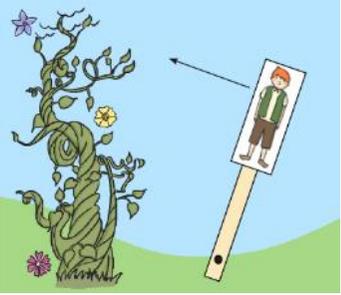
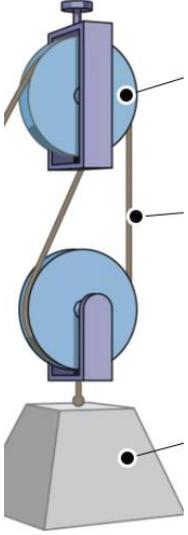


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| River Bank Primary Knowledge Organiser | Year 5 | Autumn 2 | Design technology Moving toys | |
| Planning, designing and making process | | | | |
| <p>Children will generate ideas from previous experiences. Children need to:</p> <ul style="list-style-type: none"> • understand that there are many types of mechanisms • recognise the movement of a mechanism within a toy or model • understand that a cam will change rotary motion into linear motion • understand that different shaped cams produce different movements • know about the relationship between a cam and a follower | <p>Design brief: To design and construct a moving toy with a cam.</p> <p>Functional considerations: The toy needs to be able to move in a linear motion. The movement must be noticeable and smooth.</p> <p>Aesthetic consideration – the toy needs to be themed around the Egyptians.</p> | <p>Children need to select tools, materials, equipment, components to help them make their moving toy:</p> <ul style="list-style-type: none"> • Wood • Saw • Wheels • Rods • Axle <p>Children need to understand properties of materials and be able to use the most sensible one for their toy. Assemble, join and combine materials – axle/shaft, follower, cam</p> | | |
| Key vocabulary, knowledge and understanding | | | | |
| 1. What motion does the cam transform into? | a. Rotary to rotary motion | b. Linear to rotary motion | c. Rotary to linear motion | d. Linear to linear motion |
| 2. What is the axle? | a. A rod that moves in a linear motion. | b. A rod that passes through the centre of a wheel. | c. An eccentric cam. | d. Component that puts the mechanism into motion. |
| 3. What is a rotary motion? | a. A straight line motion. | b. A circular motion. | c. A zig-zag motion. | |
| 4. Turning the cam will make the toy move... | a. In a circular motion | b. Consistently up and down | c. Will not move at all. | d. Depends on the shape of the cam. |
| 5. What part of the moving toy rests on the edge of the cam? | a. Axle | b. Follower | c. Pear cam | d. Wheel |

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| <p>6. Which of these images shows a cam being used?</p> | <p>a.</p>  | <p>b.</p>  | <p>c.</p>  | <p>d.</p>  |
| <p>7. What is the difference between eccentric and round cams?</p> | <p>a. There is no difference.</p> | <p>b. Round cams is more circular.</p> | <p>c. The eccentric cam has the hole for the axle in a different place. Round cam axle hole is in the centre.</p> | <p>d. The round cam will be in rotary motion and eccentric will be in linear motion.</p> |
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