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Please note: The evidence presented in this exemplar provides snapshots of student evidence. The commentary aims to link the student evidence which for this standard was 40+ A4 pages.

The student brief was confirmed by the teacher:

"To develop a conceptual design for a remote controlled lamp for his mother to use by her bedside"

Specifications included:

- Easy to use
- Low maintenance
- Has a flat bottom so that it sits steadily
- Holds a 60 watt bulb
- Needs to fit on the bedside table.

An issue of lighting was established and the need to have it remote controlled for ease of use particularly at night.

The student began his practice looking at a range of lamps and evaluating them on their physical attributes. There is no evidence that actual existing lamps were investigated or the recommended wattage for lighting in a bedroom.

He started by producing three 2D design ideas for lamps and considered the physical attributes with some consideration of the function and asking for stakeholder comment.

Concept 3

- The rounded base of the speaker will have a flat bottom so that it may sit firmly on the bedside lamp (in the intended location)

- Circuits will be placed inside the spherical base of the lamp where it will be safe and secure if knocked over or in case of an accident.

- Colours will need to be to the liking of the key stakeholder:

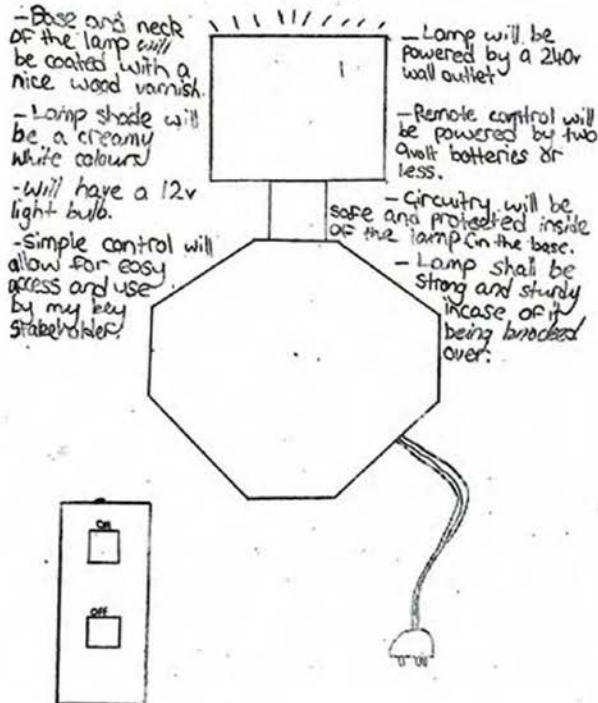
- Lamp will be plugged into a wall power outlet.

- This simple design would be easy to manufacture in the time that we are given.

- Base would be manufactured from plastics that have been moulded into a sphere.

Stakeholder Comments:
The lamp appealed to my key stakeholder as it looks as though it will be strong and sturdy and will keep all circuitry safe from all damage done from being dropped or knocked over.

3 Concept Development



The student continued to develop his design through 2D drawing. The ideas remain untested.

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The student then researched materials that could be used but the research needed to be applied to the brief for the lamp and some consideration of the location needed to be shown.

Research

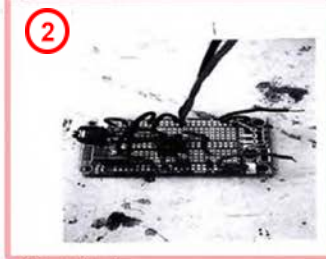
Materials – Woods:

Teak: Ranging in colour from dark brown to yellowish-brown, it has mineral streaks that give it a contrasting grainy structure. The texture of teak is oily, and it is a strong and durable wood, which is resistant to warping and insects. This is a popular wood for making various types of furniture pieces.

Cherry: The colour of this wood ranges from reddish-brown to light pinkish. It is a close grained wood with markings like gum pockets and pitch pockets. The figure in this wood varies from highly mottled to plain. When polished, it can become glowing and deep red. It is used to make all types of furniture from chairs to cabinets.

Maple: This wood ranges from cream-white to snowy-white, although during the off season you do get a few that are yellowish in tone. It has mineral streaks and sugary specks, and also sometimes contains figures that are quilted, blistered, fiddle back, or curly. One of the hardest woods is hard rock maple. When hand-rubbed with oil it can be given a golden-ivory warm colour.

Transmitter Circuit:



Receiver Circuit:



The student then produced a 3D cardboard model of the lamp to gain stakeholder feedback.

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The student then provided evidence of his transmitter and receiver circuits and wiring diagrams. There was no evidence of testing.

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The student evaluated the potential of his conceptual model to be potentially fit for purpose.

Modelling Evaluation

Quotes From My Key Stakeholder:

- ❖ I like the design of the lamp and the remote control, as it is simple and will be able to be manufactured in the time frame given.
- ❖ The remote controls design appealed to me as it fits easily in the palm of my hand and will be easy to use.
- ❖ I would like the lamp to use a 60v bulb instead of anything like a 240v bulb, as it would be easier on the eyes and would cost less to run.

Summary Of Evaluation:

I have presented the model to my key stakeholder and I have then placed the model in the intended location on the bedside table. My key stakeholder, my wider stakeholder and myself have all decided and agreed that the square lamp shade looked more appealing than the small undersized triangular lamp shade which was, at first going to be used. My stakeholders have both agreed that they like the rectangular remote control that was designed, as it is easy and straight forward to use. We have all also agreed that the lamp would look most effective when coated with a wood