

THE PIG® - DESIGN TECHNOLOGY

Student Activity 1

Craig identified that the pitted rubber skin on a table tennis bat gripped the ball better than a flat surface. It was the physical properties of the rubber, and the way in which the rubber was placed in layers, that allowed the bat to grip the ball better. Craig's patent was for a new way of using this material.

By exploring new uses for existing technologies, designers can propose new products for potential markets, e.g. using wetsuit material (neoprene) for novelty drinks can holders.

From these specific pages from the UK Intellectual Property Office website, find the list of requirements that the new invention (in this instance, THE PIG®) has to satisfy to be successful in a bid to secure a patent.

<http://www.ipo.gov.uk/whatis/whatis-patent.htm>

From the list of requirements, prepare a detailed specification for THE PIG® based on the information in the case study. A part of the table is already completed.

PATENT REQUIREMENTS	THE PIG® DESCRIPTION
Be new	
Involve an inventive step	A new use for the existing technology of layering rubber sheets on a surface to affect ball impact/deflection and bounce. The use of the rubber layering on the external surface of a football boot allows greater control of a football that wasn't previously possible.
Be industrially applicable	
The description of the invention.	

Teacher's notes Activity 1

Working through this exercise will demonstrate the students' knowledge and understanding of how the existing technology of the table tennis bat was used differently for a new invention and it was this that secured the new patent.

It will be more successful as a teacher-led exercise that reiterates the case study explanation of what and how the invention came about. The challenge presented will stretch the students ability to put into their own words what they can hypothesise and understand about THE PIG® without seeing it at first hand.

Student Activity 2

<http://www.ipo.gov.uk/tm.htm>

This page details information about trade marks. THE PIG® already has its own identity but consider yourself as the designer with the brief to 'design an advertising logo and associated graphical images for the new PIG®'. In order to develop the logo/image you will need to consider the audience, the function of THE PIG® and the name, in addition to your initial personal ideas. Show in your ideas how these influences have affected the appearance of your design. In addition, use the information from the UK Intellectual Property Office site on what constitutes a trademark. You should avoid names or logos already registered by other companies.

Lesson plan Design & Technology Suggested lesson structure [one hour/90 minutes]

Lesson objectives

- For students to understand the product history and innovation behind THE PIG®.
- For students to recognise that the physical properties of materials affect the performance of products.
- For students to develop their own ideas in response to the case study information.

Homework

To find an advert of a recently introduced sports product and, from it, draw a simple sketch to show the product as clearly as possible. Students are to imagine that the product needs redesigning. Under their illustration students are to add four noticeable changes to its shape and appearance so it is ready for its re-launch after initial sales have tailed off. Perhaps these modifications could be in response to a sporting event such as the Olympics or World Cup. Students could create on an A3 sheet a selection of fabric swatches/images/photos that give a feel to the type of design the product will change into.

Starter

Sports brainstorm: what do we imagine when we think of 'sport' - class discussion with results on board .

Main

- Case study on THE PIG®. Explanation of the invention. Examples of old sports boots could be brought into class for all to see. Images of sports personalities using THE PIG® could also be shown.
- Discussion of materials and uses leading to Activity 1.
- Discussion of findings as class exercise leading to Activity 2.