

The Medicines Risk Game

This game is designed to practice answering Human Biology questions. They are based on the AQA B1a Module but other syllabuses may group these topics differently.

This game can be played with 2, 3 or 4 players. The following pages contain the game board, and 4 question sheets, each with a different set of true or false questions. Rules for playing each game are included on the playing board.

There are 3 games in this series available from GamePlan Games. All the games use the same 'True or False' questions, but each game offers a different playing objective. You can renew your motivation for learning the same facts by playing a different game. If you would like some new questions, why not buy the "Round the Block" game from our website?

Here is a summary of the Products from Rocks games, which are available for FREE download from www.GamePlanGames.co.uk

Game	No. of players	No. of sheets	Playing objective
Tree of Life	2,3 or 4	1	To be first to get from the bottom to the top of the Tree of Life.
Medicines Risk	2,3 or 4	1	Make yours the dominating medicine in the treatment area.
Infectious Dot to Dot	2,3 or 4	1	Be last to complete each letter and claim it. Most letters wins.

You can also download and print off the Revision Sheet which is designed to help you to understand why an answer you thought was right is actually wrong.

Medicines Risk Game

Preparation

- Cut out the medicine hexagons and their 36 matching squares.
- Each player chooses a medicine hexagon and places it on a numbered disease area on the board. The numbered hexagons indicate the starting positions according to the number of players, e.g. for 2 players the two hexagons marked “2” will be used. It is best to start a medicine on the particular disease for which it is best suited!
- Each player takes a question sheet.
- Decide who will start.





To Play

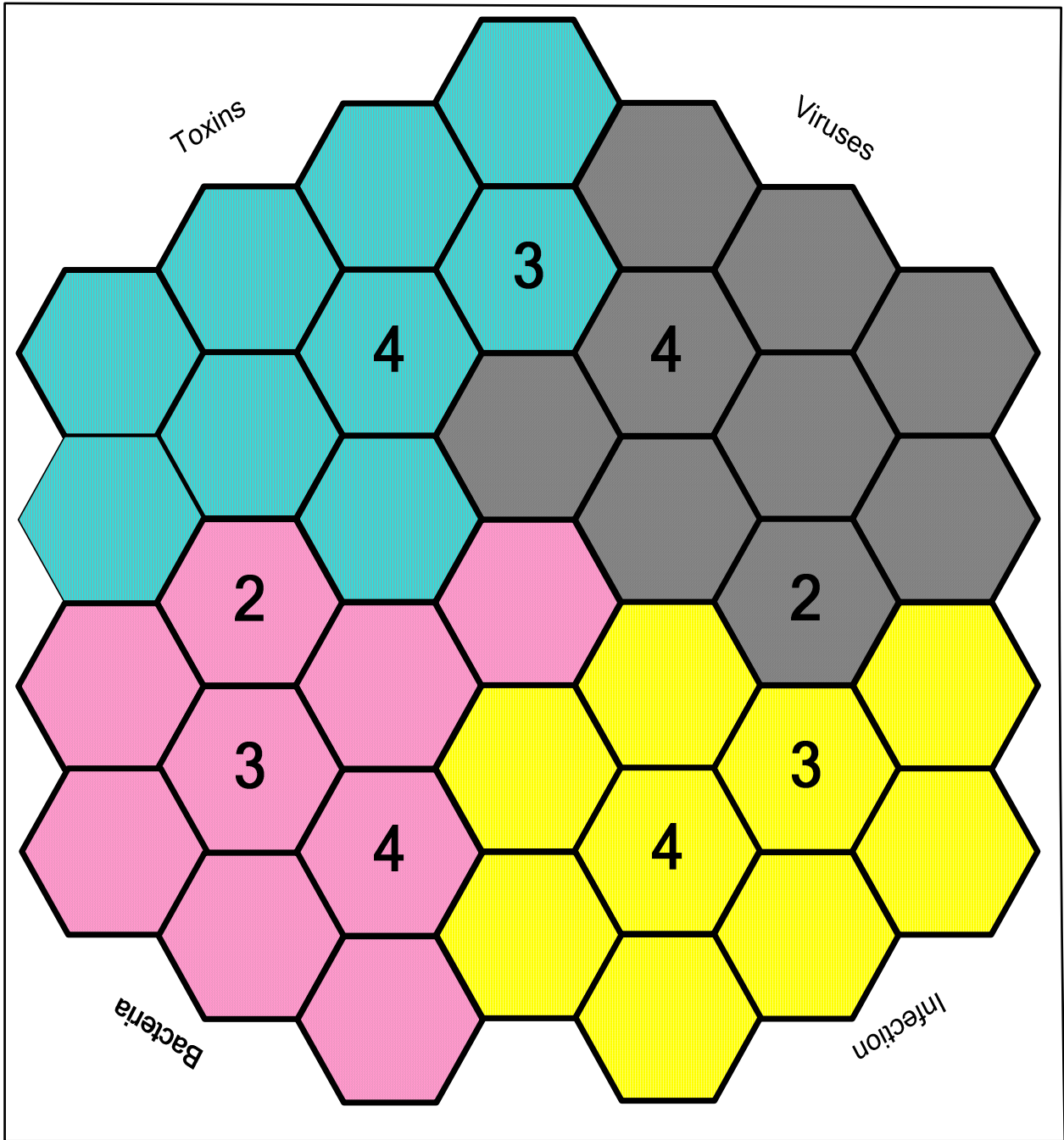
- On their go, each player decides on which disease hexagon they want to try their medicine. **This disease must be directly next to one in which their medicine is already working.**
- The player to the left of the player is the Question Master for this players go.
- The Question master checks how many questions that the player must answer correctly to treat that disease. They do this by checking the treatment table for their medicine and the disease.
- The Question master then asks the player, the indicated number of ‘true or false’ questions.
- The Question master checks the answers from the grid at the bottom of the question sheet.
- If the player answers all the questions correctly then....
 - If the target disease hexagon is not being treated by another player, that player can place a medicine marker on the board on their target, thus extending and **marking their disease treatment area.**
 - If the target disease already uses another medicine, then the player for the existing medicine answers **one question in defence**, which if correct, repels the challenge.
- Play continues with the next player, moving round in a clockwise direction, players taking it in turns to ask questions and extend their disease treatment areas by correctly answering questions.
- If a medicine’s area completely surrounds the treatment area of another medicine on their go, all the surrounded treatment squares are removed from that area. **NOTE: The original medicine hexagon cannot be removed.**

Ending the game

- Play continues until:
 - a) The whole board becomes one treatment area. The player who has developed the super medicine is crowned Best Pharmacist in the World!
 - b) A pre-agreed time or question limit is reached. The player with the largest treatment area wins!
 - c) There is a stalemate - everyone keeps getting all the questions right. All players agree to end the game and the player with the largest treatment area is declared the winner.

Treatment Table

		Disease			
		Bacteria	Toxins	Infection	Viruses
Medicine		1 question	2 questions	2 questions	3 questions
		2 questions	3 questions	1 question	2 questions
		2 questions	1 question	3 questions	2 questions
		3 questions	2 questions	2 questions	1 question



Legend for the hexagonal grid:

- Antibiotic:** Pink hexagon
- Painkiller:** Cyan hexagon
- Antiseptic:** Yellow hexagon
- Vaccination:** Grey hexagon

Below the legend are four vertical columns of 10 hexagons each, colored cyan, pink, yellow, and grey respectively.

Human Biology A – True or false?

1. In tobacco, the substance that is addictive is nicotine.
2. Alcohol acts as a stimulant.
3. When deprived of certain drugs a person may suffer from withdrawal symptoms.
4. Anorexia is a psychological condition leading to a dangerously low body mass index.
5. Drinking alcohol can increase your reaction time.
6. The MMR vaccine contains antibodies.
7. Oral contraceptives stop pregnancy by preventing ovaries releasing eggs.
8. Both FSH and LH are produced by the ovaries.
9. Antibodies counteract poisons released by pathogens.
10. White blood cells ingest pathogens.
11. Pathogens make toxins which make us feel ill.
12. In the body, cholesterol is made in the heart.
13. Thalidomide was used as a sleeping pill.
14. In a woman's monthly cycle the womb lining is thickest on the 13th day.
15. Antitoxins neutralise poisons produced by pathogens.
16. Tests on vaccines take time because scientists need to check on side effects.
17. In IVF eggs and sperm are mixed in the womb.
18. Painkillers are drugs taken to relieve the symptoms of a disease.
19. Eating large amounts of low density lipoproteins could cause damage to the liver.
20. Digitalis produced by foxgloves is a toxin that can be used to treat heart failure.
21. Some body cells have a protein coat.
22. The effector can be a muscle that contracts.
23. The concentration of cholesterol in the blood depends on the amount of fat in the diet.
24. No water is lost from the body in faeces.
25. A blood clot stops bacteria entering the body.
26. During digestion, protein is broken down into amino acids.
27. Vaccines contain white blood cells.
28. It takes time for white blood cells to produce antibodies.
29. The core body temperature is 37°C because enzymes work best at this temperature.
30. Louis Pasteur cured women with childbed fever.

Answers

True	False
1, 3, 4, 5, 7, 10, 11, 13, 15, 16, 18, 20, 22, 23, 25, 26, 28, 29	2, 6, 8, 9, 12, 14, 17, 19, 21, 24, 27, 30

Human Biology B- True or false?

1. Smoking cigarettes can cause liver damage.
2. Skin contains temperature receptors.
3. Too much salt in the diet causes heart disease.
4. Respiration produces water.
5. Drinking alcohol can cause a rise in carbon dioxide in the blood.
6. In the eye, the optic nerve carries messages to the brain.
7. Oral contraceptives stop pregnancy by preventing a fertilised egg from implanting in the uterus lining.
8. Both FSH and LH are produced by the pituitary gland.
9. Anorexia is a severe shortage of food in the diet.
10. Cannabis may cause psychological problems.
11. Antitoxins kill infective viruses outside the body.
12. White blood cells seal wounds to prevent infection.
13. It is dangerous when carbon monoxide is absorbed by red blood cells.
14. The MMR vaccine contains dead or weakened bacteria.
15. The kidney is the organ that maintains the correct amount of sugar in the blood.
16. Oestrogen is used in the contraceptive pill because it stimulates LH production and inhibits FSH production.
17. Thalidomide is being tested on pregnant women to see if it can treat AIDS.
18. Antibodies are poisons produced by bacteria.
19. Taking cannabis could lead to addiction to hard drugs.
20. Toxins are only produced by plants.
21. Information gets across a synapse by an impulse jumping across a gap.
22. In the body, cholesterol is made in the liver.
23. Mucus in the breathing organs kills bacteria in food.
24. Glucose is absorbed by the small intestine.
25. Core body temperature is 42°C because reactions speed up at higher temperatures.
26. The liver is the organ that maintains the correct amount of water in the blood.
27. Vaccines contain dead or weakened micro-organism.
28. Cholesterol is carried around the body by both types of lipoproteins.
29. A placebo is used in drug trials to ensure that two groups of volunteers are the same.
30. Semmelweis insisted that doctors should wash their hand before examining patients.

Answers

True	False
2, 4, 6, 8, 10, 13, 16, 19, 22, 24, 27, 28, 30	1, 3, 5, 7, 9, 11, 12, 14, 15, 17, 18, 20, 21, 23, 25, 26, 29



Human Biology C- True or false?

1. Heroin is a legal drug.
2. Alcohol can cause damage to the liver.
3. No water is lost from the body in exhaled air.
4. The ears contain receptors that help us balance.
5. There are pain receptors in the skin.
6. The liver is where most water from food is absorbed.
7. Antiseptics kill infective bacteria outside the body.
8. In a reflex action the correct path taken by the impulse is:
sensory neuron-> receptor-> motor neuron-> effector
9. Oral contraceptives stop pregnancy by preventing menstruation.
10. Oestrogen is produced by the ovaries.
11. Drinking alcohol can cause emphysema.
12. Starvation is a severe shortage of food in the diet.
13. In a woman's monthly cycle an egg is released on the first day.
14. MRSA bacteria kill about 1000 hospital patients per year.
15. Toxins are chemicals produced by white blood cells.
16. Too little food to eat can cause irregular periods.
17. Measles cannot be treated with an antibiotic because the virus keeps mutating.
18. The relay neurons are found in the spine.
19. Eating food containing a lot of polyunsaturated fats could reduce cholesterol in the blood.
20. Blood sugar levels are controlled by hormones secreted by the pancreas.
21. Drinking large amounts of alcohol could lead to heart disease.
22. Information gets across a synapse by movement of a chemical.
23. Cholesterol is a type of enzyme involved in digesting lipids.
24. Viruses do not have any cytoplasm.
25. In IVF lots of eggs are made to mature by injecting with LH.
26. Stomach acid kills bacteria in food.
27. During digestion, protein is broken down into glucose.
28. Kidneys are the organs that maintain the correct amount of water in the blood.
29. Some time after vaccination, the level of antibodies in a person's blood will decrease.
30. Louis Pasteur injected a boy with fluid from a rabbit that had died of rabies, to immunise him.

Answers

True	False
2, 4, 5, 7, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 29, 30	1, 3, 6, 8, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27

Human Biology D – True or false?

1. Viruses get right inside our body cells to reproduce.
2. Carbon dioxide in cigarette smoke reduces the ability of blood to carry oxygen.
3. Blood carries hormones to their target organs.
4. Obesity is caused by an imbalance of nutrients in the diet.
5. In a reflex action the correct path taken by the impulse is:
receptor-> sensory neuron-> relay neuron-> effector
6. The skin contains receptors that help us detect chemicals in the air.
7. Malnutrition is an imbalance of nutrients in the diet.
8. In tobacco, the substance that is addictive is tar.
9. Women who smoke during pregnancy have a higher risk of their baby being a low birth weight.
10. Antibiotics are drugs that kill bacteria inside the body.
11. MRSA could be prevented if medical staff has regular health checks.
12. In a woman's monthly cycle an egg should be travelling to the womb on the 21st day.
13. Mucus which lines the air passages, traps pathogens.
14. The brain always coordinates reflex actions.
15. A high proportion of saturated fat causes heart disease.
16. Vaccines work in the body by trapping the pathogens.
17. The pancreas is the organ that maintains the correct amount of water in the blood.
18. Antibiotics are drugs taken to relieve the symptoms of a disease.
19. A placebo is used in drug trials to ensure that the trial is carried out on a random basis.
20. Hormones are produced by the blood and transported to the nerves.
21. Pressure receptors are in the eyes.
22. To avoid measles children have to be vaccinated because measles is a virus.
23. Low density lipoproteins are considered "good" cholesterol.
24. Sweat is produced by glands in the skin.
25. Vaccines contain enzymes.
26. Drinking alcohol can cause a lack of self control.
27. During digestion, protein is broken down into glycerol.
28. After vaccination, it takes a few days for the level of antibodies to increase.
29. Semmelweis invented antibiotics.
30. When the core body temperature increases, the person is likely to sweat and skin capillaries constrict.

Answers

True	False
1, 3, 5, 7, 9, 10, 12, 13, 15, 19, 22, 24, 26, 28	2, 4, 6, 8, 11, 14, 16, 17, 18, 20, 21, 23, 25, 27, 29, 30

