

# Scientific Tablecloths Gamification

## Simple Version

Ages: 8+

Time: 15 minutes

Players: 2-6

## Components

- 1x 20-sided dice
- 1x 6-sided dice
- 6x pawns of different colors
- 1x action card (lists all the results of the 6 sided dice)
- 1x scorebook with many scoresheets (also maybe 6 pencils of 6 different colors, matching the pawns)

## Setup

Place the tablecloth on the table, where all spots are visible.

Each player gets a pawn of their choice or randomly.

The youngest player gets the 2 dice.

Each player gets one scoresheet from the scorebook, and note their name and pawn color on it with a pen or pencil.

Place the action card somewhere on the table where it is visible, or keep it in hand, in case it is needed as a reminder.

## Round

Players take turns, starting from the youngest player. During each round, each player plays a turn.

## Turn

During your turn, you must:

- Roll the 20-sided dice. According to the result, place your pawn on the corresponding spot (the 20 sides match the 20 spots of the tablecloth).
- Roll the 6-sided dice. According to the result, perform the corresponding action (the 6 sides match 6 possible unique actions).
- Perform the action required on the spot where your pawn is placed.

After your turn, the next player must play. A clockwise order is suggested.

## Spots

Each spot has a title and information of a specific aspect of the tablecloth's theme. There can be theory, types, symbols, numbers, shapes and other types of scientific information. There are also some questions and tasks, related to the content of each spot, but they are not used in this version.

## Actions

There are 6 possible actions that can be performed on each spot. The action performed is defined by the result of the 6-sided dice. Each action has 2 possible elements, and both are available on each spot. The first element can be the number of the dice, and the second a symbol or shape. Every time you roll a number, you can choose to either use that number (element 1) or use the action (element 2). You cannot use both elements in one roll.

Dice number	Action	Element 1	Element 2
1	Symbol	1	+
2	Symbol	2	-
3	Symbol	3	=
4	Shape	4	Triangle
5	Shape	5	Square
6	Shape	6	Circle

\*Symbols can be math or science related symbols

All actions: When you choose a number, you can use it on any free equation space on your scoresheet. Numbers must make sense in order to be used, otherwise they must be used on a new or available equation.

Actions 1-3: When you choose a symbol, you can use it on any free equation space on your scoresheet. Symbols must make sense in order to be used, otherwise they must be used on a new or available equation. + and – are used as middle symbols, and = is used as a secondary part of an equation.

Actions 4-6: When you choose a shape, you can draw it on an available shape space on your scoresheet, in order to form the complete required shape (2 circles, a triangle and a square).

The template of the scoresheet is shown in the end.

## Game End and Winner

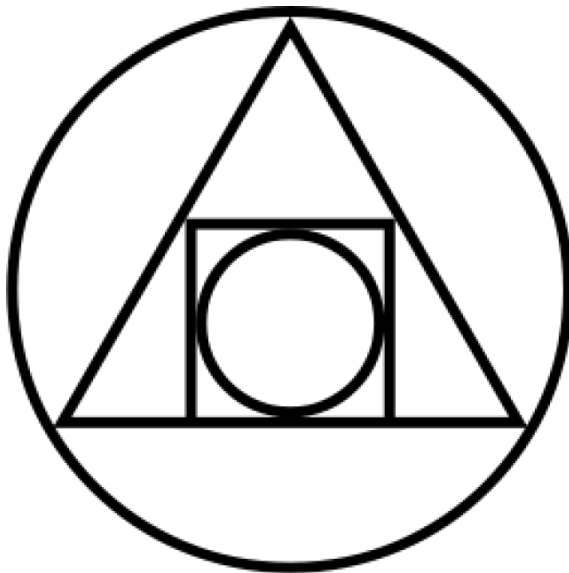
The game end is immediately triggered when any player completes 3 full rows, either full equations on their scoresheet (one of each elements of the action on scoresheet) or full shapes (one of each shapes of an full shape on scoresheet). This can be in any combinations, meaning 3 full equations, 2 full equations and 1 full shape, or 1 full equation and 2 full shapes. The player who managed to end the game, is the winner!

## Scoresheet

Equation	Number 1	Symbol (+ or -)	Number 2	Equals (=)	Result number
1					
2					
3					
Shape	Circle out	Circle in	Square	Triangle	-
1					
2					

Any number, symbol or shape can be written in any order on the scoresheet. Only 1 element per space can be used. You can also change a number or symbol after erasing the previous one.

This complete shape needs to be completed:



Every time you get a shape, you can draw it in a box on the scoresheet, specially made for 2 shapes like the one above. With circles, always start with the smaller one. Lines of smaller shapes must touch each other, exactly like in the completed shape above.

[Action card](#) is a help card, which explains the actions in detail.