Prezi Presentation

Science Experiment

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Science Experiment

How does the height of the puppet's shadow change when we move the torch?

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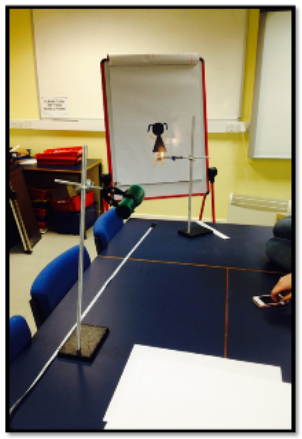
The Planning

- Two clamps
- Torch
- 30cm ruler
- Tape measure
- Flipchart and paper
- Paper puppet
- Results table
- Table
- Dark room



Risk Assessment

Due to our age and equipment, our experiment wasn't too dangerous.

The Method

Place clamps level with each other.
Place torch and puppet in either clamp.
Measure 35cm (starting distance) between clamps.
Turn on torch. Turn off lights.
With a tape measure, record height of shadow on flip chart.
Increase distance between clamps by 5cm each time.

REPEAT

Stop when the puppet's shadow becomes too distorted to measure accurately. (1m)

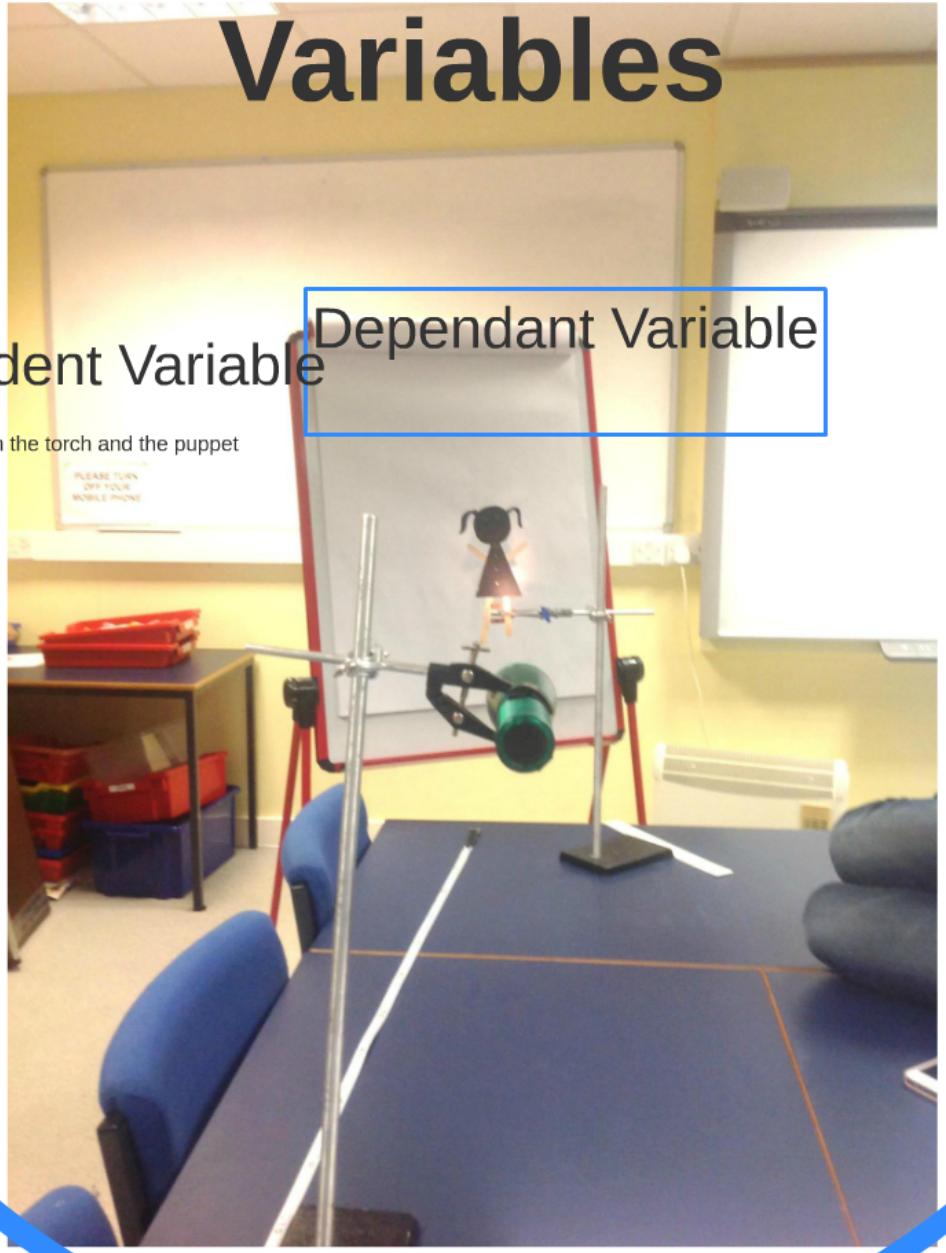
Photos of the experiment

Variables

Independent Variable

Distance between the torch and the puppet

Dependant Variable

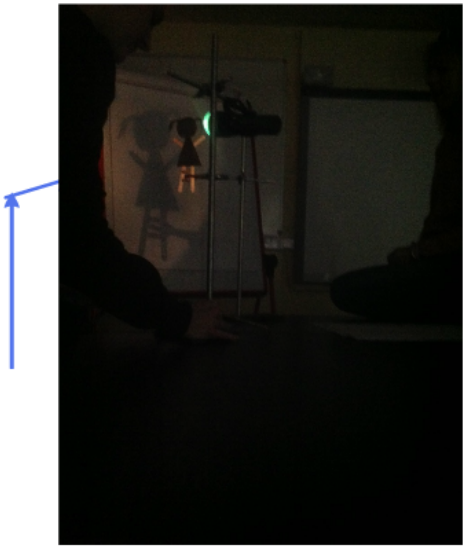


Variables to be controlled

Distance from puppet to the board
Height of the puppet from the table
Height of the torch from the table
Individual measuring
Darkness of the room

To Ensure that the shadow was not distorted

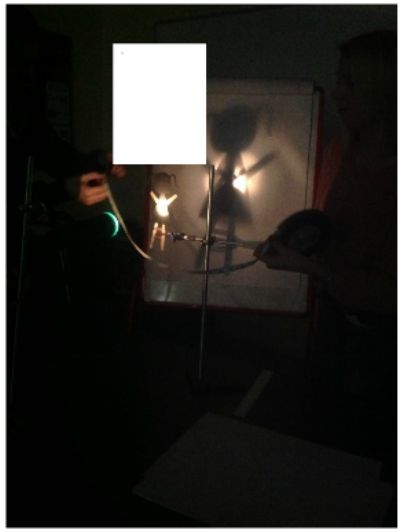
Controlled Variables



Variables

Individual Measuring

Darkness of the room



Fair Testing

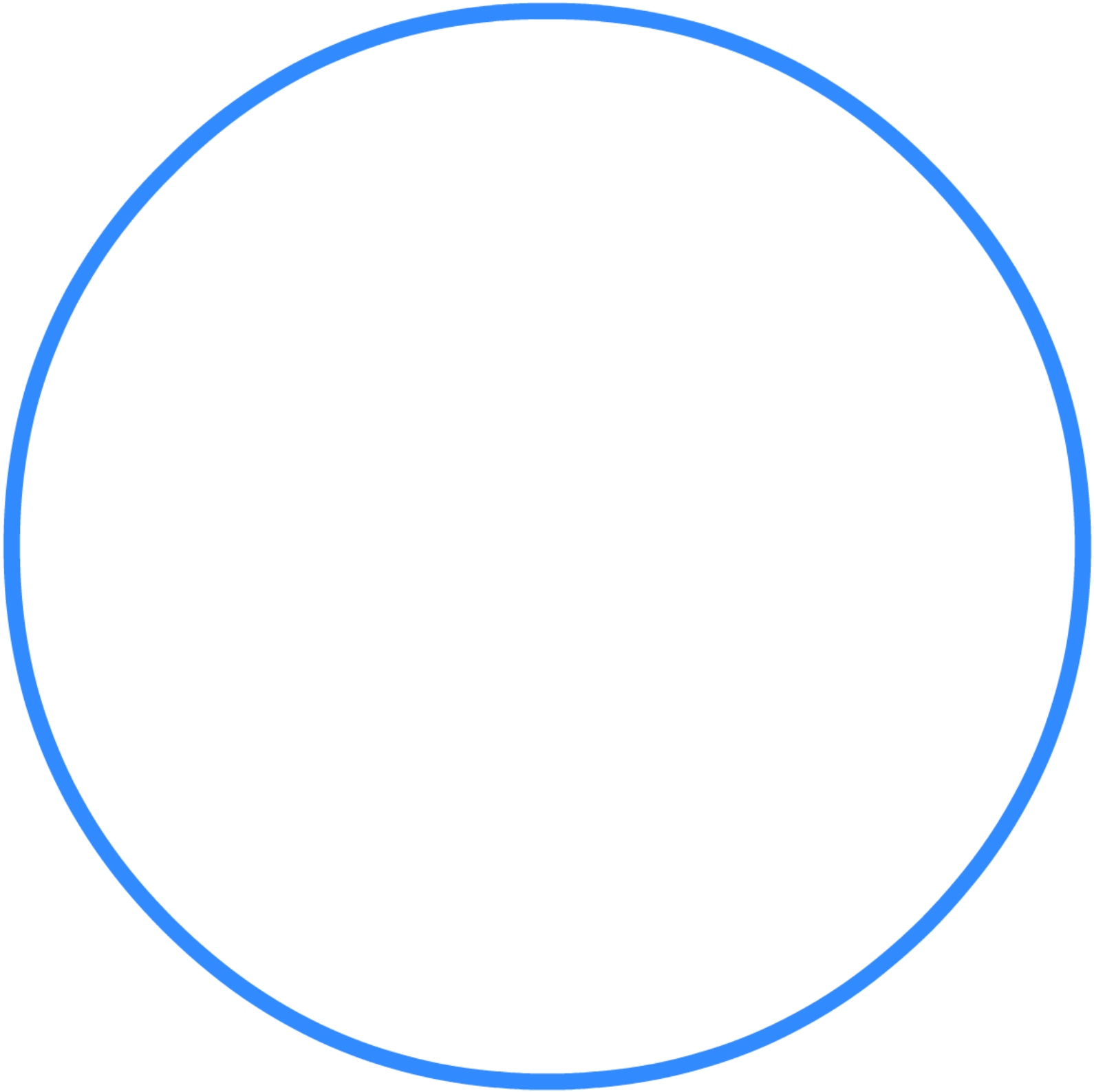
"A fair test is defined as a test that is designed to be free of any type of bias to ensure fairness and to ensure that no one person benefits more than the other. It can also be defined as a test that can be repeated and has a control"

Repeat the experiment X2
Have two people measuring
Use a stable table
Appropriately recorded to 1dp

Your Predictions…

Who thinks the shadow of the puppet is going to get SHORTER the further away the torch is?

Who thinks the shadow of the puppet is going to get TALLER the further away the torch is?



What do our results show/mean?

Negative correlation

Things to consider for next time

pet, the shadow outline became ss distinct. This is because as the torch moved further back other objects in the room were reflecting the light towards the shadow. (Farrow, 1999, p.155)

we could limit the light reflecte One way we could limit this was by clearing the room of items (which were reflecting the light).

Using this experiment in the classroom

Change to risk assessment
More challenging/end result
Smaller groups/in pairs
Example lesson plan

Opportunity for assessment
Shows progression within 20 minutes
Differentiation

Using this experiment in the classroom

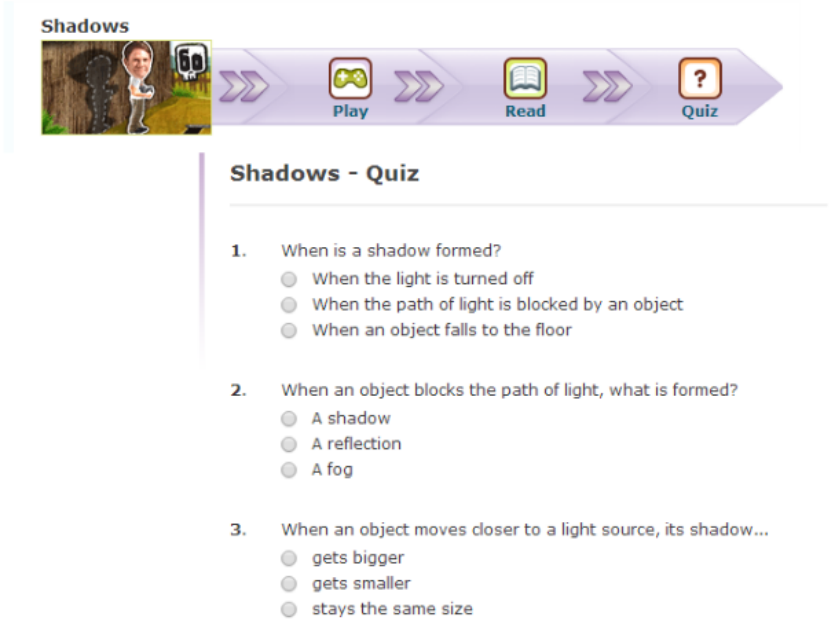
This experiment supports the requirements for Key Stage 1 Science for children to
“look more closely at the natural and humanly constructed world around them”
“perform simple tests, with simple equipment and observe”

Year 3 Programme of Study:
“recognise that shadows are formed when the light from a light source is blocked by a solid object”

(National Curriculum, 2013).

Extra Resources

http://www.bbc.co.uk/bitesize/ks2/science/physical_processes/



Extra Resources

http://rigb.org/education/games?gclid=CMSAnpLb-7wCFQkUwwodlrsAQw

	Game: Bio Bob's Biodiversity Adventure	Can you help Bob to adapt and survive in different environments?
	Game: Biodiversity Quiz	See if you can beat the rest in this quiz about Biodiversity
	Game: Born to Spawn	Can you track the flounder as they migrate to and from their feeding grounds?
	Game: Build a Skeleton	The aim of the game is to make the skeleton of the animal in the quickest time you can. See if you can beat the top score.

Thank you
for watching!

Reference List

http://www.bbc.co.uk/bitesize/ks2/science/physical_processes/

National Curriculum (2013)

http://rigb.org/education/games?gclid=CMSAnpLb-7wCFQkUwwodlrsAQw

Farrow, S. (1999) The Really Useful Science Book. 2nd Ed. London: The Falmer Press.