Go Nuts!

Scribbly Gum Classroom Task Card 2.2



Look at an unused tree diagram on the Kuringgai side, and answer these questions:

1. Starting at any of the starting circles, what is the fewest number of lines you can trace (solid or dotted) to collect every single gum nut on the tree?
2. Starting at any of the starting circles, what is the fewest number of lines you can trace (solid or dotted) to collect every single gum leaf on the tree?
3. Starting at any of the starting circles, what is the fewest number of lines you can trace (solid or dotted) to collect every single gum blossom on the tree?

Now look at the tree diagram on the Mooloolah side, and answer the same questions.

Tree Designer

Scribbly Gum Classroom Task Card 2.3



Get a blank sheet of paper and design your own tree diagram. Follow these steps:

1. Draw a grid of 64 circles in 8 rows of 8.
2. Choose 4 starting circles. First, draw a moth larva in the space in the middle of 4 circles of your choice. Then fill in these 4 circles around the moth larva.
3. Use coloured markers to draw gum nuts, gum leaves, gum blossoms, and water drops in all the empty circles. Remember, you can have 1, 2, or 3 icons in each circle - but make the 2s and 3s rare!
4. Draw a meal tracker on the right-hand side of your tree. Look at a Scribbly Gum tree diagram to see what it looks like.
5. Now you can play a game with your very own tree design! You might like to scan or photocopy it first so you have extra copies.

Scribbly Gum Researcher

Scribbly Gum Classroom Task Card 2.4



Do your own research to learn more about scribbly gum trees. See if you can find information to answer these questions.

1. What are the names of 5 trees that are often called scribbly gums?
2. Where can each of these 5 types be found in Australia?
3. On a blank sheet of paper, draw a map of Australia. Then shade in the area where *Eucalyptus haemastoma* can be found. Now use different colours to shade in where the other types of trees are found as best as you can.
4. Write down three more interesting facts you discovered about scribbly gum trees.

The Perfect Game

Scribbly Gum Classroom Task Card 3.1



Play a game of Scribbly Gum using the Kuringgai side of the tree diagram, following these different rules. At the start of each round, instead of laying 7 movement tiles face-down, lay all 8 movement tiles face-up. On each turn you get to choose which movement tile to use. You may only use each movement tile once per round. You still only play 7 turns per round, so you will not use 1 of the movement tiles.

What is the absolute highest score you can achieve by playing the game this way?

Make a Move

Scribbly Gum Classroom Task Card 3.2



Design your own set of movement tiles! Use paper, scissors, and markers to make a set of 8 movement tiles that look like the original tiles from the game. Come up with your own ideas for what could be on each tile. Here are some examples: 'Move up or left', 'Move down then move down again', 'Move in any direction but you must reach a water drop'.

Now play a game with your movement tiles and then answer these questions:

1. Was the game more fun or less fun with your movement tiles? Why do you think it felt this way?
2. Was it easier or harder to score points with your movement tiles? Why do you think it felt this way?

Achievement Unlocked

Scribbly Gum Classroom Task Card 3.3



Play the advanced game of Scribbly Gum with achievement tiles. Now it's time to design your own! Use paper, scissors, and markers to make 3 achievement tiles that look like the original achievements from the game. Come up with your own ideas for what each achievement should be. You can also decide how many points each achievement is worth.

Now play a game with your 3 achievement tiles and answer these questions:

1. Which of your achievement tiles was the easiest to achieve? Why do you think this was the case?
2. Which of your achievement tiles was the hardest to achieve? Why do you think this was the case?
3. Would you change any of the points on your achievement tiles to make them feel more fair? If so, how?
4. What is your favourite achievement tile out of the 3 you made and the original 8 in the game? What do you think makes your favourite one fun to play?

Scribbly Gum Expert

Scribbly Gum Classroom Task Card 3.4



Do your own research to learn more about scribbly gum trees. See if you can find information to answer these questions.

1. Why do you think the tree diagrams in Scribbly Gum are named Kuringgai and Mooloolah?
2. What are the origins of the names Kuringgai and Mooloolah?
3. Name three Aboriginal lands on which scribbly gum trees grow.
4. Find out the name of a national park that has scribbly gum trees in it. Find the names of 3 other plants and 3 animals that live in this park.
5. What is the scientific name for the class, order, family, and genus of the scribbly gum moth?