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 **MASTERS  
GRADE LEVEL**

 **MEETS  
GRADE LEVEL**

# 8TH GRADE SCIENCE MASTERY & STAAR® READINESS

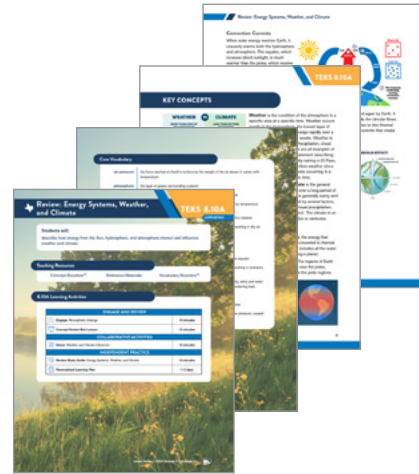
## BUILT FOR THE 2024-2025 TRANSITION TEKS

- Optimize science STAAR® outcomes with a full-length practice test and Personalized Learning Plan
- Achieve a Domain 1 (science component) score of 60%+ (A rating)
- Deliver whole-class, small-group, and individual practice and review
- Guide students through a rigorous 5-step STAAR® review sequence



\*For full details visit [summitk12.com/guarantee-information](https://summitk12.com/guarantee-information)

# RIGOROUS 5-STEP STAAR® REVIEW SEQUENCE



**STEP 1:  
CONCEPT REVIEW**

When ocean water moves from one place to another, it is known as an ocean current. The Gulf Stream is an example of an ocean current.

What is the main energy source of the creation of these ocean currents?

Select one:

- A. Geothermal energy
- B. Tectonic plates
- C. The movement of fish in the ocean
- D. The Sun

**STEP 2:  
STAAR® ASSESSMENT 1**

**Oceans**  
impact local weather

sea breeze  
land breeze

**STEP 3:  
TEKS INSTRUCTIONAL VIDEO**

**ocean current**  
corriente oceánica  
noun

An ocean current is the continuous movement of seawater driven by solar energy, gravity, wind, and water density, which helps regulate global climate by helping to counteract the uneven heating of Earth.

Select \_\_\_\_\_ are influenced by different forces acting to propel water both on the surface and in deep ocean waters.

**STEP 4:  
VOCABULARY REVIEW**

Radiation from the Sun heats Earth's surface, which in turn heats up the atmosphere.

As air warms and cools, convection currents are produced. What are the two main factors that drive convection currents? Select **TWO** correct answers.

- A. Density
- B. Humidity
- C. Precipitation
- D. Temperature
- E. Currents

**STEP 5:  
STAAR® ASSESSMENT 2**

TEKS	Lesson Name	Assessment 1	Video	Vocabulary Review	Assessment 2
8.10A	Energy Systems, Weather, and Climate				
7.8A	Methods of Thermal Energy Transfer				
6.10A	Biosphere, Hydrosphere, Atmosphere, and Geosphere				

## READINESS

**Energy Systems, Weather, and Climate**

Uneven heating of Earth's ocean water creates global ocean currents that influence our weather and climate.

The Sun is the source of energy that drives Earth's weather and climate by powering convection currents in the hydrosphere and atmosphere.

The uneven heating of Earth's surface creates convection currents that power global wind belts, affecting weather and climate.

air pressure atmosphere climate convection currents Coriolis effect high-pressure system humidity  
hydrosphere latitude low-pressure system ocean current solar energy weather wind

**8.10A**

## SCAFFOLDS

**Methods of Thermal Energy Transfer**

Thermal energy is the total kinetic energy of the particles in a substance and can be transferred from one location or substance to another as heat within a system.

conduction convection radiation

through direct contact, such as transferring heat in a system from hot coals to a metal horseshoe

through a gas or liquid, which creates a current, such as transferring heat in a system from a hot plate throughout the water

through air or empty space, as shown in this heater system, transferring heat in the form of waves

conduction convection heat radiation system thermal energy transfer

**7.8A**

**Biosphere, Hydrosphere, Atmosphere, and Geosphere**

biosphere hydrosphere atmosphere geosphere

The biosphere is composed of all the living things on Earth.

The hydrosphere contains all the water on planet Earth.

The atmosphere includes all the gases surrounding Earth and consists of five layers.



The geosphere is the solid portion of Earth and is made up of three major components.

atmosphere biosphere exosphere geosphere hydrosphere  
mesosphere stratosphere thermosphere troposphere

**6.10A**

## PERSONALIZED LEARNING PLANS

After students take the full-length STAAR® practice test, a Personalized Learning Plan (PLP) will be generated to target each student's unique needs. The PLP automatically generates assignments from lowest to highest percent mastery, starting with readiness and followed by supporting TEKS.

TEKS	Description	Assessment 1	Concept Review	Vocabulary Boosters	Assessment 2
8.7A	Newton's Second Law of Motion	71%	✓	95%	88%
8.8A	Characteristics of Waves	57%	✓	85%	77%
8.9B	Categorization of Galaxies	58%	✓	95%	75%
8.6B	Atoms in Chemical Reactions	44%	✓	82%	42%
 7.6B	Chemical Formulas	28%	✓	81%	31%
8.6A	Classification of Matter	79%	✓	94%	76%
 7.6A	Elements and Compounds	⊙ Start	⊙ Start	⊙ Start	⊙ Start
8.13A	Functions of Organelles	⊙ Start	⊙ Start	⊙ Start	⊙ Start
8.6C	Behavior of Water	⊙ Start	⊙ Start	⊙ Start	⊙ Start
8.12B	Ecological Succession	⊙ Start	⊙ Start	⊙ Start	⊙ Start

 = Scaffolds

## CLASS SE PERFORMANCE REPORT

Helps guide which TEKS to prioritize during STAAR® tutorials.

RC	TEKS	Type	Description	STAAR Practice Test
1	8.6E	R	Law of Conservation of Mass	57%
1	7.6B	S	Chemical Formulas	63%
1	7.6C	S	Physical and Chemical Changes in Matter	65%
1	7.12A	S	Flow of Energy in Trophic Levels	76%
1	6.6C	S	Identify Metals, Nonmetals, Metalloids, and Rare Earth Elements	92%
2	8.7A	R	Newton's Second Law of Motion	25%
2	8.7B	R	Simultaneous Action of Newton's Three Laws of Motion	44%
2	7.7A	S	Calculating Average Speed	54%
2	7.7C	S	Distance-Time Graphs	66%
2	6.7B	S	Balanced and Unbalanced Net Forces	71%
2	6.8A	S	Gravitational, Elastic, and Chemical Potential Energies	86%
2	6.8B	S	Energy Transfers and Transformations	90%
3	8.9A	R	Stars: Life Cycle and Classification	28%