BROMPTON

Tyres

Narrow, thin, light bicycle tyres will be faster but have less grip than wide, heavier tyres. The narrow, thin, light tyres will also be more prone to having punctures. When deciding which tyre would be best for a bicycle it is important to consider the surface on which it will be used. For example, if a bicycle is for use off-road on muddy tracks, good, deep tread patterns are needed. For cycling on roads, tread patterns are not so essential. Instead, for grip you want as much rubber as possible in contact with the road. To increase grip, increase the tyre width.

Design brief

Design a pattern for a tyre tread for a bicycle. The tyre is for a bicycle to be used off-road, on muddy ground. The tread should leave a distinctive pattern on the road when cycled through water or mud.

What do you need to do?

1. Research tyres and tyre treads. How wide are tyres? What kinds of patterns are used on tyres?
2. If possible, collect wax crayon rubbings of bicycle tyre treads. Alternatively take digital photographs of tyre treads and look at them on an interactive white board.
3. Use a black pen or crayon to design three patterns to be used for a mountain bicycle. Show the designs to a sample of people. Use their feedback to choose which of the designs to use.
4. Copy the design onto a piece of card taken from a cereal box. Use a ballpoint pen, lean on a magazine and press hard with the pen so that the pattern may be used for printing.
5. Place a piece of plain paper on top of the card pattern and rub over with a thick wax crayon to make tyre tread prints.
6. Display the tyre print samples as a giant patchwork. When completed discuss which treads make the most effective patterns for a mountain bicycle.

Suggested organisation

- *Consider the design brief*
- *Group brainstorm*
- *Design the product*
- *Present ideas*
- *Evaluate: Does the product meet the design brief? What worked well? What could be improved?*