

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.

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| 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? |
|---|---|---|
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| 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 |
| | | |
| | | |
| | | |



Comic Strip Planner

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? |
| | | |
| | | |
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| | | |



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 | |

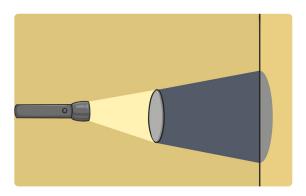
Look at the results you have collected. Do you notice a pattern? Does the size of the shadow change when the distance between the object and the light source changes?

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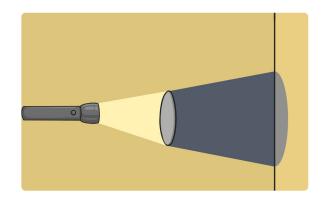
Look at the results you have collected. Do you notice a pattern? Does the size of the shadow change when the distance between the object and the light source changes?

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 _____





Results and Patterns

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. |
|---|------------------------------|
| | |
| | |
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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 _____

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

