



# SCIENCE

## Step Up to the TEKS

**GRADE CATEGORY 1**  
**8**  
The student will demonstrate an understanding of the properties of matter and energy and their interactions.

**RD S STANDARD**  
**TEKS**  
The student is expected to investigate how evidence of chemical reactions indicates that new substances with different properties are formed.  
**TEKS 8.5E**

Verb	Concept	How
investigate	evidence indicates new substances with different properties are formed	chemical reactions

**The Essentials**  
The focus of this TEKS is on the student's ability to investigate evidence that indicates the formation of new substances during a chemical reaction. Evidence can include production of a gas, change in temperature (exothermic and endothermic reactions), production of a precipitate, or a color change.

TEKS checklist that breaks each standard into its fundamental components for clearer understanding

### Vertical Alignment

**GRADE 5** TEKS 5.9C demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand

**GRADE 6** TEKS 6.5D identify the formation of a new substance by using the evidence of a possible chemical change such as production of a gas, change in temperature, production of a precipitate, or color change

**GRADE 7** TEKS 7.8B distinguish between physical and chemical changes in matter in the digestive system

**GRADE 8** **RD S STANDARD** **TEKS** investigate how evidence of chemical reactions indicates that new substances with different properties are formed. **TEKS 8.5E**

**HIGH SCHOOL** TEKS IPC 7.B recognize that chemical changes can occur when substances react to form different substances and that these interactions are largely determined by the valence electrons

Vertical alignment that clarifies the scope for each standard for grade levels directly before and after the current grade level  
Easily identify opportunities for RTI  
Easily identify opportunities for enrichment

### Verb Glossary

<ul style="list-style-type: none"> <li>analyze (evaluate)-learn the nature or relationship of the parts of a concept</li> <li>calculate-find by using mathematical processes</li> <li>classify (sort/categorize)-arrange in a certain group based on characteristics</li> <li>collect (gather)-bring information together for comparison</li> <li>construct-build or form</li> <li>combine-join or bring together</li> <li>communicate-make known</li> <li>compare (relate)-look at two or more things closely</li> <li>debate- discussion between people in which they express different opinions</li> <li>demonstrate-prove mastery of a concept by showing evidence or examples</li> <li>describe-give an account in words, figures, or models</li> <li>design-plan or make an experiment to demonstrate a concept</li> <li>differentiate (contrast)-distinguish qualities between separate things</li> <li>discuss-talk over, explore, or write about</li> <li>distinguish-set apart as different</li> </ul>	<ul style="list-style-type: none"> <li>examine (investigate)-look closely or inspect carefully</li> <li>explain-make something clear or easy to understand</li> <li>explore (research)-study or analyze a concept</li> <li>graph-diagram given numerical data</li> <li>identify (define)-establish what something is</li> <li>illustrate (diagram)-give examples or provide proof for a concept</li> <li>interpret-explain the meaning of</li> <li>justify-show reason for</li> <li>know-understand or recognize nature of</li> <li>measure-determine the size, capacity, or quantity of something</li> <li>observe-notice or inspect a concept</li> <li>predict (make prediction)-indicate what could happen in the future based on reasoning</li> <li>recognize-acknowledge or recognize a concept</li> <li>record-write something down</li> <li>summarize-brief statement of the main points</li> <li>test-perform trials or investigations</li> <li>understand-know meaning of</li> <li>verify-prove, show, or find out</li> </ul>
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Verb glossary helps teachers better understand the expected student actions as specified for each TEKS

**GRADE 8** **Process Standards**  
The student uses scientific inquiry methods during laboratory and field investigations.

**PS STANDARD** **TEKS**  
The student is expected to design and implement comparative and experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology.  
**TEKS 8.7B**

Verb	Concept	How
design implement	experimental investigations	<ul style="list-style-type: none"> <li>making observations</li> <li>asking well-defined questions</li> <li>formulating testable hypotheses</li> <li>using appropriate equipment</li> <li>using appropriate technology</li> </ul>

**The Essentials**  
The focus of this TEKS is on the student's ability to plan and implement investigations, ask and answer questions, make inferences, select/use equipment and solve problems during lab investigations and classroom questions. This process skill can fit into most daily lessons that are focused on the content categories. \*These skills will not be listed under a separate reporting category. For state assessments, these skills will be incorporated into at least 40% of the test questions for categories 1-4 (at assessed grades 5, 8, and Biology). For the classroom, these skills are important to incorporate during lab investigations, hands-on learning activities, and daily lessons.

Clarification of the purpose of process standard TEKS for classroom and assessment integration

## TEKS Checklists

The Step Up to the TEKS Science Series lesson planning component is called the TEKS Checklist.

The TEKS Checklists combine an in-depth understanding of the TEKS along with vertically aligned expectations from surrounding grade levels. This tool was developed by teachers for teachers as a must-have road map!

TEKS Checklists Contain:

- TEKS Breakdown for ALL TEKS, including those not tested and Process TEKS
- Essentials with pointers and tips for each TEKS
- Vertical alignment for each TEKS
- Verb Glossary