



## Generic Venues ~ Pub Science Quiz ~



Institute of *Physics*

## Pub Science Quiz

This event involves a science-related quiz designed for adult audiences, related to the physics of all aspects of pub culture, from beer, wine and spirits to food, and even toilets! Between each quiz round entertaining pub-related demonstrations are performed by the competitors to highlight various physical principles.

A great way of reaching a wider range of audiences is to liaise with a local brewery to arrange sponsorship for a series of pub quiz events. Ask the brewery to donate a case of beer and whatever give-aways they have available (such as bar towels and t-shirts to act as prizes on the night) for each pub. They can also assist in arranging the pubs for you to visit – most breweries are attached to particular pubs in an area. Give away the beer during the rounds to whichever teams are winning / losing / most creative etc... But do make sure you contact each venue directly to make sure that the message has filtered down from the brewery managers that an event is to be held at that pub!

### The ideal Pub has:

- A friendly cooperative landlord/landlady
- A regular quiz night
- A public address system
- A layout which would enable the quiz master to see most of the contestants

### Requirements:

- Event Team consisting of at least three people, including one compere – preferably someone confident, enthusiastic, outgoing and engaging.
- PA system (if not supplied by the pub).
- Quiz questions and answers (included in this Pack).
- Answer sheets for each quiz round (included in this Pack).
- Pens / pencils for each competing team.
- Prizes – both for the best explanations to the science tricks and for the final quiz winners (and runners up). Beers or a bar tab are usually acceptable, and it may be possible to arrange sponsorship with the brewery or pub to get these donated.
- Ingredients for the physics demonstrations (see the 'Physics Tricks' section of this Pack).

## Recommended Format

There are eight rounds in the quiz, each on a different aspect of the science found in pubs.

Event Team members hand out answer sheets to each group of competitors, who should be sitting around a table. Each group is asked to devise a team name and write it on their answer sheet.

The compere asks the first 16 questions (say, the Beer and Wine rounds) and then the answers are collected from each table. Some of the Event Team members start marking these.

The remaining Event Team members distribute the necessary materials for each table to perform a table top demonstration, and explain to the competitors how to do each trick. The compere then asks for explanations of what makes the tricks work. The table with the most correct answer gets some kind of prize, such as bottles of beer. If there are large numbers of teams (so the marking is slow) then perform more than one demonstration between each round.

By now the first set of questions will have been marked and the compere gives out the scores for each table (award interim prizes if possible). The second set of answer sheets are then handed out and the second set of 16 questions are asked (say, the Spirits and Games rounds), answers collected, a demonstration introduced, marks fed back etc. until all the questions have been asked and at least four demonstrations performed.

The whole event should take between an hour and a half and two hours.

## General Hints for Success

- Students tend to be happy to get involved in anything that happens in a pub so getting volunteers is not usually a problem.
- Note that you are trying to encourage enjoyment and good will, so if the audience is struggling with the answers then don't be too harsh when marking. Perhaps you could award marks (beers) for creativity if it seems appropriate!
- Be constructive in judging the explanations for the demonstrations – the aim is to encourage the audience to enjoy and appreciate the science, not to lecture them. A good technique to encourage involvement is to get everyone in the pub to vote on which answer they think is most correct.
- Announcing the running scores for each round builds tension and rivalry. Awarding interim prizes of beer can also help to even out the scores a little!

## **Pub Quiz**

### **Wines**

**1.** What gas are the bubbles in Champagne?

Ans. CO<sub>2</sub>

**2.** What is the difference between sweet and dry wines?

Ans. Sugar content

**3.** What is red wine supposed to protect you from?

Ans. Heart disease

**4.** Where does the alcohol in wine come from?

Ans. Yeast

**5.** What limits wines to an alcohol content of about 12%?

Ans. The concentration of alcohol yeast can live with

**6.** What is cork made from?

Ans. The bark of a cork oak tree

**7.** Which two countries import the largest amount of champagne?

Ans. UK & USA

**8.** How many units of alcohol in a glass of wine?

Ans. One

## **Pub Quiz**

### **Beers**

1. What grain is beer usually made from?

Ans. Barley

2. What is the difference between stout and lager?

Ans. Stout is made with roasted (dark) malt

3. What ingredients are allowed under the Bavarian purity laws?

Ans. Water, barley, hops, yeast, wheat

4. How many pints in a litre stein?

Ans. 1.75

5. What are hops used for in beer making?

Ans. Flavour

6. Which way round a pole does a hop plant grow?

Ans. Clockwise

What about in Australia?

Ans. Same

7. What is the essential ingredient of Mead?

Ans. Honey

8. When England won the World Cup in 1966 how much did a celebration pint cost?

Ans. 2 shillings (10p)

## **Pub Quiz**

### **Spirits**

**1.** What is malting in whisky manufacture?

Ans. Wetting of barley grains to stimulate germination which produces sugar

**2.** Does ice float higher in whisky or water?

Ans. Water

**3.** How can you get drunk on spirits without actually swallowing?

Ans. Alcohol vapour penetrates the roof of the mouth and enters the blood stream through nasal passages and lungs

**4.** Whisky is a Gaelic word, what does it mean?

Ans. Water of life

**5.** What is laudanum?

Ans. Opium and ethanol

**6.** What does it mean to say that spirits are methylated?

Ans. They contain methanol

**7.** What is the difference between proof and % alcohol?

Ans. 100% proof is 57% alcohol (the rest is water). So if whiskey is labelled 70% proof it actually contains  $57\% \times 70 = 39.9\%$  alcohol.

**8.** Why was Gin called "Mother's Ruin"?

Ans. It helps to induce miscarriages

## **Pub Quiz**

### **Games**

**1.** Why does the cue ball stop when it hits another?

Ans. All momentum is transferred to the second ball

**2.** What is the maximum score possible with 6 darts?

Ans. 360

**3.** What is the minimum possible score with 3 darts?

Ans. Zero

**4.** How are snooker tables made so flat?

Ans. The top of the table is a single slab of slate

**5.** Which snooker ball colours are NOT in the rainbow?

Ans. Black, white, brown, pink

**6.** What are the odds of throwing a 3 on a dice?

Ans. 1 in 6

**7.** What are the odds of throwing first a 3, then a 4 with one dice?

Ans. 1 in 36

**8.** How many red balls are there in a game of snooker?

Ans. 15

## **Pub Quiz**

### **Food**

**1.** What do Americans call crisps?

Ans. Chips

**2.** What do Canadians call crisps?

Ans. Crisps/Chips

**3.** What is the chemical name for vinegar?

Ans. Acetic acid

**4.** Where do peanuts grow?

Ans. Underground

**5.** What (not who!) is the biggest nut in the world?

Ans. Coco de mare

**6.** What is E300?

Ans. Vitamin C

**7.** How many calories are there in a typical Donner Kebab?

Ans. 900

**8.** What are chitterlings?

Ans. Boiled pig intestines

## ***Pub Quiz***

### **Toilets**

**1.** What physical principle underlies the flush?

Ans. Siphon

**2.** Who invented it?

Ans. Thomas Crapper

**3.** How do automatic hand dryers go on and off?

Ans. Infrared beam/LED

**4.** How much urine does the average person produce in a typical day?

Ans. 1.5 - 2 litres

**5.** Which chemical weapon used in Vietnam was first discovered in animal urine?

Ans. Phosphorous

**6.** Name two of the three common gases found in farts

Ans. CH<sub>4</sub> (methane); H<sub>2</sub>S (hydrogen sulphide); NH<sub>3</sub> (ammonia)

**7.** Which group of animals don't urinate?

Ans. Fish

**8.** True or False: Toilets flush clockwise in the northern hemisphere and counter-clockwise in the southern hemisphere.

Ans. False. This is an urban myth – the direction of drain depends on initial conditions.

## **Pub Quiz**

### **Cocktails**

**1.** What is it in Baileys that causes it to float in layered cocktails?

Ans. Fat

**2.** If you mix equal quantities of 20% spirit and 40% spirit, what is the % alcohol content of the mixture?

Ans. 30%

**3.** Who makes Benedictine?

Ans. Benedictine monks

**4.** Why does Pernod go cloudy when you add water?

Ans. Aniseed forms an emulsion with water

**5.** Who was Molotov?

Ans. Soviet foreign secretary

**6.** Name three drinks that are colours of the rainbow.

Ans. Midori (green), Grenadine (red), Blue Curacao (blue)...

**7.** What is tonic water flavoured with?

Ans. Quinine

**8.** What disease is treated with answer to above?

Ans. Malaria

## **Pub Quiz**

### **Drunk**

- 1.** If you drank eight pints before closing time on Friday, what time on Saturday will you be legally able to drive?

Ans. 11:00

- 2.** Where is alcohol destroyed in the body?

Ans. The liver

- 3.** Why does drinking water reduce the effects of a hangover?

Ans. Rehydration

- 4.** Which plant makes Aspirin?

Ans. White Willow

- 5.** What is the main ingredient of Alka Seltzer?

Ans. Sodium Bicarbonate

- 6.** Why do some spirits cause a worse hangover than others?

Ans. Because they contain congeners (an impurity, such as methanol, that is normally found in a lower quality wine, or in dark alcohols)

- 7.** If the drink driving limit is  $80\text{mg}/\text{dm}^3$ , how much will kill you?

Ans.  $400\text{ mg}/\text{dm}^3$

- 8.** What is the Cockney rhyming slang for pissed?

Ans. Brahms and Liszt

## **Pub Quiz**

**Team Name** \_\_\_\_\_

### **Wines**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

### **Beers**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

## **Pub Quiz**

**Team Name** \_\_\_\_\_

### **Spirits**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

### **Games**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

## Pub Quiz

Team Name \_\_\_\_\_

### Food

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

### Toilets

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

## **Pub Quiz**

**Team Name** \_\_\_\_\_

### **Cocktails**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

### **Drunk**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.