

**Key Vocabulary**

**Lever:** a rigid bar resting on a pivot used to move a heavy load by applying pressure to the other end.

**Pulley:** a wheel with a grooved rim for a rope to sit in, which is used to raise heavy weights.

**Mechanism:** a system of parts working together in a machine.

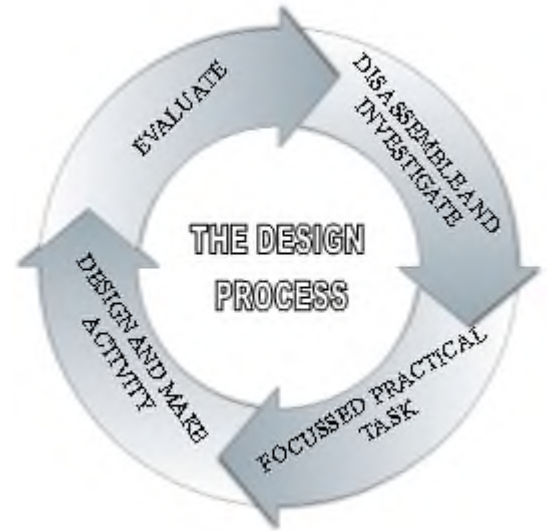
**Pivot:** the point from which a mechanism spins or moves.

**Fulcrum:** the point against which a lever is placed.

**Load:** at one end of the lever, which will move up when pressure is applied to the other end.

**Effort:** the pressure applied to the end of the lever, in order to move the load up.

**Force:** an influence which changes the motion of a body.



**Key activities that MUST take place (this unit doesn't have a disassemble stage)**

**Stage 1:** Investigate / experiment with levers and pulleys (have mini tasks set up for the children to play with)

**Stage 2:** FPT: children make something from K'nex using levers / pulleys.

**Stage 3:** DMA: design and make a ducking stool. (could be made from K'nex / lego dacta / woodstrip / lollipop stick)

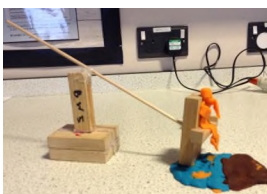
**Stage 4:** Evaluate their ducking stool model.

**Key skills:**

1. Use a pulley to move a load.
2. Use a lever and pivot to move a load.
3. Build with K'Nex.
4. Independently design and build.

**Sources of support:**

- Pulleys guide in the shared area
- 2 K'nex guides in the shared area
- <https://www.youtube.com/watch?v=boHKjBZqBDw> (ducking stool)



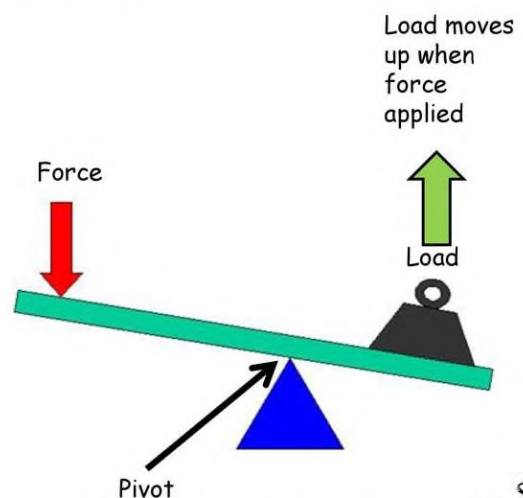
**Levers**

Forces can move objects by turning them around a **pivot**.

A long bar that pivots is a **lever**.

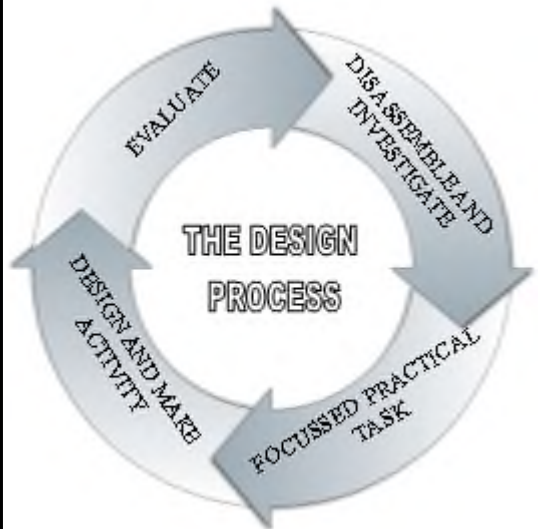
When you **push** down on one side, you are applying **force**. The object on the other end (the **load**) moves up.

Using a lever **magnifies** the **force** and makes objects easier to move.



### **Key Vocabulary**

- Balanced meal:** a meal which provides the right amount and type of nutrients.
- Healthy plate:** an imaginary plate which shows the correct amount of nutrients needed to be healthy.
- Soup:** a savoury liquid dish made by boiling vegetables and / or meat.
- Hob:** a cooking appliance with gas burners or hot plates.
- Saucepan:** a cooking implement used to contain food whilst cooking on a hob.
- Scales:** kitchen equipment designed to measure the amounts of dry ingredients.
- Measuring jug:** kitchen implement used to measure wet ingredients.
- Ingredients:** food stuffs that are mixed together in recipes.
- Recipe:** a list of ingredients and method which explains how to make a food dish.
- Bridge:** a knife hold used to cut food in half.
- Claw:** a knife hold used to slice or dice food.
- Knife:** kitchen implement used for cutting or spreading.
- Chopping board:** kitchen implement used to cut food up on.
- Stock:** a liquid flavouring base for soups and sauces.
- Vegetables:** part of a plant used as food.
- Vegetable peeler:** kitchen utensil used to remove the peel / skin from vegetables.
- Seasonality:** a time series (in this instance) in which different things grow



### **Key activities that MUST take place**

- Stage 1:** Investigate soups sold in a super-market, talk about the different ingredients used. Talk about seasonality of food.
- Stage 2:** FPT: learn how to chop using bridge and claw holds, learn to use a vegetable peeler.
- Stage 3:** DMA: design a healthy soup that will get children eating more vegetables.
- Stage 4:** Evaluate their soup.
- NB There is a portable hob in the cooking cupboard.



The black peeler requires children to use their thumb as a lever placed on the actual vegetable and pull the peeler towards them.

The orange peeler is one that you push away from you / pull sideways.

*NB These colours are not the same as the colours we have in school!*

### **Key skills:**

1. Use a vegetable peeler. (we have 2 different sorts for the children to try, see pic above)
2. Learn some hob safety skills.
3. Weigh with scales.
4. Measure with a measuring jug.
5. Use bridge and claw cutting holds.

### **Sources of support:**

- \* Cooking guide in the DT subject folder
- \* <https://www.youtube.com/watch?v=BdXjLjNWu44> bridge hold
- \* <https://www.youtube.com/watch?v=wVJUD8SSQRA> claw hold



### Key Vocabulary

**Running stitch:** small even stitches which do not overlap (in this case used as decoration not for joining pieces)

**Back stitch:** small even stitches which do overlap to make a continuous line.

**Needle:** sharp implement used for sewing to get thread from one side of a piece of material to another.

**Thread;** a long strand of cotton or other fibres used in sewing.

**Sew;** to join, fasten or repair something by making stitches.

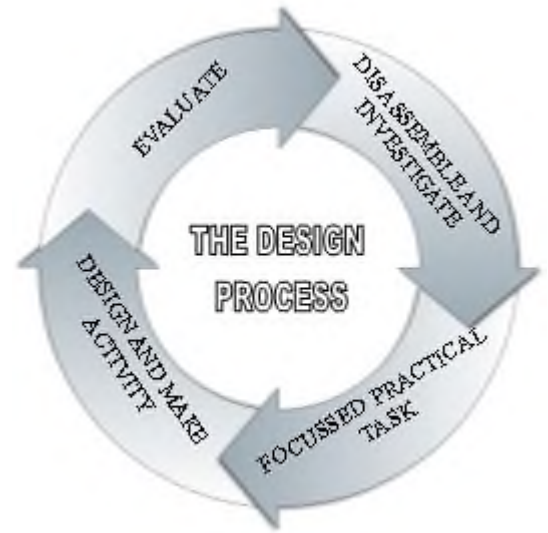
**cast on / cast off:** to make 3 small stitches in the same place to start or end sewing.

**Microbit;** pocket sized computer with LED lights and input / output facilities.

**Pocket;** a small bag sewn into clothing to carry articles.

**Input;** the information out into a computer.

**Output;** something produced by a computer (in this case an LED light show)



### Key activities that MUST take place

**Stage 1:** Investigate / experiment the microbit circuit option on Tinkercad and investigate the microbit monsters already made.

**Stage 2:** FPT: children learn to use back stitch and templates for fabric outlines.

**Stage 3:** DMA: design and make a monster from fabric, which includes a pocket to fit the microbit.

**Stage 5:** Programme to microbit to make it say something / create a pattern of lights.

**Stage 6:** Evaluate their microbit monster.

### Key skills:

1. Learn how to use back stitch to join 2 pieces of material.
2. Sew a small 'monster' with front and back pieces and wadding filling. (decoration would be an added bonus) Decorate as appropriate.
3. Create a pocket in the monster to allow the microbit to sit inside it.
4. Programme the microbit to make the monster either say something or create a pattern of lights on the LED screen, using Tinkercad- circuits section, this is the same coding language as scratch uses.

### Sources of support:

- Sewing stitches guide in the DT subject folder
- <https://www.youtube.com/watch?v=i1-B01FB56s> running stitch guide
- Rachel—use her!!

