

# STAAR Review to Go: Science Features

3: Kinetic and Potential Energy  
Reporting Category: 2, TEKS 6.8A

**TEKS**

6.8 Force, motion, and energy. The student knows force and motion are related to potential and kinetic energy. The student is expected to:  
A. compare and contrast potential and kinetic energy.

**TEKS and ELPS** are embedded in each activity and are reflected in the content and language objectives.

**Materials** lists aid in activity preparation.

**Language Proficiency Standards (ELPS)**

Articulate second language acquisition/writing. The student is expected write using standard basic vocabulary and content-based grade-level vocabulary.

**Materials**

**For folder**

- snack-size resealable plastic bag, small envelope, or pocket to hold cards
- cardstock to make folder pockets or flaps
- 12 inches of string or yarn (optional)
- tape or glue (optional)
- **Venn Diagram Descriptor Cards**
- **Venn Diagram Template** (optional)
- pendulum (optional)
- safety glasses (if providing a pendulum)

The titles of **Activity Masters** and **Student Pages** are printed in bold for ease of reference.

**For each student**

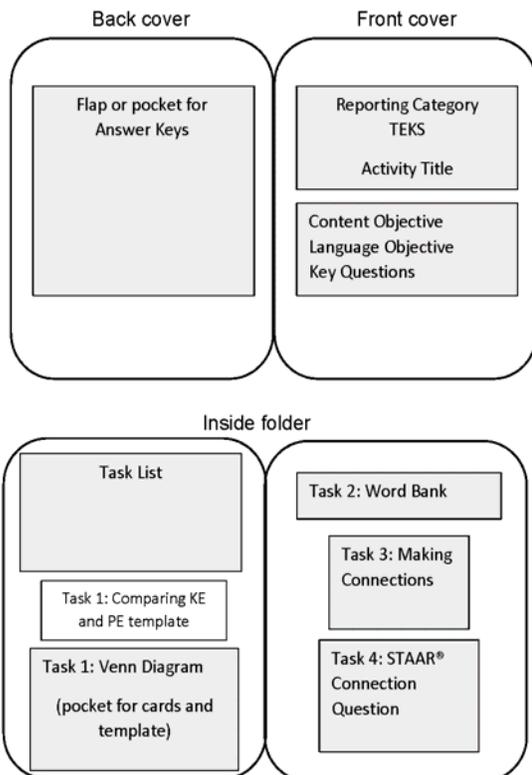
- **Describing KE and GPE** Student Page
- **Making Connections** and **STAAR® Connection Question** Student Page

**STAAR® Released Test Questions**

2013: Question 19  
2014: Question 4  
2015: Question 25

**STAAR® Released Test Question** item numbers are listed for reference or further review.

**Sample Layout**



**Activity Folder Sample Layouts** provide an option/example for assembling folders.

# STAAR Review to Go: Science Features

Folder tab label: RC 2 TEKS 6.8A  
Kinetic and Potential Energy

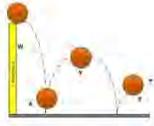
**Folder Tab Labels** are provided to aid in organization of folders.

Cover:

Reporting Category 2  
Force, Motion, and Energy

TEKS 6.8A

Kinetic  
and  
Potential Energy



region 4

**Content Objective**  
I can compare the amount of kinetic energy and gravitational potential energy of objects.

**Language Objective**  
I can use sentence stems to describe the kinetic energy and gravitational potential energy of an object.

**Key Questions**

1. What determines the gravitational potential energy of an object?
2. What determines the kinetic energy of an object?

region 4

**Language Objectives and Content Objectives** describe the focus of the TEKS-based activity in student-friendly language.

**Key Questions** help students focus on what they need to know after completing the tasks in the activity folder.

# STAAR Review to Go: Science Features

**Kinetic and Potential Energy Task List**

**Task 1: Comparing KE and GPE**  
Use the Venn diagram to compare and contrast kinetic energy and gravitational potential energy. Place the Venn Diagram Descriptor Cards in the correct areas of the Venn diagram. Check your answers before starting Task 2.

**Task 2: Describing KE and GPE**  
Use the completed Venn diagram and the Task 2 word bank to complete Describing KE and GPE on the student handout. Some words will be used more than once.

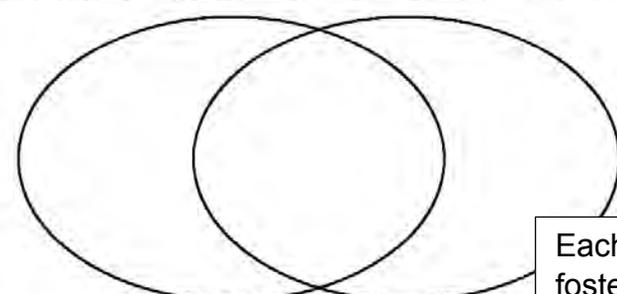
are available, observe the pendulum in motion. Determine greatest and least kinetic energy and gravitational potential energy. Record your answers on the student handout. Use evidence to justify your answer.

**Task 4: STAAR® Connection Question**  
Answer the practice question. Provide evidence to justify your answer.



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**Task 1: Comparing Kinetic Energy and Gravitational Potential Energy**



**Task 1**  
Venn Descriptor Cards  


**Task 2: Describing Kinetic Energy and Gravitational Potential Energy**

**Word Bank**

fastest	height	motionless	speed
ground	highest	motion	slowest
position	lowest	stored	



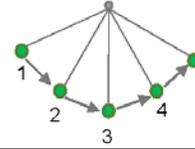
Varied border designs are used to differentiate tasks.

Each activity includes a literacy component to foster student engagement and processing.

# STAAR Review to Go: Science Features

## Task 3: Making Connections Student Page

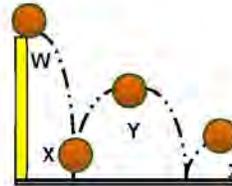
1. The pendulum has the greatest kinetic energy at position \_\_\_ because
2. The pendulum has the least kinetic energy at position \_\_\_ because
3. The pendulum has the greatest gravitational potential energy at position \_\_\_ because
4. The pendulum has the least gravitational potential energy at position \_\_\_ because



Each activity includes a student takeaway that provides students with a study resource.

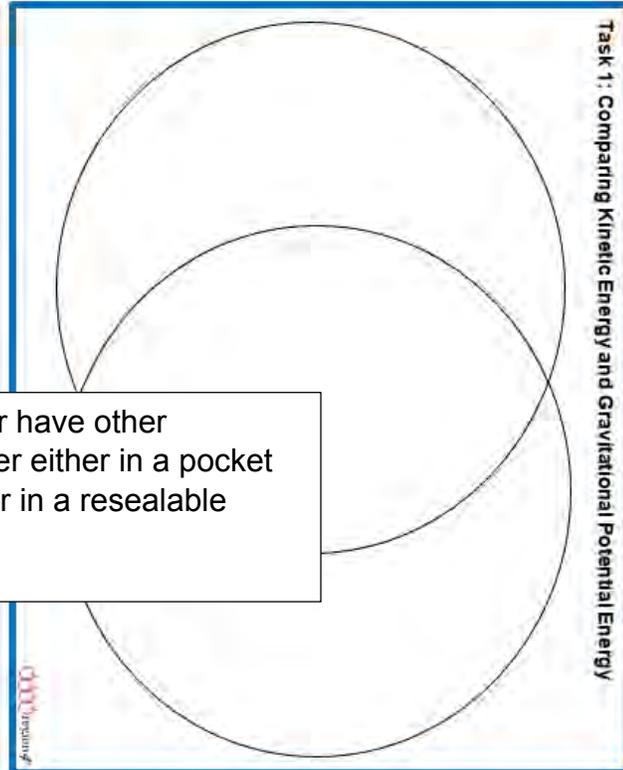
## Task 4: STAAR® Connection Question Student Page

The answer is \_\_\_\_\_. The basketball has the greatest kinetic energy and least gravitational potential energy at position \_\_\_\_\_ because



### Venn Diagram Descriptor Cards

Kinetic Energy	Both	Gravitational Potential Energy
depends on speed of object	measured in Joules	depends on height (position) of object
energy of motion	depends on mass of the object	stored energy



Task 1: Comparing Kinetic Energy and Gravitational Potential Energy

Venn Diagram Template

Some review activities include card sorts or have other manipulatives. Cards are stored in the folder either in a pocket (created using cardstock or an envelope) or in a resealable plastic bag.