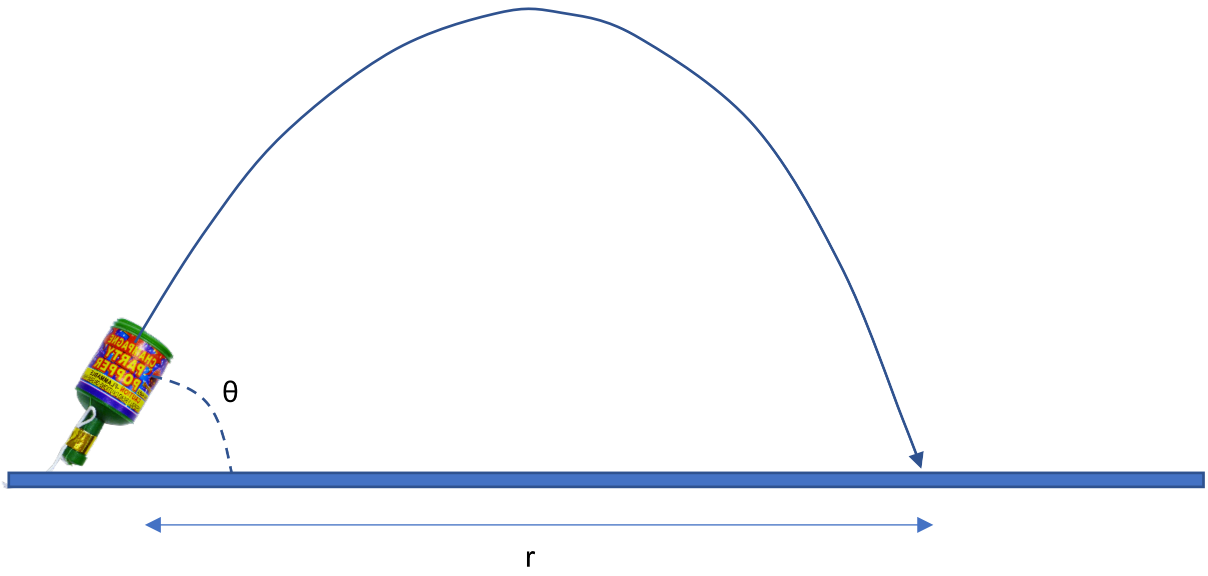
A-level Physics Taster Day Transition Activity

Aim: In this activity you will plan, run and evaluate a physics experiment.

Overview: When a party popper is fired at an angle (θ) the confetti travels along a curved path called a parabola, we call this type of movement projectile motion. The horizontal distance travelled by the confetti is called the range (r).



Hypothesis: The angle at which the party popper is fired will change the range of the confetti.

Your task: Design and run an investigation to test the hypothesis provided.

In lesson:

- Predict what you might discover in this experiment
- Briefly design your method, identifying what needs to be measured.
- Collect your results

Outside of the lesson:

- Write-up your experiment, it should include:
    - An equipment list
    - A method
    - A table of results
    - A suitable graph
    - A conclusion
    - An evaluation

Use the templates on the following pages to structure your work. **If you were unable to attend the lesson**, please use the sample results table on the last page of this booklet to complete this activity.

In lesson:

Prediction (What do you think you will discover in this experiment? Why?)

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Planning and Table (Briefly design your experiment and produce a quick results table)

Outside of lesson:

Equipment List (What equipment will you use in your investigation?)

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Method (Describe, in detail, how you carry out your investigation. Be sure to consider safety and how you ensure the collection reliable data)

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Results table (Put you results in a clear results table. Be sure to include suitable column headings and units)

Graph (Produce a suitable graph of your results. Insert your graph in the space below)

Conclusion (What did you discover in your investigation. Use your knowledge of physics to explain what you have found)

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Evaluation (What did you do well in your investigation? What would you do differently if you were to do the experiment again? Why?)

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Submitting Your Work

Completed paper copies of your work should be handed in during your first physics lesson in September.

For Teacher use only

Success Criteria	Excellent	Good	Acceptable	Poor
All equipment required has been listed				
A suitable method has been designed				
Safety has been considered within the method				
Methods to ensure high quality results have been considered				
Results are recorded in a suitable table				
A suitable graph has been produced				
The conclusion identifies the pattern observed				
Scientific reasoning has been given for the pattern observed				
The evaluation identifies the strengths and weaknesses of the investigation				
Spelling				
Punctuation				
Use of scientific keywords				
Handling of data				

Teacher comment:

Sample results

If you were unable to complete the experiment in the lesson please use the results below to complete this activity. **Please note:** although the results recorded below are to be used, this is not a good results table, nor have the results been recorded well. Make sure you redraw your own table including the results extracted from the table below.

Angel	Distance travelled by the stuff in centimeters			Average
	1	2	3	
10	32	38	36 cm	
30	75	77	75	
45	1.03 m	99	98	
65	81	24	78	
77	39	40	41.2	