**Arbeitsblatt - Gedämpfte Schwingungen**

In zwei Experimenten wird untersucht, wie sich

1. ein Fadenpendel und
2. ein Federpendel

unter Einfluss von Luftreibung verhalten. Dazu nutzen wir jeweils ein Smartphone mit der App „Phyphox“. Diese gibt die Bewegung des Smartphones in einem Orts-Zeit-Diagramm live wieder.

Im ersten Experiment wird das Smartphone an zwei Fäden aufgehangen. Nachdem man das Smartphone ausgelenkt hat, lässt man das Smartphone für eine bestimmte Zeit hin und her schwingen. Schaut euch das folgende Video an und schreibt die Werte in die folgende Tabelle. Zeichnet mithilfe der Werte ein Amplituden-Zeit-Diagramm.

https://www.youtube.com/watch?v=iIu6M03yvM0

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| **Zeit in Sekunden** |  |  |  |  |  |  |
| **Amplitude****In cm** |  |  |  |  |  |  |

**Amplituden-Zeit-Diagramm**

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Im zweiten Experiment wird das Smartphone an zwei Fäden aufgehangen. Nachdem man das Smartphone ausgelenkt hat, lässt man das Smartphone für eine bestimmte Zeit hin und her schwingen. Schaut euch das folgende Video an und schreibt die Werte in die folgende Tabelle. Zeichnet mithilfe der Werte ein Amplituden-Zeit-Diagramm.

https://www.youtube.com/watch?v=9wJEyc\_XDtQ

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| **Zeit in Sekunden** |  |  |  |  |  |  |
| **Amplitude****In cm** |  |  |  |  |  |  |

**Amplituden-Zeit-Diagramm**

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**Auswertung**

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