

Tuesday 23rd March 2021

Lesson Objective: To find patterns when exploring how shadows change size.

★ **Success Criteria** ★

		Me	Miss B
1	I can set up an experiment for how a shadow changes shape using given details		
2	I can set up an experiment for how a shadow changes shape and record the results		
3	I can set up an experiment for how a shadow changes shape and record the results using detailed explanation for my findings		

Red

How do shadows change when the distance between the light source and the object changes?

Use the comic strip below to draw and write about what you will do to carry out your investigation.

Equipment: Draw the things you will use to carry out your investigation.	Step 1 - How will you make a shadow using your equipment?	Step 2 - How will you measure the distance of the object from the light source, and the size of the shadow?
Step 3 - How will you measure what happens to the shadow when you move the object away from the light source?	Step 4 - How will you record your results?	Prediction: What do you think will happen? How



Complete this table with your results as you carry out your investigation.



How do shadows change when the distance between the light source and the object changes?

Distance between the light source and the object.	Size of the object's shadow.
10cm	
20cm	
30cm	
40cm	
50cm	

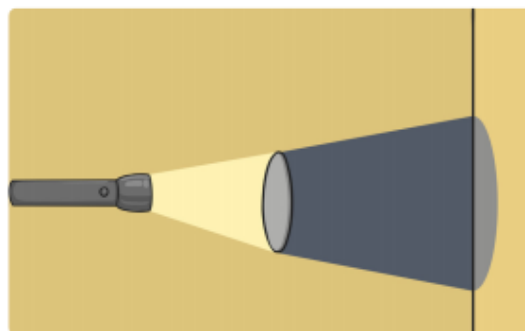
Look at the results you have collected. Do you notice a pattern? Does the size of the shadow change when the distance between the object and the light source changes?

Explain what you notice:

The pattern I have noticed is _____

Make a concluding statement to explain what you have found out:

I have found out that the _____ the distance between the object and the light source, the _____ the object's shadow is.



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Yellow

What question are you investigating?

Use the comic strip below to draw and write about what you will do to carry out your investigation.

What equipment will you use?	Step 1	Step 2
Step 3	Step 4	Prediction: What do you think will happen?



Complete this table with your results as you carry out your investigation.

How do shadows change when the distance between the light source and the object changes?

Distance between the light source and the object.	Size of the object's shadow.
10cm	
20cm	
30cm	
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Look at the results you have collected. Do you notice a pattern? Does the size of the shadow change when the distance between the object and the light source changes?

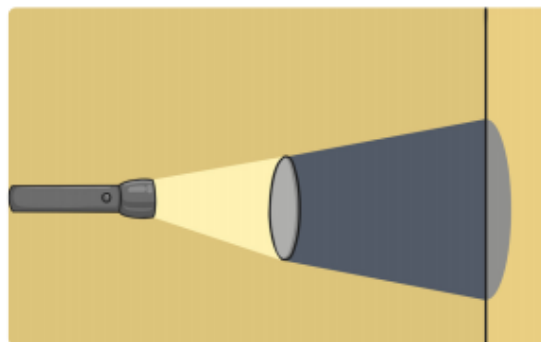
Explain what you notice:

Are there any results that do not fit your pattern? _____

If there are, can you think why? _____

Make a concluding statement to explain what you have found out:

I have found out that _____



Green

What question are you investigating?

Use the comic strip below to draw and write about what you will do to carry out your investigation.

What equipment will you use?	Step 1	Step 2
Step 3	Step 4	Prediction: What do you think will happen?

Complete this table with your results as you carry out your investigation.



How do shadows change when the distance between the light source and the object changes?

Distance between the light source and the object.	Size of the object's shadow.

Look at the results you have collected. Do you notice a pattern? Does the size of the shadow change when the distance between the object and the light source changes?

Explain what you notice:

Are there any results that do not fit your pattern? _____

If there are, can you think why? _____

Make a concluding statement to explain what you have found out:

I have found out that _____

Can you explain why the shadow changes in this way? Think about how light travels.

