

Classify different types of energy as kinetic or potential and...

classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems

Learning intention

- classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems

Teach and model

- investigating relationships between kinetic and potential energy in a simple system such as a roller-coaster or Newton's cradle
- classifying types of energy as either kinetic energy such as movement, heat and electricity or potential energy such as chemical, elastic and gravitational
- critiquing and using representations such as flow diagrams to illustrate changes between different forms of energy in a system

Check understanding

- Explain the main idea in classify different types of energy as kinetic or potential and... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.