

## Video question script: Party popper eruption

Question/Activity	Likely response	Rationale
In teaching about the Earth we use practical activities to explore Earth processes. This activity explores the predictability of volcanic eruptions and is based on the Earthlearningidea 'Party time for volcanoes'		Preparation for bridging from the model to real Earth processes
What is this? And this?	<ul style="list-style-type: none"> <li>we have two stands, each with a party popper and masses of 300g suspended from it</li> </ul>	Concrete preparation: familiarising pupils with the apparatus and materials
Two people are going to add masses to the two party popper set ups at the same time. Ask them to predict when each party popper volcano might 'blow'. We are asking them to act as the geologists in charge. Just before the final mass that they have predicted is added, we will evacuate the town/city where you are, to save the population, so: <ul style="list-style-type: none"> <li>if the prediction is too late, most people will die</li> <li>if it is too early, everyone will leave, but soon will complain that they had to leave unnecessarily and there will be big social and economic costs</li> </ul>		
Ask them to make their predictions. Then to add masses to each party popper at the same time. Before adding the mass for the lowest prediction, ask if they want to revise their prediction – reminding them of the dire consequences either way if they get it wrong.	<ul style="list-style-type: none"> <li>each person should make a prediction</li> </ul>	Construction: reasonable prediction involves constructing a mental pattern first
Continue until each party popper 'blows'		Cognitive conflict: the poppers 'blow' with different masses
Usually the party poppers 'blow' with different numbers of masses, showing that these party popper eruptions are unpredictable – like volcanic eruptions		Bridging: linking the activity to real world eruption predictability
Explain that the graph shows a distribution from 400g to 3600g with the highest peak at 1300g – clearly showing that the predictability is low		Bridging: linking the activity to real world eruption predictability
Explain that another way of carrying out the activity is by using 'chance' cards using the Earthlearningidea 'Take a chance on the volcano erupting', to introduce different factors that may aid the prediction of eruptions		

Note: ensure that pupils do not stand over the party poppers when they might 'erupt' or wear eye protection for safety.