

What I already know...

How to create different initial designs.
(Year 3 Come Dine with me)

Investigated materials and how they can be used in different ways.
(Year 2)

How to design for a target market—
Smoothie design.
(Year 3 Come Dine With Me)

Let it shine

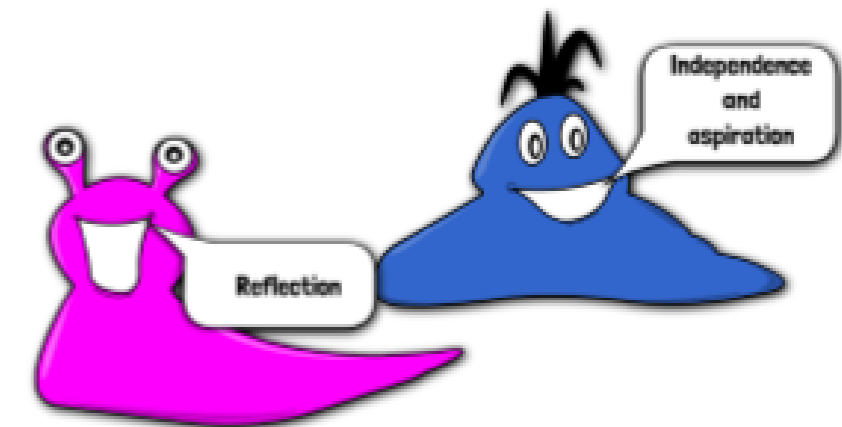
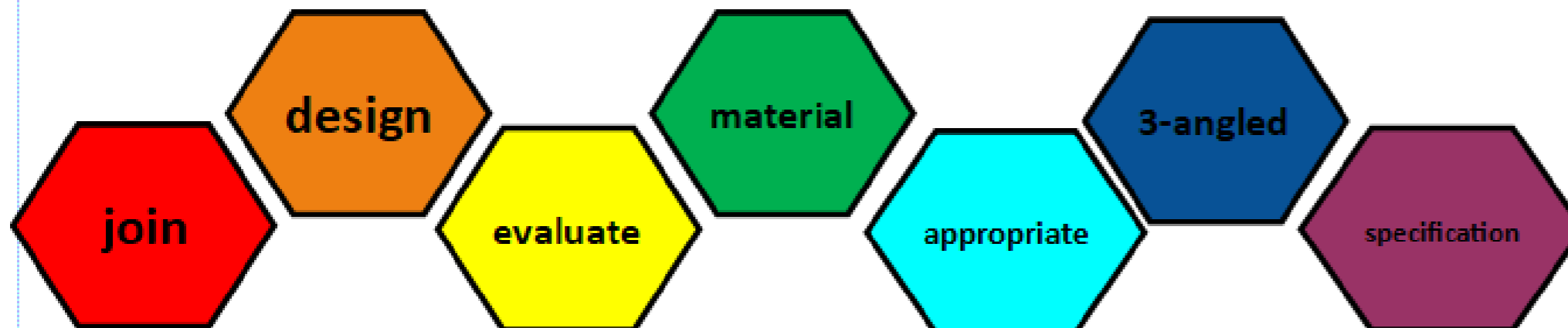
In this project, we will be becoming **designers**. We will be learning about light, properties of materials and electrical circuits to design and create our own reading torch.



I will learn...

- ⇒ *The history of the torch.*
- ⇒ *To create a design from different angles*
- ⇒ *To explore methods for joining*
- ⇒ *Choose an appropriate method to join materials*
- ⇒ *Begin to compare the final product to the final design*

Key Vocabulary



Develop your reflection skills evaluating and improving designs through all the stages of your torch design.

Year 3 Let it Shine!—Spring 2

Project: Let it Shine

In this project children develop their design skills following the design process to create their own reading torch. Using their scientific knowledge of light and electricity to support them, their torch must meet the specifications of having a switch and being made of appropriate materials. Children evaluate the effectiveness of their torch at the Year 3 sleepover, when reading before lights out!

HOOK: The Torch— exploring the torches history and development.

OUTCOME: Year 3 Sleepover—children use their torches to read in the dark at the sleepover.

Applied Literacy:

Factual paragraphs—biographic information
David Missell

Scientific conclusions—Electricity and Shadows
Information Text—a non-fiction text about light.

Applied Mathematics:

Science—measure- length of shadows

SMSC:

Cultural—British history of inventors—David Misell and how his invention of the battery powered hand held torch impacted life today.

Driving Subject: Design and Technology—Children develop their knowledge of the design cycle through a design driven project.

Research:

Children use scientific learning to support their decisions in **designing**—e.g. choice of material for casing, switch, lens, reflector.

Design:

Children learn to create a **3-angled** final design.

Make:

Children explore techniques of joining materials and **choose** their preferred method for **joining** their torches.

Evaluate:

Children reflect on how well their joining worked on their final torch and **evaluate** how **successful** their final product is against their final design.

Curriculum Links:

Science—

How to use scientific language to support findings and identify changes when drawing conclusions.

Knowledge:

- Light—travels in straight lines, reflection, formation of shadows
- Electricity—series circuits, switches, conductors and insulators, scientific symbols

Pupil Premium Enrichment

Electrician/ electrical engineer aspirational talk.
Practical elements linked to electricity - take apart items to look at components and how they work together.

Community links/Enterprise/Experiences:

Children given the challenge of creating a working torch in a design brief—they apply their problem solving skills when creating their torch from recycled materials collected.

Year 3 Sleepover—spend a night away from home.