

DT Year 5 - Mechanisms



INTENT

The children will be using the K'nex Education STEM Building Solution box set, building models that will deepen students' knowledge of the scientific concepts associated with gears including; gear ratios, spur gears, mechanical systems and more. The children can work in groups to make the 7 different models with an emphasis on making products through stages of prototypes, making continual refinements.

Disciplinary Knowledge <i>How have experts expressed quality and value throughout history?</i>	• I can design with the user in mind, motivated by the service a product will offer. • I can make products through stages of prototypes, making continual refinements. • I can ensure products have a high-quality finish, using art skills where appropriate.
Substantive Knowledge (Practical) <i>Methods, techniques, media, materials.</i>	• I can use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). • Convert rotary motion to linear using cams.

Vocabulary

Mechanisms, STEM, model, pulleys, levers,
gears, clockwise, anti-clockwise,
force, function, prototype, design

