

Probability Connect Four

Developed by Steve Cooke. You need to enlarge the board and keep the coloured cards small. We have provided two coloured sets of cards for colour photocopiers. We recommend printing on paper and then laminating. The white set is for printing on your own coloured card.

Webaddress

<http://www.collaborativelearning.org/probabilityc4.pdf>

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COLLABORATIVE LEARNING PROJECT

Project Director: Stuart Scott

We support a network of teaching professionals to develop and disseminate accessible talk-for-learning activities in all subject areas and for all ages.

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BRIEF SUMMARY OF BASIC PRINCIPLES BEHIND OUR TEACHING ACTIVITIES:

The project is a teacher network, and a non-profit making educational trust. Our main aim is to develop and disseminate classroom tested examples of effective group strategies that promote talk across all phases and subjects. We hope they will inspire you to develop and use similar strategies in other topics and curriculum areas. We want to encourage you to change them and adapt them to your classroom and students. We run teacher workshops, swapshops and conferences throughout the European Union. The project posts online many activities in all subject areas. An online newsletter is also updated regularly.

*These activities are influenced by current thinking about the role of language in learning. They are designed to help children learn through talk and active learning in small groups. They work best in non selective classes where children in need of language or learning support are integrated. They are well suited for the development of oracy. They provide teachers opportunities for assessment of talk.

*They support differentiation by placing a high value on what children can offer to each other on a particular topic, and also give children the chance to respect each other's views and formulate shared opinions which they can disseminate to peers. By helping them to take ideas and abstract concepts, discuss, paraphrase and move them about physically, they help to develop thinking skills.

*They give children the opportunity to participate in their own words and language in their own time without pressure. Many activities can be tried out in pupils' first languages and afterwards in English. A growing number of activities are available in more than one language, not translated, but mixed, so that you may need more than one language to complete the activity.

*They encourage study skills in context, and should therefore be used with a range of appropriate information books which are preferably within reach in the classroom.

*They are generally adaptable over a wide age range because children can bring their own knowledge to an activity and refer to books at an appropriate level. The activities work like catalysts.

*All project activities were planned and developed by teachers working together, and the main reason they are disseminated is to encourage teachers to work more effectively with each other inside and outside the classroom. They have made it possible for mainstream and language and learning support teachers to share an equal role in curriculum delivery. They should be adapted to local conditions. In order to help us keep pace with curriculum changes, please send any new or revised activities back to the project, so that we can add them to our lists of materials.

Probability Glossary

Description	Chance	Probability
impossible	0 in ten	0
extremely unlikely	1 in ten	0.1
very unlikely	2 in ten	0.2
unlikely	3 in ten	0.3
quite unlikely	4 in ten	0.4
an even chance	5 in ten	0.5
likely	6 in ten	0.6
quite likely	7 in ten	0.7
very likely	8 in ten	0.8
extremely likely	9 in ten	0.9
definite	10 in ten	1

How to Play Probability Connect Four

Best played with two teams of two. Each team has a set of cards. Shuffle them and place them face down. Teams take turns to pick a card from the top of their pile and place it on the board. If in doubt consult the Probability Glossary. The first team to get four in a row in their colour vertically, diagonally or horizontal wins the game.

What is the probability of picking

A red card out of 10 red cards	A red card out of 3 red and 7 blue cards	A blue card out of 6 green and 4 red cards	A green card out of 8 red and 2 green cards	A green or blue card out of 1 blue, 2 green and 7 red cards	A green card out of 9 green and one 1 red card.
A green or blue card out of out of 3 green, 2 blue and 5 red cards	A red card out of 7 red and 3 blue cards	A red card out of 5 green and 5 blue cards	A red card out of 9 blue and 1 red card	A red or green card out of 5 red and 5 green cards	A green card out of 2 red, 1 blue and 7 green cards
A red card out of 9 red and 1 blue card	A blue card out of 7 green and 3 blue cards	A green card out of 6 green, 3 red and 1 blue card	A red or blue card out of 5 green, 3 red and 2 blue cards.	A red or a blue card out of out of 1 red, 1 blue and 8 green cards	A green card out of 8 green and 2 red cards
A red card out of 5 red, 3 blue and 2 green cards	A blue card out of 5 red, 1 green and 4 blue cards	A blue or red card out of 4 blue, 4 green and 2 red cards	A blue card out of 5 red and 5 blue cards	A green card out of 10 green cards	A green card out of 7 blue and 3 red cards
A green or blue card out of 4 green 5 blue and 1 red card	A blue card out of 5 red, 4 green and 1 blue card	A red or green card out of 5 red, 3 green and 2 blue cards	A blue card out of 8 red and 2 red cards	A blue or green card out of 4 blue, 3 green and 3 red cards	A green card out 1 green 4 red and 5 blue cards
A blue or red card out of 3 blue, 1 red and 6 green cards	A blue card out of 6 blue and 4 red cards	A red card out of 10 red cards	A red card out of 2 green and 8 red cards	A red card out of 4 red and 6 green cards	A green card out of 3 blue and 7 red cards

Probability connect four cards

impossible	impossible	impossible	extremely unlikely	extremely unlikely	extremely unlikely
very unlikely	very unlikely	very unlikely	unlikely	unlikely	unlikely
quite unlikely	quite unlikely	quite unlikely	an even chance	an even chance	an even chance
quite likely	quite likely	quite likely	likely	likely	likely
very likely	very likely	very likely	extremely likely	extremely likely	extremely likely
definite	definite	definite	definite	impossible	an even chance

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