## pHet: Gravity and Orbits - NGSS Aligned

Learning Goals:

1. Explain how gravity controls the motion of our solar system
2. Identify the variables that affect the strength of gravity
3. Predict how motion would change if gravity was stronger or weaker

**A. Open the *Gravity and Orbits Simulation*. Investigate the simulation for 10 minutes and write down 5 things that you observe as you manipulate the simulation.**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**B. Using the class discussion and what you observed while manipulating the simulation, write 2 or 3 scientific questions that could be investigated using the simulation related to the path of objects and/or the force of gravity.**

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| 1. |
| 2. |
| 3. |



**3. Peer Evaluation: Trade your paper with another student or group. Evaluate and make clarification comments for the questions in the space below. Sign your names in the evaluator box to the left.**

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| --- |
| 1. |
| 2. |
| 3. |

**4. Select one question to examine with the simulation. Your group may need to rewrite your question using the clarification comments. Formulate a hypothesis from your observations.**

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| Question: |
| Observations: |
| Hypothesis: |
| What evidence from the simulation supports your hypothesis? |

**5. Using the information from the table above, write a summary explaining the relationship between the force of gravity and the motion of objects in our solar system.**