

COPY OF LET'S PLAY: KINETIC AND POTENTIAL ENERGY

Lesson Overview

Students will use various objects and pictures to discover the properties of potential and kinetic energy.

Standards

National Standards

undefined
undefined

SC Science Standards

6-5.2: Explain how energy can be transformed from one form to another (including the two types of mechanical energy, potential and kinetic, as well as chemical and electrical energy) in accordance with the law of conservation of energy.

Materials

yo yo
pictures depicting kinetic and potential energy (i. e. water behind a dam and water flowing over a dam)
rubber bands
pictures depicting objects in motion (i. e. roller coaster, pendulum)

Documents

Web Links

[Interactive diagram showing changes in KE and PE energy](#)

Instructional Plans

Explain 1 (15-20 min)

1. Explain Details

Sub-components:

Interpret

Representative Questions:

(1) What took place?

Explain Description:

Students will share their evidences and conclusions from the explore portion of the exemplar. From these conversations the terms potential and kinetic will be introduced.

Students now revisit the observations they made of the yo-yo during the Engage. Ask students to revisit their ideas about where does the energy come from that makes the yo-yo move.

2. Formative Assessments

Whole Class Discussion, individual check in using small

1) Option 1-the teacher will show various pictures and ask the students to identify if the pictures represent potential or kinetic energy. Students will be asked to put a K on their individual white board for kinetic or a P for potential. The students will then hold up the white boards so that the teacher can assess individual comprehension.

2) Option 2-Students will be asked to identify examples of potential or kinetic energy within the pictures in the form of an exit slip.

Engage 1 (15 min)

1. Engage Details

Sub-components:

Misconception, Motivation/Interest

Representative Questions:

(1) What do you know about...?

Engage Description:

The class will be divided into small groups. Each group will be given a yo yo and instructed to take turns using the yo yo. Students are asked to write down their ideas about where the energy comes from that makes the yo yo move. The students will then be asked to draw and record all observations made while using the yo yo.

2. Formative Assessments

Formative Probe, Warm-Up, Brainstorming, Science Notebooks, Drawings

The engage activity allows the teacher to assess the level of understanding and to probe for misconceptions.

Explore 1 (15 min)

1. Explore Details

Sub-components:

Predict, Justify

Explore Description:

Students are given two pictures depicting potential and kinetic energy. Ask students to describe where the energy is located in each picture. Then, ask students to describe how that energy could change forms.

2. Formative Assessments

Teacher Prompt, Science Notebooks

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