

SEESAW SCIENCE TEKS TASKS

USING SEESAW TO BOOST PERFORMANCE ON STAAR

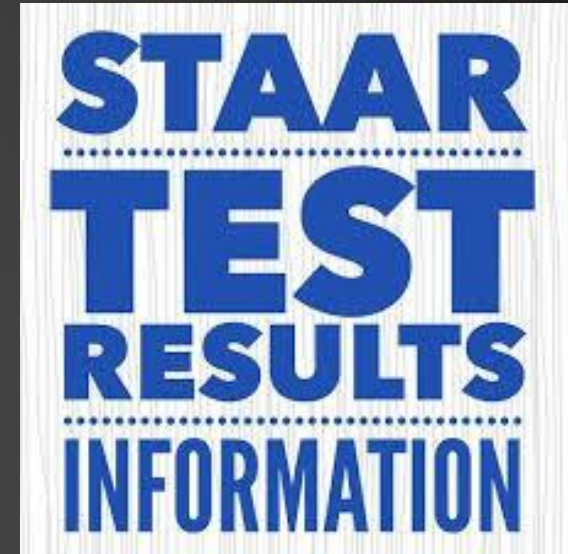
(please download seesaw on to your devices if you don't already have it)

LORA HOLT, M.ED

INSTRUCTIONAL SPECIALIST, ANTHONY ISD

IN EARLY FEBRUARY OF 2017 A GRADE
LEVEL OF 5TH GRADERS TOOK A
MOCK 2016 SCIENCE EXAM AND GOT
AN APPROACHES PASSING RATE OF
28% WITH **0%** MASTERY.

IN MAY OF 2017 THE SAME GROUP
GOT AN APPROACHES PASSING RATE
OF 85% WITH 12% MASTERY.



	Science			
	Total Students	Percent Score	Approaches	Mastery
Anthony Elementary School	68	51.90%	27.94%	0%
Hispanic	65	51.88%	27.69%	0%
White	3	52.33%	33.33%	0%
Female	27	51.67%	22.22%	0%
Male	41	52.05%	31.71%	0%
Gifted Talented	8	69.25%	75%	0%
LEP	17	49.82%	17.65%	0%
Second Year of Monitoring	3	72%	100%	0%
Section 504	4	38%	0%	0%
Special Ed Indicator	4	33.25%	0%	0%

**Mock Exam
2016 Release
Taken the last
week of January
2017**

2017 STAAR Results for Anthony ISD 5th Grade

	Science					
	Total Students	Percent Score	Scale Score	Approaches GL	Meets GL	Masters GL
Anthony Elementary School	65	70.40%	3853.71	84.62%	35.38%	12.31%
Hispanic	62	70.32%	3847.87	85.48%	35.48%	11.29%
White	3	72%	3974.33	66.67%	33.33%	33.33%
Female	25	72.40%	3903.24	88%	44%	12%
Male	40	69.15%	3822.75	82.5%	30%	12.5%
Gifted Talented	8	86.50%	4351.88	100%	87.5%	62.5%
LEP	16	66%	3729.44	87.5%	12.5%	6.25%
Second Year of Monitoring	3	83.33%	4149.33	100%	100%	0%
Section 504	3	68.67%	3794	66.67%	66.67%	0%
Special Ed Indicator	4	46.50%	3314.50	25%	0%	0%

WE OUTPERFORMED
ALL OF THE
DISTRICTS IN OUR
REGION

Grade 5

 <p>Anthony ISD Approaches GL: 84.62% Meets GL: 35.38% Masters GL: 12.31% # of Testers = 65</p>	 <p>Canutillo ISD Approaches GL: 79.26% Meets GL: 48.16% Masters GL: 23.73% # of Testers = 434</p>
 <p>Clint ISD Approaches GL: 68.42% Meets GL: 33.52% Masters GL: 13.34% # of Testers = 877</p>	 <p>Dell City ISD Approaches GL: 00.00% Meets GL: 00.00% Masters GL: 00.00% # of Testers = 3</p>
 <p>El Paso ISD Approaches GL: 72.09% Meets GL: 38.35% Masters GL: 15.59% # of Testers = 4,156</p>	 <p>Fabens ISD Approaches GL: 67.52% Meets GL: 38.22% Masters GL: 14.65% # of Testers = 157</p>
 <p>Ft. Hancock ISD Approaches GL: 76.67% Meets GL: 53.33% Masters GL: 23.33% # of Testers = 30</p>	 <p>San Elizario ISD Approaches GL: 65.06% Meets GL: 28.10% Masters GL: 11.11% # of Testers = 306</p>
 <p>Sierra Blanca ISD Approaches GL: 33.33% Meets GL: 00.00% Masters GL: 00.00% # of Testers = 9</p>	 <p>Socorro ISD Approaches GL: 83.48% Meets GL: 48.93% Masters GL: 20.02% # of Testers = 3,262</p>
 <p>Tornillo ISD Approaches GL: 56.57% Meets GL: 21.21% Masters GL: 9.09% # of Testers = 99</p>	 <p>Ysleta ISD Approaches GL: 77.45% Meets GL: 42.02% Masters GL: 17.40% # of Testers = 2,913</p>
 <p>REGION 19 Average Approaches GL: 75.85% Meets GL: 41.38% Masters GL: 17.06% # of Testers = 12,738</p>	 <p>State Average Approaches GL: 73.00% Meets GL: 41.00% Masters GL: 17.00% # of Testers = 385,853</p>



State Average

Approaches GL: 73.00%
Meets GL: 41.00%
Masters GL: 17.00%

of Testers = 385,853



Anthony ISD

Approaches GL: 84.62%
Meets GL: 35.38%
Masters GL: 12.31%

of Testers = 65



REGION 19 Average

Approaches GL: 75.85%
Meets GL: 41.38%
Masters GL: 17.06%

of Testers = 12,738

HOW DID THEY DO
IT?

HOW DO WE GET
KIDS TO PASS THIS TEST
WITHOUT KILLING
OURSELVES OR
BURNING OUT KIDS?



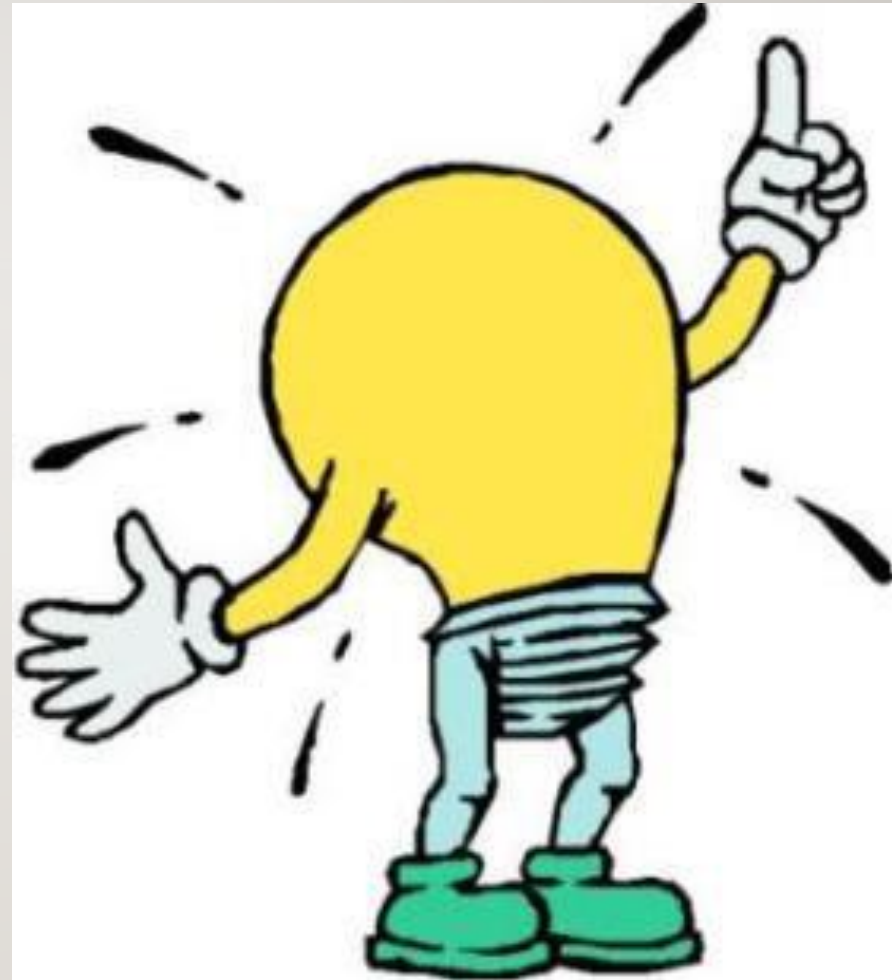
ANOTHER ISSUE: AFTER A UNIT EXAM SO MANY STUDENTS MISS THE CONCEPT AND WE DON'T HAVE TIME TO RETEACH!!!



LET'S SEE WHAT WE
CAN DO...

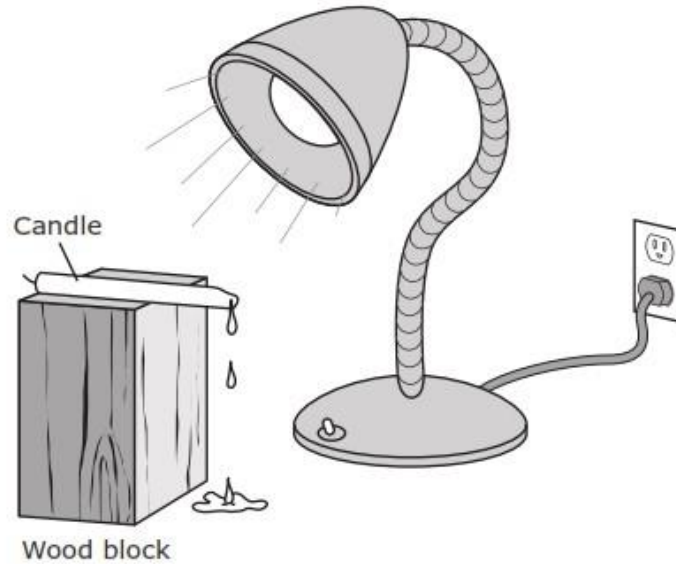


TEKS TASKS!...
LET'S DO ONE



USES OF ENERGY TEST INVESTIGATION (5TH GRADE 5.6A)

- 19 A class is learning about states of matter. The teacher shows the students how to set up the investigation shown in the diagram.



What kinds of energy are needed in this investigation to change the state of matter of the candle?

USES OF ENERGY TEST INVESTIGATION (6TH GRADE 6.9C)

8. A cook heats a meal in a microwave oven. What energy transformations occur between the microwave oven and the meal?

F Electrical energy \longrightarrow light energy \longrightarrow chemical energy

G Chemical energy \longrightarrow thermal energy \longrightarrow light energy

H Electrical energy \longrightarrow electromagnetic energy \longrightarrow thermal energy

J Chemical energy \longrightarrow electromagnetic energy \longrightarrow chemical energy

USES OF ENERGY TEKS TASK INVESTIGATION : REPORT OUT ON SEESAW (5TH GRADE 5.6A, 6TH GRADE 6.9C)

Name _____



How Energy Transfers 5.6A

Energy Scavenger Hunt

Record (on SeeSaw) as many of these energy transformations as your group can find. Circle the ones you recorded by picture, video or by drawing and labeling. If you don't see your combination create your own:

Heat and sound

sound and electricity

electricity mechanical and light

Heat and electricity

sound and mechanical

mechanical and light

Heat and mechanical

sound and light

Heat and Light

sound electricity and mechanical

Heat, sound and electricity

sound, electricity mechanical and light

Heat, sound electricity and mechanical

electricity and mechanical

Heat, light, sound, electricity and mechanical

Electricity and light

CHECKLIST FOR A CRITIQUE

Checklist: Please critique at least two transfers

Energy Transfers 1

- All energies demonstrated or diagramed were identified (25 pts)
- Labels and arrows were used in identifying the energies (25 pts)
- Well elaborated explanation of energy being used (25 pts)
- Used at least 4 vocabulary words correctly while explaining or diagraming the energies (25 pts)

Suggestions to make this diagram or demonstration better: We noticed that _____ have you considered doing _____

CRITIQUING THE SUBMISSIONS ON SEESAW

Science 1 > GC Group C

Get Class Code

- GB Group B
30 items
- GC Group C
21 items**
- GD Group D
24 items
- GE Group E
25 items

Manage Students

102 Nicole Stokes
5 Classes

May 3, 2017

Nicole Stokes

Nicole Stokes Great Job! Group did a great job of teamwork and color pictures. Have you considered adding uses of Nuclear power in your presentation?

Liked Comment

SO WHAT HAPPENS
DURING A LOT OF
CLASSES?

THE
TEACHING
USUALLY
STOPS
HERE!

5E Instructional Model

- Engage
- Explore
- Explain
- Elaborate
- Evaluate

YOU'LL KNOW IF THIS HAPPENS WHEN YOU ARE SAYING AT PLC...

- **We covered that**
- **We did that lab**
- **We read about that**
- **We went over the vocabulary**
- **Don't you guys remember?**
- **Hello? Remember we did this in class?**

SO WHAT IS A TEKS TASK?

- **A TEKS TASK** is an **ELABORATE** part of the 5E in which the student is actually doing the **verb** and **content** of the standard on their own without help from you
- This is a project based formative assessment that is created so that teacher and students can gauge learning **BEFORE** taking the summative, therefore eliminating the majority of reteaching

Let's take a look at the electricity task



PRE-ASSESSMENT

BEFORE 5E BEGINS, STUDENTS ARE GIVEN A PRE-ASSESSMENT THAT THEY WILL TRACK THEIR PROGRESS WITH

Energy Test 5.6A

1. A student made a list of activities that involve energy.


1. Sharks chasing a school of fish
2. A toaster heating bread
3. A cell phone charging
4. A tree limb falling to the ground
5. Tomato plants absorbing sunlight
6. A canoe floating down a river

Which activities on the list are examples of the use of mechanical energy?

A Activities 1, 4, and 6
B Activities 2, 4, and 5
C Activities 1 and 2
D Activities 3, 5, and 6

2016
RS.6A, 5.2D

2. An old-fashioned metal toy is shown below. When the candle is lit, the carousel of horses begins to turn.



2016
RS.6A

Which of these correctly describes the energy that makes the carousel turn?

F Heat from the candle produces currents of warm air.
G Heat from the candle produces electrical energy.
H Light from the candle produces mechanical energy.
J Light from the candle produces wind currents.

STUDENTS TRACK THEIR PROGRESS WITH A TRACKER THAT LISTS THE STANDARDS THEY ARE LEARNING

Students track both content and process standards and question numbers. Do not go over the test until post test.

Properties of Matter Tracker Sheet


Readiness 5.6B: demonstrate that the flow of electricity in circuits requires a complete path through which an electric current can pass and can produce light, heat, and sound

Pre Test

1	2	3	4	5	6	7	8	9	10	11
---	---	---	---	---	---	---	---	---	----	----

Post Test

1	2	3	4	5	6	7	8	9	10	11
---	---	---	---	---	---	---	---	---	----	----




Scientific Method 5.2D: analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence

Pre Test

1	2	3	8
---	---	---	---

Post Test

1	2	3	8
---	---	---	---



Scientific Method 5.2F: communicate valid conclusions in [both] written [and verbal] form[s]

Pre Test

7

Post Test

7


Critical Thinking, Models, History of Science 5.3A: collect information by detailed observations and accurate measuring

Pre Test

4

Post Test

4




Lab Tools and Equipment 5.4A: collect, record and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets and notebooks, timing devices including clocks and stopwatches, and materials to support observations of habitats or organisms such as terrariums and aquariums

Pre Test

6

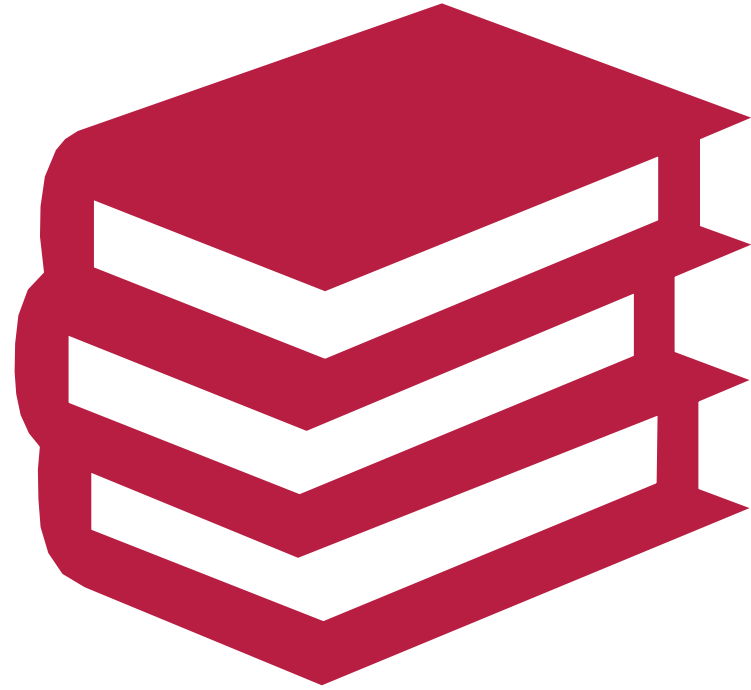
Post Test

6



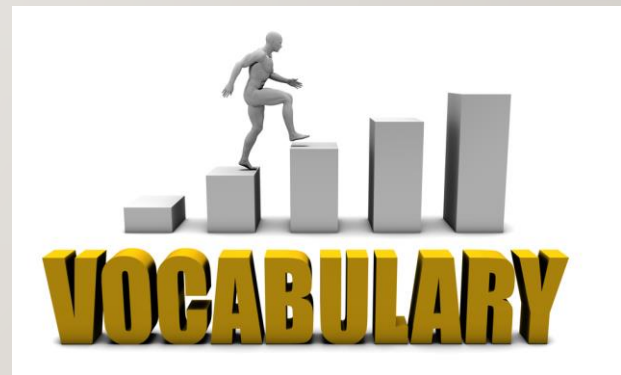
TEACHER TEACHES
CONCEPT WITH KIDS
USING ENGAGE,
EXPLORE AND
EXPLAIN MATERIALS

TEXTBOOK, STEMSCOPES, OTHER
RESOURCES....



USING THE WORDING OF THE
STANDARDS,
AND THE EXAMPLES OF THE RELEASE
THE TEACHER CONSTRUCTS A TEKS
TASK (PERFORMANCE ASSESSMENT)
FOR THE STUDENT TO DO TO
SHOW THEY UNDERSTAND THE
CONCEPT. STUDENTS MUST RELATE
VOCABULARY TO THEIR PROJECT

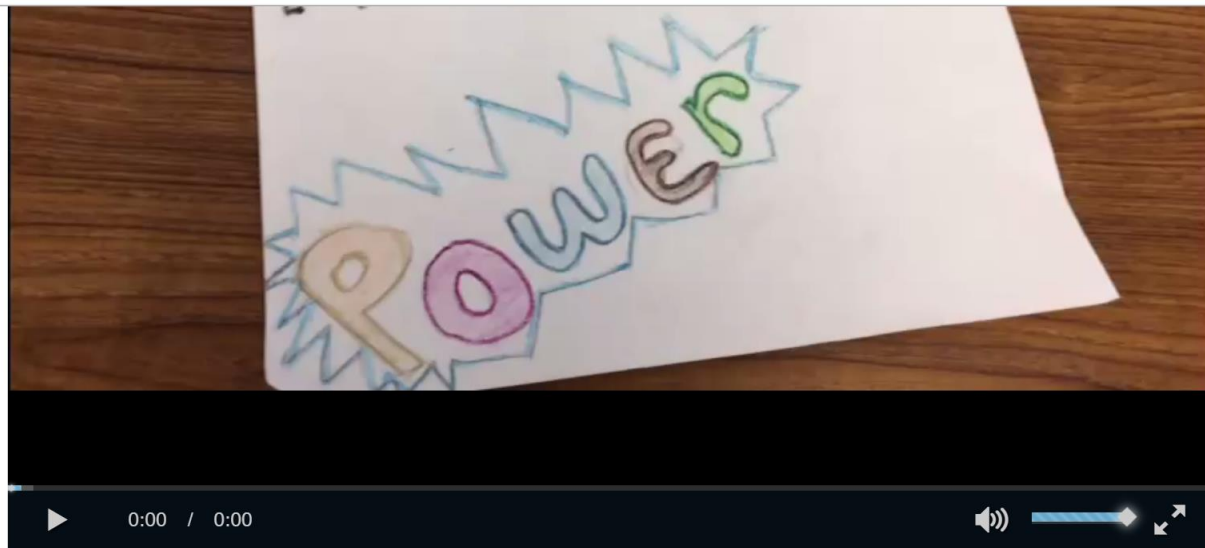
TIME TO SHOW WHAT
WE KNOW!!!!



CRITIQUE: STUDENTS AND TEACHER GIVE FEEDBACK AND ALLOW STUDENTS TO GO BACK AND FIX THEIR MISTAKES

Creating a safe atmosphere for learning





May 3, 2017

♥ Nicole Stokes

💬 **Nicole Stokes** Great Job! Group did a great job of teamwork and color pictures. I have you considered adding uses of Nuclear power in your presentation?

♥ Liked 💬 Comment 🎓 📁 ⋮

Get Class Code

📖 📅 🌐

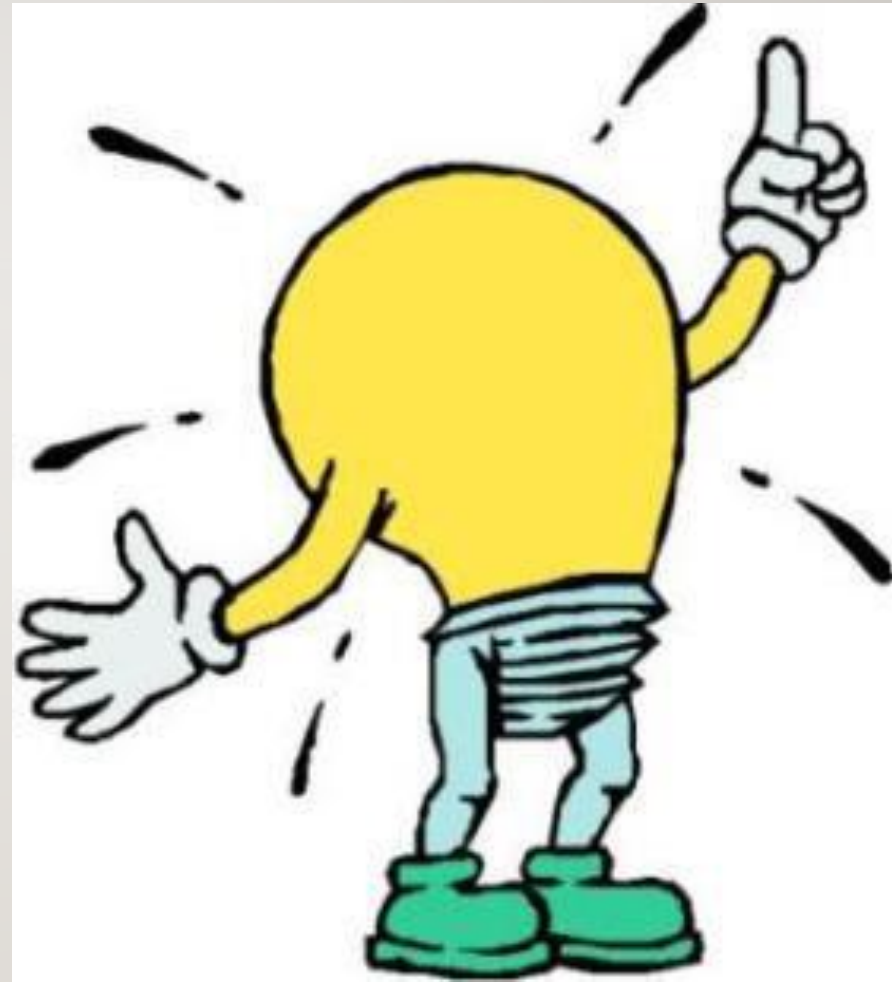
- GB Group B
30 items
- GC Group C
21 items**
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24 items
- GE Group E
25 items

Manage Students

CRITIQUING THE SUBMISSIONS ON SEESAW

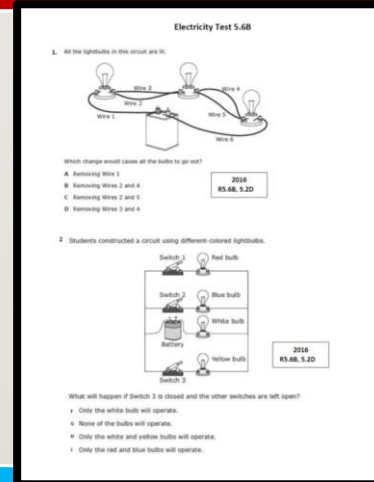
**STUDENTS TAKE THE
POST TEST**

TEKS TASKS!...
LET'S DO
ANOTHER



TEKS VS PERFORMANCE LEVEL DESCRIPTORS

STAAR



TEKS

The student will demonstrate that the flow of electricity in closed circuits can produce light, heat and sound

**Performance
Level
Descriptor**

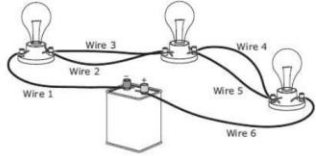
Explain the flow of energy in series and parallel circuits

LET'S TAKE A LOOK AT A PRE/POST TEST!

- Tasks are created with the wording of the standard, performance descriptor and examples from release items

Electricity Test 5.6B

1. All the lightbulbs in this circuit are lit.

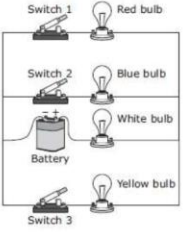


Which change would cause all the bulbs to go out?

- A Removing Wire 1
- B Removing Wires 2 and 4
- C Removing Wires 2 and 5
- D Removing Wires 3 and 4

2016
R5.6B, 5.2D

2. Students constructed a circuit using different-colored lightbulbs.

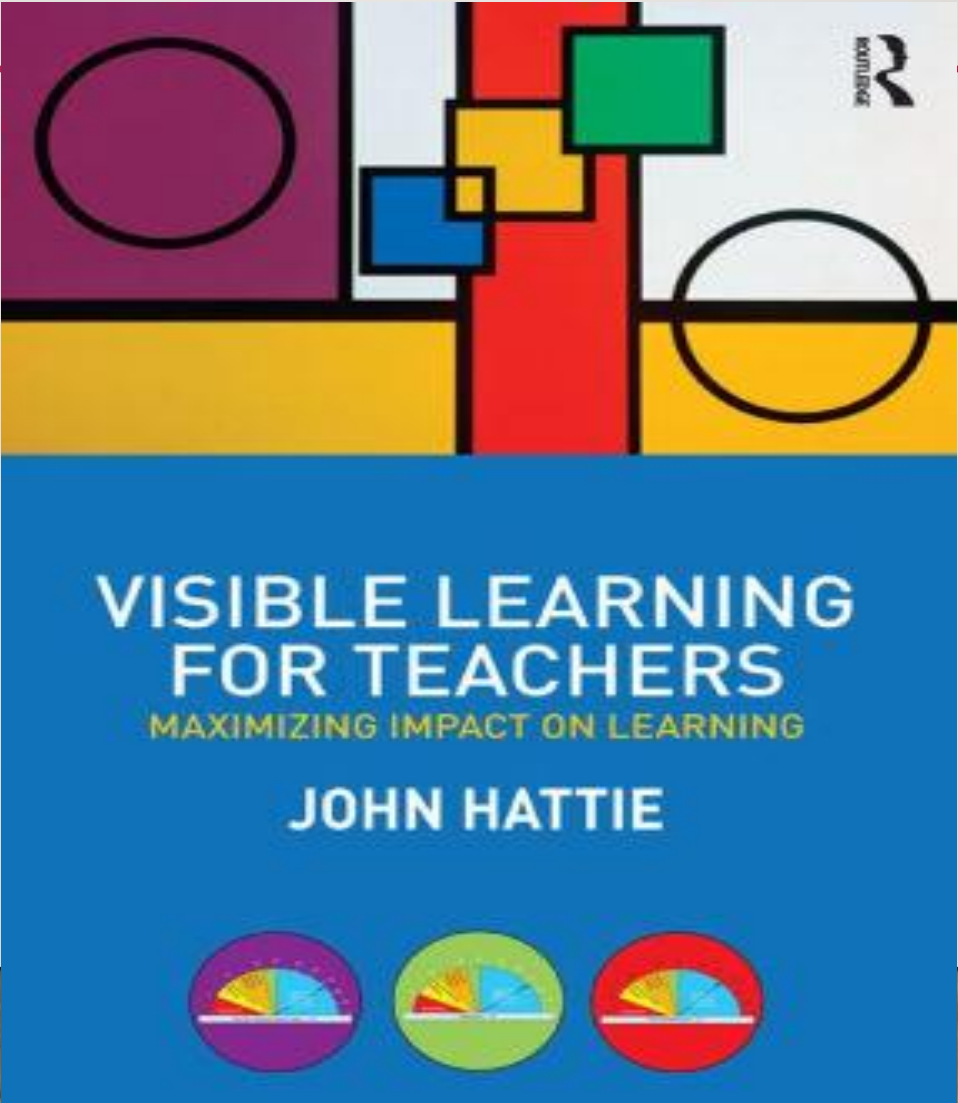


2016
R5.6B, 5.2D

What will happen if Switch 3 is closed and the other switches are left open?

- F Only the white bulb will operate.
- G None of the bulbs will operate.
- H Only the white and yellow bulbs will operate.
- J Only the red and blue bulbs will operate.

THE RESEARCH BEHIND THE TEKS TASKS APPROACH...



FEEDBACK

FEEDBACK HAS A LARGE EFFECT SIZE!
(CAN ACHIEVE OVER A YEAR'S WORTH OF GROWTH)

- The idea of feedback is not what you would think it would be. Feedback is not advice, praise or evaluation. Feedback is a process that involves...



COMPONENTS OF FEEDBACK:

WHERE AM I GOING?

- The teacher has an idea of and can communicate to students what the goal is ... (in this case... pre-test, teacher knows the test items, standards and performance levels)

HOW AM I GOING THERE?

- The teacher has strategies and processes to get the student there that will allow the student to gauge their own learning (teaching concept, the teks task, vocabulary development, practice with processes)

WHERE TO NEXT?

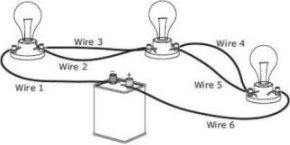
- Students and teacher can gauge if there was success or if more help is needed before moving on to the next concept (Trackers that will identify students for RTI with precise intervention)

WHERE AM I GOING? PRE-ASSESSMENT

BEFORE 5E BEGINS, STUDENTS ARE GIVEN A PRE-ASSESSMENT THAT THEY WILL TRACK THEIR PROGRESS WITH

Electricity Test 5.6B

1. All the lightbulbs in this circuit are lit.

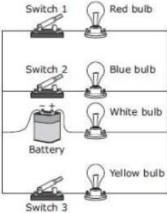


Which change would cause all the bulbs to go out?

- A Removing Wire 1
- B Removing Wires 2 and 4
- C Removing Wires 2 and 5
- D Removing Wires 3 and 4

2016
R5.6B, 5.2D

2. Students constructed a circuit using different-colored lightbulbs.



What will happen if Switch 3 is closed and the other switches are left open?


- F Only the white bulb will operate.
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- H Only the white and yellow bulbs will operate.
- J Only the red and blue bulbs will operate.

2016
R5.6B, 5.2D

HOW AM I GOING THERE?

ENGAGE, EXPLORE, EXPLAIN, **TEKS TASK**

STUDENTS DO TEKS TASK TO SHOW DEEPER UNDERSTANDING OF STANDARD THAT ALLOWS FOR RIGOR

 **TEKS TASK: Electricity**

First:
Create a circuit so that if one light bulb is turned off the others will also turn off. Build the circuit with the following materials:

- 2 batteries
- 3 lightbulbs
- 1 switch
- wires
- battery and bulb holders

Video your circuit and post on seesaw. Use at least 4 vocabulary words while explaining or diagraming your circuit.

Then:
Create a circuit so that if one thing (lightbulb or motor) turns off the others will remain on. Build the circuit with the following:

- 2 batteries
- 2 lightbulbs
- 1 motor
- 1 switch
- Wires
- Battery and bulb holders

Video your circuit and post on seesaw. Use at least 4 vocabulary words while explaining or diagraming your circuit.

Checklist: Please critique at least two groups (once a group has two critiques, find another group)

Circuit 1

- All materials were used in circuit 1 (25 pts)
- When the circuit was closed all of the lights were working (25 pts)
- When one light turned off, none of the others could work (25 pts)
- Used at least 4 vocabulary words correctly while explaining or diagraming the circuit (25 pts)

Suggestions to make this circuit better: We noticed that _____ have you considered doing _____

Circuit 2

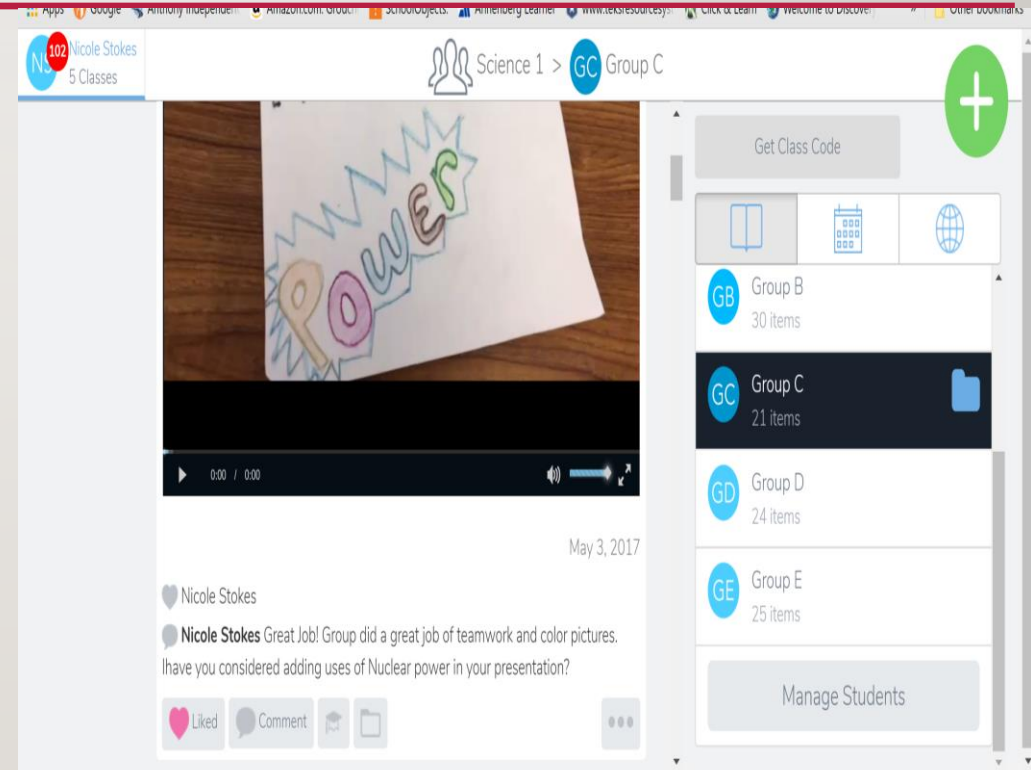
- All materials were used in circuit 2
- When the circuit was closed all of the lights and motor were working
- When one item was turned off the others were able to still work
- Used at least 4 vocabulary words correctly while explaining or diagraming the circuit

Suggestions to make this circuit better: We noticed that _____ have you considered doing _____

SO,...WHY CRITIQUE THE TEKS TASK ON SEESAW?

THE USE OF SEESAW FACILITATES

- A place where teachers can collect student work as a formative assessment to see where students are on a concept
- A safe atmosphere where students can submit their work and receive feedback
- A place where students can use engineering concepts “iterations” to fix their work and seal the learning!



The screenshot displays the Seesaw interface for a teacher named Nicole Stokes, who has 5 classes. The current view is for 'Science 1 > GC Group C'. A video player shows a student's drawing of the word 'POWER' in colorful, stylized letters. Below the video, a comment from Nicole Stokes dated May 3, 2017, reads: 'Great Job! Group did a great job of teamwork and color pictures. Have you considered adding uses of Nuclear power in your presentation?'. The interface includes a 'Get Class Code' field, a sidebar with group lists (Group B: 30 items, Group C: 21 items, Group D: 24 items, Group E: 25 items), and a 'Manage Students' button.

WHERE TO NEXT?

STUDENTS FOLLOW UP ON **GOAL SETTING**

STUDENTS TAKE THEIR POST TEST
AND TRACK THEIR OWN PROGRESS.
THEY CAN EVEN REQUEST
TUTORING FOR THEMSELVES.

Electricity Tracker Sheet

Readiness 5.6B: I can demonstrate that the flow of electricity in circuits requires a complete path through which an electric current can pass and can produce light, heat, and sound

Pre Test

1	2	3	4	5	6	7	8	9	10	11
---	---	---	---	---	---	---	---	---	----	----

Post Test

1	2	3	4	5	6	7	8	9	10	11
---	---	---	---	---	---	---	---	---	----	----

Scientific Method 5.2D: I can analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence

Pre Test

1	2	3	8
---	---	---	---

Post Test

1	2	3	8
---	---	---	---

Scientific Method 5.2F: I can communicate valid conclusions in [both] written [and verbal] form[s]

Pre Test

7

Post Test

7

Critical Thinking, Models, History of Science 5.3A: I can analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student

Pre Test

4

Post Test

4

Lab Tools and Equipment 5.4A: I can collect, record and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets and notebooks, timing devices including clocks and stopwatches, and materials to support observations of habitats or organisms such as terrariums and aquariums

Pre Test

6

Post Test

6

HOW DID WE DO IN 2017?

BEFORE TEKS TASKS

- **25% passing on standards for the mock**

AFTER TEKS TASKS

- **Up to 85% passing on the post tests and 85% passing on the STAAR (in a 3 and 1/2 month period after the mock test)**

Post test: Properties of Matter

Passed
70%

Advanced
4 students

Post test: Electricity

Passed
80%

Advanced
16 students

Post test: Energy

Passed
79%

Advanced
2 students

Post test: LIGHT

Passed
62%

Advanced
7 students

Post test: Landforms

70%

16 students

Post test: Fossil Fuels

72%

11 students

Post test: Life Cycles & behaviors

Passed
76%

Advanced
7 students

Post test: Organisms & Env

Passed
55%

Advanced
6 students

Post test: Adaptations

Passed
80%

Advanced
15 students

WHAT HAPPENED AFTER 2017?

5th Grade 2018: 80% Approaches 35% Meets and 16% Mastery
(with a new bilingual teacher from New Mexico)

5th Grade 2019: Mono: 80% Approaches, 48% Meets and 16% Mastery

8th Grade 2019: 80% Approaches, 35% Meets, 16% Mastery
(up from 2018: 64% Approaches, 37% Meets and 16% Mastery)

YOUR TURN, YOU DESIGN A TEKS TASK!



YOUR TASK

- Think of a standard that repeatedly gives your students problems
- Examine the process and content standards tested
- Read the PLD to find out if that standard is in the PLD and how it is described
- Come up with a task for kids to do that involves the standards (process and content) using the examples in the test items and the PLD
- Give an opportunity for students to relate vocabulary to content
- Come up with a materials list
- Come up with a rubric for students to follow and critique
- Track your progress

WHERE CAN I FIND OUT MORE?

- **El Paso Science
Teachers K-12
Website**

- Lora Holt -- Instructional Specialist
- Anthony ISD... techscichick@gmail.com
- lholt@anthonyisd.net