**Energy Transfer & Transformation – Energy Skate Park Worksheet**

**Name:** \_\_\_\_\_\_\_\_\_\_\_\_  
**Date:** \_\_\_\_\_\_\_\_\_\_\_\_

**Instructions:**

* Open the **PhET Energy Skate Park Simulation** (https://phet.colorado.edu/en/simulation/energy-skate-park)
* Answer the questions based on your observations.

**Part 1: Understanding Energy Types**

👉 **Match the words to the correct definitions**

| **Energy Type** | **Definition** |
| --- | --- |
| **Kinetic Energy** | a) Stored energy, ready to be used |
| **Potential Energy** | b) Energy in motion |
| **Thermal Energy** | c) Heat energy caused by friction |

👉 **Check your answers with your teacher before moving on!** ✅

**Part 2: Observing Energy Changes**

**Step 1:** Open the simulation. Click on **“Intro” mode**.  
**Step 2:** Place the skater on the ramp and watch what happens!

1. **What happens to the skater’s speed when going down the ramp?**  
   ☐ Increases  
   ☐ Decreases
2. **What type of energy is greatest at the top of the ramp?**  
   ☐ Kinetic Energy  
   ☐ Potential Energy
3. **What type of energy is greatest at the bottom of the ramp?**  
   ☐ Kinetic Energy  
   ☐ Potential Energy
4. **If there is no friction, will the skater stop moving?**  
   ☐ Yes  
   ☐ No

**Part 3: Friction & Energy Loss**

**Step 3:** Turn on **“Friction”** in the simulation and observe the changes.

1. **What happens to the skater over time when friction is added?**  
   ☐ The skater speeds up  
   ☐ The skater slows down
2. **Where does the energy go when friction is present?**  
   ☐ It disappears  
   ☐ It turns into thermal (heat) energy

**Part 4: Draw & Label**

👉 **Draw the skater on the ramp**. Label where they have:

* **Most potential energy**
* **Most kinetic energy**
* **Energy transformation due to friction**

**Challenge Question (Bonus!)**

💡 **If the skater was on the Moon, how would the energy change?**