



|                            |  |                  |   |
|----------------------------|--|------------------|---|
| D.T                        |  | Year 4           |   |
| Focus: Levers and linkages |  |                  |   |
| Age related vocabulary     |  |                  |   |
| Pivot                      | The central point, pin, or shaft on which a mechanism turns.     | Temporary fixing | A fixing that t is temporary lasts for only a limited time.                     |
| Fit for purpose            | Well equipped or well suited for its designated role or purpose. | Process          | A series of stages in time where the last stage is the product, result or goal. |

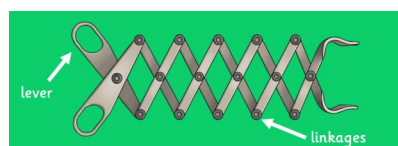
## Key Knowledge

A lever the simplest type of mechanism. It is a stiff bar that moves around a pivot the pivot can be loose or fixed.

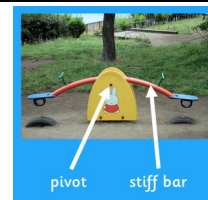
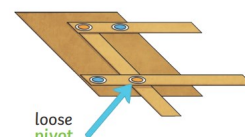
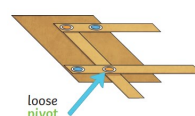
A linkage mechanism is made by connecting together levers around a pivot to produce the type of movement required.

Fixed pivot– A split pin that joins card strips to the backing card.

Loose pivot– A split pin that joins card strips together.



Joins the levers together.



pneumatics - The use of pressurised air to make things move.

pneumatic machines are also widely used in manufacturing, for example, in the production of cars.

Tyres, drills, bicycle pumps, bus door openings and lifts all use pneumatics.

| D.T Y4  | Carlton Assessment Grid            |                                   |                    |
|---|------------------------------------|-----------------------------------|--------------------|
| Success Criteria  | Pupil Reflection                   |                                   | Teacher Assessment |
| I can research to investigate a range of existing toys saying what I like and dislike about them. | Before<br><input type="checkbox"/> | After<br><input type="checkbox"/> |                    |
| I can use pneumatic system.   | Before<br><input type="checkbox"/> | After<br><input type="checkbox"/> |                    |
| I can design a toy including a lever using an annotated and cross sectional sketch.               | Before<br><input type="checkbox"/> | After<br><input type="checkbox"/> |                    |
| I can create my own toy incorporating a pneumatic and mechanical system.                          | Before<br><input type="checkbox"/> | After<br><input type="checkbox"/> |                    |
| I can critically evaluate my toy against design criteria.   | Before<br><input type="checkbox"/> | After<br><input type="checkbox"/> |                    |