Your GUIDE to 5th Grade SCIENCE STAAR

TO THE BUYER

Thank you for downloading this file! I hope you find this resource useful and I look forward to excellent feedback.

Please contact me with any questions, concerns, or comments at thesciencepenguin@yahoo.com.

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Your Guide to 5th Grade Science STAAR

About this Guide

This document is your guide to the 5th grade Science STAAR exam. As a Texas teacher, I spent many hours researching and learning about STAAR to make sure my students were as prepared as possible.

The focus of these pages is on the 3-4 weeks before STAAR. I give a benchmark before this time to make sure I can look at student data.

My Goals for Test Prep

1. Include student goal setting.
2. Use whole group mini-lessons.
3. Utilize stations.
4. Meet with small groups for remediation.
5. Add pure fun.

What's included?

- suggestions for using Released STAAR data with students and for your own planning
- how 5th Grade Science STAAR is structured
- documents for Released STAAR planning
- my review lesson timeline for 3 weeks (plus 2 days)
- Minute to Win It games
- 4 alien themed review stations

About SCIENCE STAAR

About Science STAAR

Know Your Test

1. Download the STAAR Snapshot from Lead4ward. This one-page document has the *tested* Readiness Standards, Supporting Standards, and Process Standards color-coded and sorted.

2. Take a look at the reporting categories and the number of questions on STAAR from each category.

Reporting Category	# of Questions on STAAR
Matter and Energy	8
Force, Motion and Energy	10
Earth and Space	12
Organisms and Environments	14

3. Look at the percentage of the test devoted to Readiness Standards and Supporting Standards.

Science STAAR	Readiness Questions	Supporting Questions
Percentage of Test	60-65%	35-40%
Number of Questions	26-29	15-18

About Science STAAR

4. Take a look at the number of questions that were dual coded. Dual coded questions test both a Readiness or Supporting Standards AND a process skill.

Question Type	# of Questions on STAAR in 2013	# of Questions on STAAR in 2014
Dual Coded	about 26/44	about 28/44

5. About HALF of the dual coded questions are TEKS 5.2D.

analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence

6. Use the information from #1-5 to make a list of Focus TEKS for the test. Here is my Focus TEKS List. It includes Readiness Standards and 5.2D.

Readiness Standards:

- classifying matter based on physical properties
- the uses of mechanical, light, thermal, electrical, and sound energy
- the flow of electricity in a complete circuit produces heat, light, and sound
- reflection and refraction of light
- the processes that led to the formation of sedimentary rock and fossil fuels
- recognizing how landforms are the result of changes to Earth's surface
- identifying alternative energy resources
- day/night cycle and apparent movement of the sun across the sky
- how organisms survive by interacting with living and non-living elements
- the flow of energy in a food chain and food web
- comparing structures and functions of species that help them survive
- differentiating between inherited traits and learned behaviors

Process Skill:

- analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence

About Science STAAR

7. Look at all parts of the standard when making your reteach plans. In the example below, students don't need to just know about structural adaptations, they need to be able to compare them and relate it to surviving in their environments.

   5.10 The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to:

   5.10A compare the structures and functions of different species that help them live and survive such as hooves on prairie animals or webbed feet in aquatic animals

8. Move on to the next section to read more about Benchmark Data.

Benchmark DATA

Benchmark Data

1. Give the 2013 or 2014 Released STAAR. Most districts have a program that shows you information for each of the TEKS and each of your students.

2. We go over the benchmark as a class and students complete the Science Benchmark page shown on the right (2013 is on page 10 and 2014 is on page 11).

   Students mark a smiley face if the answer is correct and an X if the answer is incorrect. They use this information to complete the back.

Name _____ Science Benchmark

1. Force	2. Matter	3. Ecosystems and Decomposers	4. Light
5. Day and Night	6. Forms of Energy	7. Cycles in Space	8. Food Webs
9. Fossils	10. Matter	11. Life Cycles	12. Soil
13. Traits	14. Properties of Water	15. Water Cycle	16. Electricity
17. Erosion	18. Alternative Energy	19. Traits	20. Erosion
21. Mixtures and Solutions	22. Adaptations	23. Light	24. Alternative Energy
25. Ecosystems and Change	26. Forms of Energy	27. Food Webs	28. Water Cycle
29. Ecosystems and Change	30. Alternative Energy	31. Light	32. Day and Night
33. Matter	34. Life Cycles	35. Electricity	36. Ecosystems and Change
37. Climate and Weather	38. Properties of Water	39. Traits	40. Mixtures and Solutions
41. Force	42. Photosynthesis	43. Electricity	44. Adaptations

Science Benchmark Data

Keep Working	Getting There	Almost There	Way to Go!	Total Rock Star

0 45 55 65 75 85 100

List 5 things you did well on.

_____
_____
_____
_____
_____

List 5 things you need to work on.

_____
_____
_____
_____
_____

I feel _____
_____
_____

3. This page (on page 12) is located on the back of the benchmark sheet. I tell students their percent score based on the number they missed.

Students use the information on the front to make a list of topics they did well on and 5 topics to work on. I have them complete the sentence about how they feel so I can see how they are doing.

Benchmark Data

4. I use Eduphoria (provided by the district) to look up the percentage of students who answered each SE correctly. I fill out the information on the table shown to the right.

Then, I rank the importance of reviewing each SE. The standards in blue are Readiness, which are tested more often than the Supporting Standards in orange. (Found on page 13)

Data Analysis for Content SEs

Student Expectation	Correct	Ranking
5.5A (R): properties of matter	**editable!**	
5.5B (S): boiling/freezing point of water		
5.5C (S): some mixtures maintain properties		
5.5D (S): physical changes in solutions		
5.6D (S): design an experiment that test effect of motion		
5.6A (R): uses of energy		
5.6B (R): flow of electricity		
5.6C (R): reflection and refraction of light		
5.7A (S):sedimentary rock and fossils fuels		
5.7B (R): landforms result of wind, water, and ice		
5.7C (R): identify alternative energy resources		
5.7D (S): fossils as evidence of the past		
5.8C (R): Earth rotates on its axis causing day and night		
5.8D (S): Physical characteristics of sun, Earth, and moon		
5.9A (R): interacting with living and nonliving elements		
5.9B (R): flow of energy in a food web		
5.9C (S): predict changes in ecosystems		
5.9D (S): significance of carbon dioxide and oxygen cycle		
5.10A (R): compare structures and functions of different species		
5.10B (R): differentiate between inherited traits and learned behaviors		
5.10C (S): differences between complete and incomplete metamorphosis in insects		

5. I use the document to the right to go over whether the standards from previous grades have been reviewed and then rank those standards. I honestly don't normally have time to review those, but if they haven't been reviewed in 5th grade, it is important to review them. (Found on page 14)

Data Analysis for Content SEs

Tested TEKS from Previous Grade Levels

Student Expectation	Reviewed in 5th grade?	Teaching Importance Ranking
3.5C: changes caused by heating or cooling	**editable!**	
3.6B: position can be changed by pushing and pulling		
4.7A: properties of soils		
4.8A: renewable and nonrenewable resources		
4.8B continuous movement of water		
4.8C shadows, tides, lunar cycle, seasons		
3.7B: rapid changes to Earth's surface		
3.8D: identify planets in Earth's solar system		
3.10C: compare life cycles		

Name _____ Released Science STAAR 2013

1. Force	2. Matter	3. Ecosystems and Decomposers	4. Light
5. Day and Night	6. Forms of Energy	7. Cycles in Space	8. Food Webs
9. Fossils	10. Matter	11. Life Cycles	12. Soil
13. Traits	14. Properties of Water	15. Water Cycle	16. Electricity
17. Erosion	18. Alternative Energy	19. Traits	20. Erosion
21. Mixtures and Solutions	22. Adaptations	23. Light	24. Alternative Energy
25. Ecosystems and Change	26. Forms of Energy	27. Food Webs	28. Water Cycle
29. Ecosystems and Change	30. Alternative Energy	31. Light	32. Day and Night
33. Matter	34. Life Cycles	35. Electricity	36. Ecosystems and Change
37. Climate and Weather	38. Properties of Water	39. Traits	40. Mixtures and Solutions
41. Force	42. Photosynthesis	43. Electricity	44. Adaptations

2014 Released Science STAAR

Name _____

1. Day and Night	2. Constant Properties	3. Traits	4. Light
5. CO_2/ O_2	6. Alternative Energy	7. Water Cycle	8. Slow Changes
9. Ecosystems	10. Experiments	11. Ecosystems	12. Soil
13. Life Cycles	14. Matter	15. Electricity	16. Adaptations
17. Mixtures	18. Weather and Climate	19. Energy	20. Fossil Fuels
21. Adaptations	22. Light	23. Energy	24. Slow Changes
25. Ecosystems	26. Electricity	27. Water Cycle	28. Food Webs
29. Mixtures	30. Traits	31. Experiment	32. Rock
33. Matter	34. Adaptations	35. Shadows	36. Force
37. Food Webs	38. Alternative Energy	39. Matter	40. Light
41. Ecosystems	42. Planets	43. Ecosystems	44. Energy

Science Benchmark Data

Keep Working	Getting There	Almost There	Way to Go!	Total Rock Star

0 45 55 65 75 85 100

List 5 things you did well on.

_____

_____

_____

_____

_____

List 5 things you need to work on.

_____

_____

_____

_____

_____

I feel _____

_____

_____

Tested 5th Grade Content SEs

Student Expectation	Correct	Ranking
5.5A (R): properties of matter		
5.5B (S): boiling/freezing point of water		
5.5C (S): some mixtures maintain properties		
5.5D (S): physical changes in solutions		
5.6D (S): design an experiment that test effect of motion		
5.6A (R): uses of energy		
5.6B (R): flow of electricity		
5.6C (R): reflection and refraction of light		
5.7A (S):sedimentary rock and fossils fuels		
5.7B (R): landforms result of wind, water, and ice		
5.7C (R): identify alternative energy resources		
5.7D (S): fossils as evidence of the past		
5.8C (R): Earth rotates on its axis causing day and night		
5.8D (S): Physical characteristics of sun, Earth, and moon		
5.9A (R): interacting with living and nonliving elements		
5.9B (R): flow of energy in a food web		
5.9C (S): predict changes in ecosystems		
5.9D (S): significance of carbon dioxide and oxygen cycle		
5.10A (R): compare structures and functions of different species		
5.10B (R): differentiate between inherited traits and learned behaviors		
5.10C (S): differences between complete and incomplete metamorphosis in insects		

Tested Content SEs from 3rd and 4th Grade

Student Expectation	Reviewed in 5th grade?	Teaching Importance Ranking
3.5C: changes caused by heating or cooling		
3.6B: position can be changed by pushing and pulling		
4.7A: properties of soils		
4.8A: renewable and nonrenewable resources		
4.8B continuous movement of water		
4.8C shadows, tides, lunar cycle, seasons		
3.7B: rapid changes to Earth's surface		
3.8D: identify planets in Earth's solar system		
3.10C: compare life cycles		

Test Prep

TIMELINE

Test Prep Timeline

Here is a sample of my 3 week review timeline. This is based on 90 minutes a day of science.

Week 1 and 2

For the first 2 weeks of review, we spend about half of our time on a whole group mini-lesson, half an hour in stations or small group with me, then the final 10 minutes playing a vocabulary review game.

Notebook Mini-lesson	Stations/ Small Group	Vocabulary Review
40 minutes	30 minutes	10 minutes

Week 3

The week before testing is a little different.

Test Tips Lesson	Stations/ Small Group	Minute to Win It!
20 minutes	50 minutes	10 minutes

Two Days Before Testing

The two days before testing is spent on fun station activities with an alien and space theme.

Test Prep

TIMELINE

Week 1 &2

Test Prep Timeline

Here is an example of the first 2 weeks of mini-lessons.

Week 1

TEKS	Activity
5.5A Properties of Matter	Read and discuss short passage, complete fold-up in teams, determine physical properties of aluminum, analyze a sample question
5.5C-D Mixtures and Solutions	Read and discuss short passage, compare and contrast mixtures and solutions, sample question
5.6C Behavior of Light	Read and discuss short passage, compare and contrast reflection and refraction, observe lenses, sample question
5.6B Circuits	Read and discuss short passage, make and draw circuits, sample question
5.7C Alternative Energy	Read and discuss short passage, Whole Brain Review, sample question

Test Prep Timeline

Week 2

TEKS	Activity
5.7A Fossil Fuel Formation	Read and discuss short passage, work on Fossil Fuels Mini-Poster, sample question
5.7B Changes to Earth's Land	Whole Brain Review, Weathering Causes Fold-up, sample question
5.8B Water Cycle	Water Cycle StudyJams and Fold-up, sample question
5.9A Ecosystems	Analyze a photo of an ecosystem, determine biotic and abiotic elements, sample question
5.9B Food Webs	Analyze a food web, sample question

Mini-lesson Resources

Super Science Test Prep Lessons: 20 lessons with reading, graphic organizer, activity, and review question

Science Posters: 25 printables mini-posters for students to create and review

Science Test Prep Printables: 39 worksheets designed for quick test prep

Test Prep Timeline

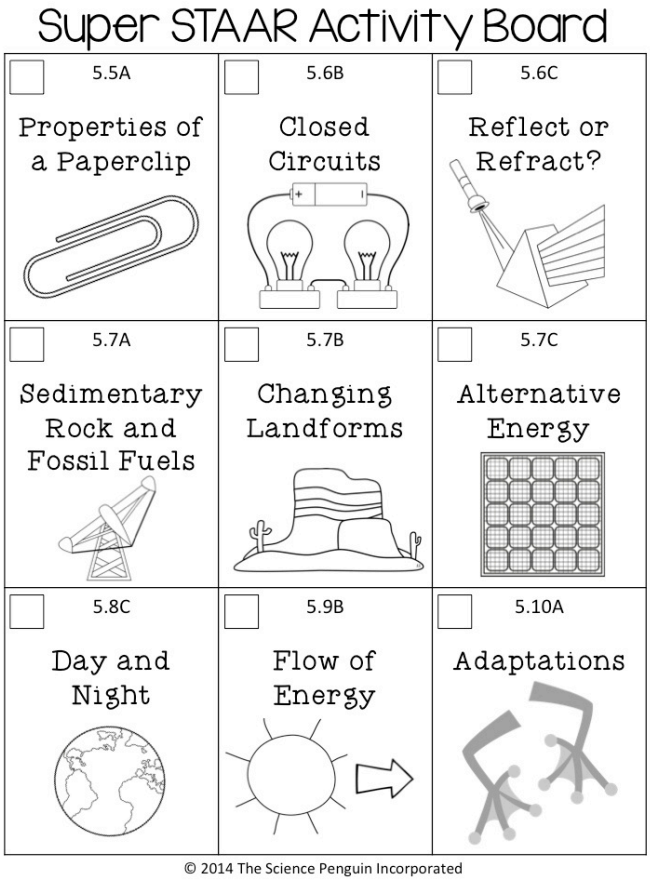
Here is a sample of my 2 week review timeline for stations.

Week 1 and 2

I love this Super STAAR activity board with 9 stations that I have listed in my TpT store at www.shopthesciencepenguin.com

Student pairs work through the 9 activities that review the readiness standards.

Learn more about this resource: Super STAAR Activity Board



Test Prep Timeline

Here is a sample of my 2 week review timeline for small group.

Week 1 and 2
For small group, we focus on one of the TEKS each day.

Students in small group will change day to day based on Released STAAR performance and my notes.

Week 1

TEKS	Activity
5.5A Properties of Matter	Work together to determine physical properties of a substance.
5.5C-D Mixtures and Solutions	Make a mixture and a solution and identify physical properties that are maintained and those that change.
5.6C Behavior of Light	Make observations with objects, complete mini-poster
5.6B Circuits	Create and analyze circuits
5.7C Alternative Energy	Complete mini-poster

Test Prep Timeline

Week 2

TEKS	Activity
5.7A Fossil Fuel Formation	Whole Brain review of steps, sequencing the steps, observing images
5.7B Changes to Earth's Land	Erosion Station Activities
5.8B Water Cycle	Explaining Processes and Vocabulary
5.9A Ecosystems	Make observations in photos and explain interaction of biotic and abiotic elements
5.9B Food Webs	Make a food web using cards, analyze it, and make predictions for changes

Test Prep

TIMELINE

Week 3

Test Prep Timeline

Here is an example of Week 3 for mini-lessons.

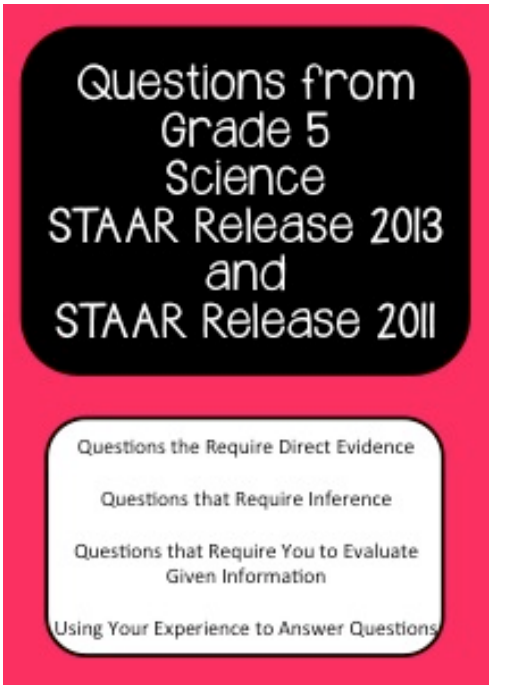
Week 3

We spend about 20 minutes working on questions that require process skills.

Day	Question Type
1	4 Questions that Require Direct Evidence
2	4 Questions that Require You to Evaluate Given Information
3	4 Questions that Require Inference
4	4 Questions that Require You to Think about Past Experiences

Download the questions I use at the link below.

https://drive.google.com/file/d/0Bw6pPmqCbfwZY1BnYjVhZ2xQQms/view



Test Prep Timeline

Here is an example of Week 3 for stations.

Week 3

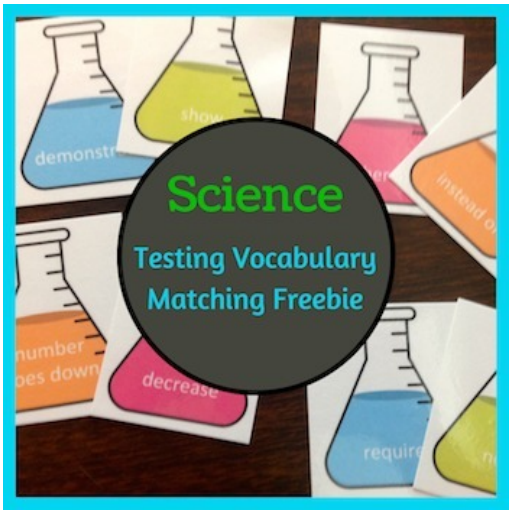
We spend about 50 minutes in stations and small group. This week, I see the same students every day for small group. The other students are working with learning partners to complete a series of stations (taken from BIG Science Stations Units).

Test Prep Timeline

Here is an example of Week 3 for small group.

Week 3

For small group instruction, we review testing vocabulary and practice test-taking skills.



We start off working with the words from Testing Vocabulary Matching Freebie.

Then, we work on practice questions and review content as needed. Each group goes a little differently depending on my students.

The main thing about these sessions is that I try to keep them SUPER DUPER positive. Overall, the students enjoy getting some attention from the teacher and like to receive the support.

Small Group Resources

Super Science Test Prep Lessons: 20 lessons with reading, graphic organizer, activity, and review question

Science Posters: 25 printables mini-posters for students to create and review

Science Test Prep Printables: 39 worksheets designed for quick test prep

Test Prep

TIMELINE

Week 3

Minute to Win It

Test Prep Timeline

Here is an example of Week 3 for Minute to Win It!

Week 3

Each of the 4 days has a different Minute to Win It! game. The directions are on the following pages.

These 4 games have a fun alien/ outer space theme!

For Minute to Win It, I divide students into groups of 4-5. I start the timer and one for one minute only one student in each group takes his/her turn performing the task.

After I call time, the groups set up the materials again and the next student does the task. We keep going until all students have gone. At the most, this takes 10 minutes from set-up to cleanup!

UFO STACKING

Materials per Group: 6-8 plastic solo cups, bucket of water with a plastic plate floating on it

Directions: Stack as many cups as you can on top each other. When I call "time", count how many cups are stacked on the plate.

STAR STEALER

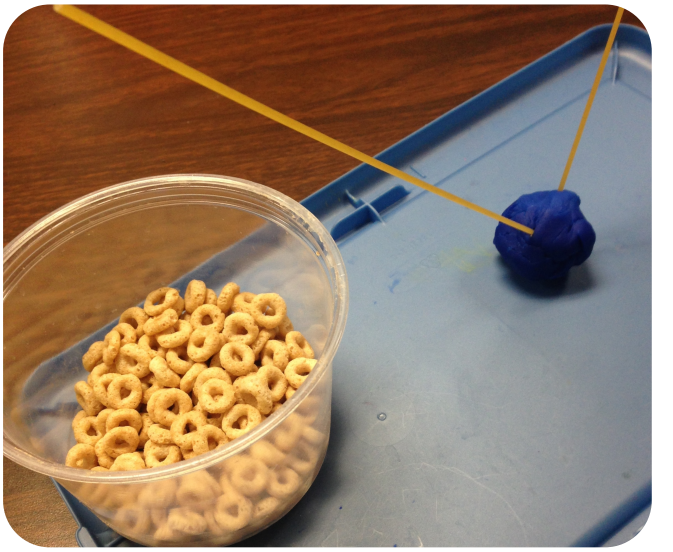
Materials per Group: 10-15 Glow in the Dark Stars, a set of chopsticks, a tray, small cup

Directions: Lay all the stars out flat. Put one hand behind your back and use the chopsticks to move the stars into the cup. When I call "time", count how many stars are in the cup.

ALIEN ANTENNAE

Materials per Group: cup of Cheerios, play dough balled up with 2 pieces of spaghetti in it

Directions: Put as many Cheerios on the spaghetti as you can. When I call "time", count how many Cheerios you stacked on the spaghetti.



GLOWING PLANET CAPTURE

Materials per Group: 5-6 bouncy balls, solo cup (you may want to put something heavy to weigh down the cup inside)

Directions: Stand several feet away from a cup that is placed on a table. Bounce as many balls into the cup as possible. 2 other team members are responsible for gathering the balls that did not go in the cup. This one can get crazy, but it's crazy fun!

Test Prep

TIMELINE

Two Days Before STAAR

Test Prep Timeline

Two Days Before Testing

<u>Two Days Left!</u>
The two days before testing are for fun and review. I have centers set up around the room with a space and alien theme. All students are working in groups to complete the stations. I don't do a mini-lesson and I don't meet with groups.

I'm working on developing a larger Alien Review Stations pack for sale in my TpT store, but in the meantime, you can use the activities starting on page 28.

My students LOVED these stations!

Alien Invasion!

1. Read the cards to learn more about the aliens' home and make notes in the Notes Box about what the aliens tell you.

2. Draw a picture of what you think the landscape of their home looks like.

3. Draw conclusions about where they live.

#1

Our home has many sand dunes, wide valleys, and mountains.

#2

Our home is warm and dry.

#3

Our home has little plant life.

#4

Our plants have long roots, thorns, and waxy stems.

#5

Our home uses wind energy and solar energy for power.

#6

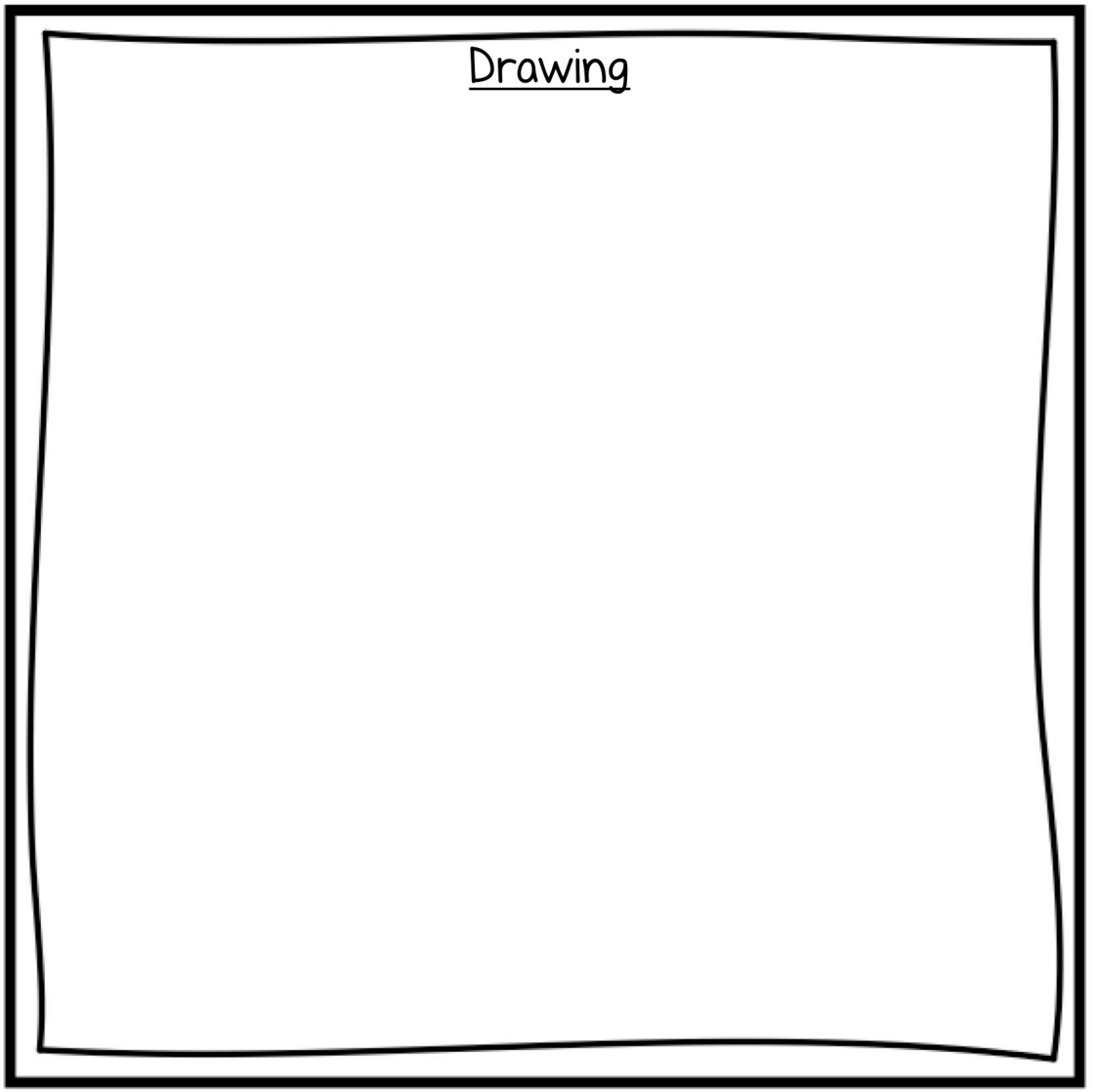
Only 20% of our home planet is covered in water.

Name _____

Alien Invasion!

Notes

Drawing



Conclusions

Alien Invasion Extension

1. Use the information the aliens gave you to design an alien that would do well in that environment. Be sure to label its physical traits and the traits' functions.

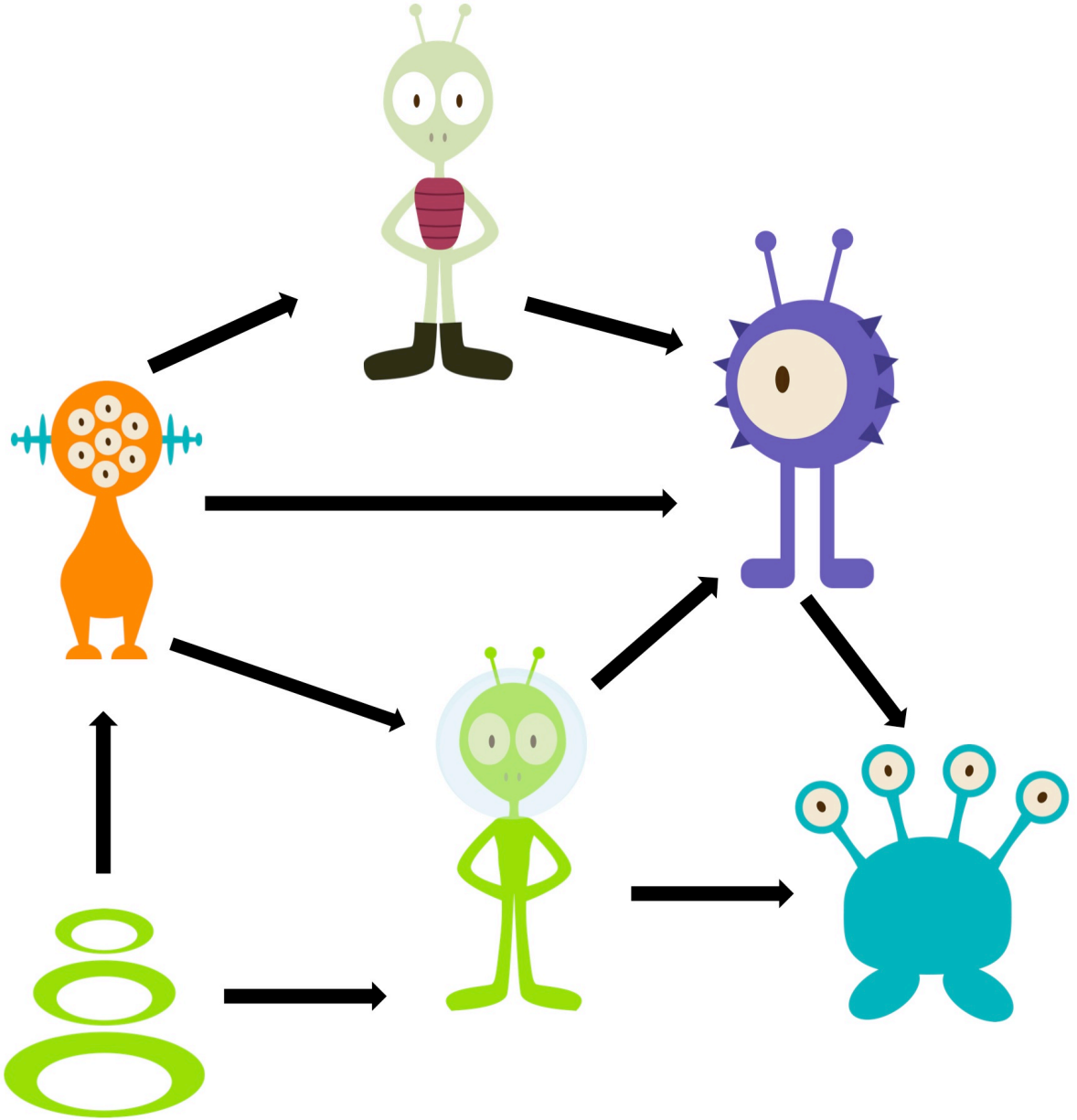
2. Then, explain what you alien does to survive in its home.

Alien Food Web

1. Follow the directions on your student page.

Name _____

Alien Food Web



1. Label each as a producer, carnivore, omnivore, or herbivore.

2. What would happen if half the population of six-eyed aliens died due to a disease?

_____

_____

_____

_____

_____

3. How many organisms in this food web can be broken down by decomposers?

_____

4. What do the arrows represent?

_____

Alien Traits

1. Read each of the alien information cards.

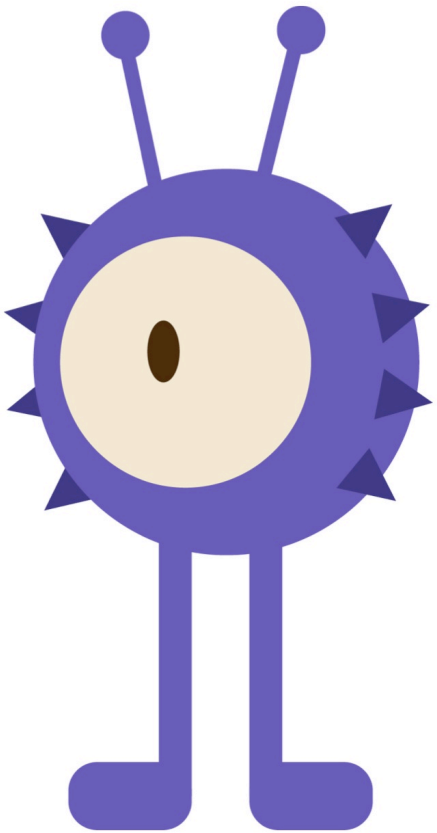
2. For each, record a learned behavior and inherited trait.

3. For each, identify a structural adaptation and its function.

Alien Trait Cards

Boombles

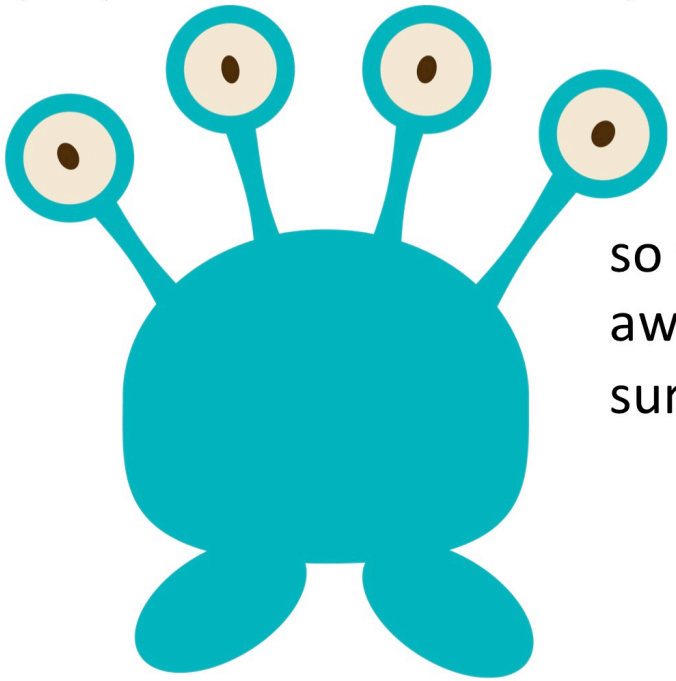
Average Height: 50 inches
Diet: hunt other aliens, mainly Zoombas, Weebles, and Honchies
Protection: spikes and good eyesight



Other Information: Boombles struggles with poor balance. They often use a stick to help them keep their balance. Their antennae help him communicate with other Boombles.

Clinkles

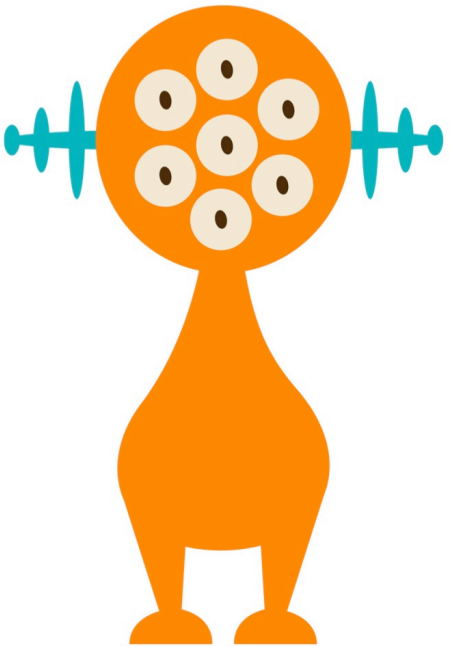
Average Height: 80 inches
Diet: hunts all other aliens
Protection: good eyesight, large size, strength
Other Information: Clinkles use their large size and strength to attack their prey. Parents teach their young how to turn their eyes in all directions so they are aware of their surroundings.



Alien Trait Cards

Honchies

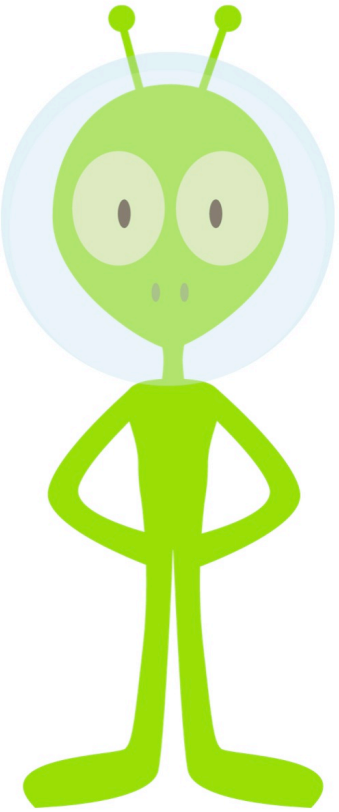
Average Height: 20 inches
Diet: space plants
Protection: movement detectors on each side of their heads, good eyesight
Other Information: Honchies are very good at hiding from predators. They easily digest strange plant material.



Some Honchies learn to cover themselves with leaves to hide from predators.

Zoombas

Average Height: 40 inches
Diet: eat plants and Honchies
Protection: long arms
Other Information: When Zoombas stretch their arms in a particular way, they are able to easily catch Honchies. Most Zoombas dance wildly in order to communicate with each other. They wear a glass case over their heads to protect themselves. If they have trouble finding Honchies, they eat space plants.



Name _____

Alien Traits

Alien Type	Inherited Trait	Learned Behavior	An Adaptation and its Function
Boombles			
Clinkles			
Honchies			
Zoombas			

Radioactive Alien Goo

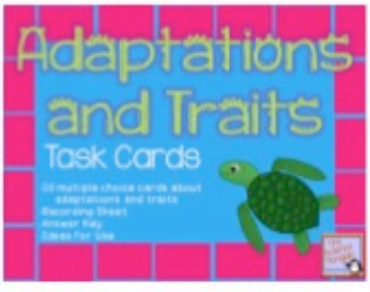
Materials: Elmer's Gel Glue, Borax, warm water, green food coloring, timer, 2 beakers, tray, graduated cylinder

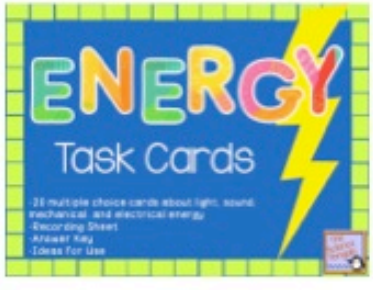
Directions:

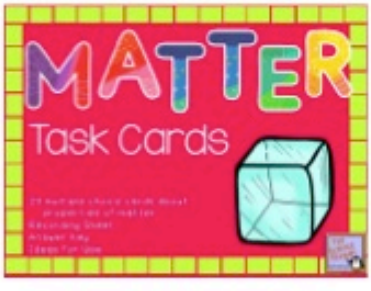
1. Fill a beaker with 50 ml of warm water. Pour in 1 ounce of glue. Add two drops of food coloring. Stir for 2 minutes.
2. Fill another beaker with 20 ml of warm water. Pour in 10 ml of Borax. Stir for 2 minutes.
3. Pour both beakers into the tray. Don't worry about getting every grain of Borax out.
4. Squish it with your fingers until it becomes solid. Divide up the alien goo equally and put it in a baggie for each person.
5. Clean up, then play with your creation.

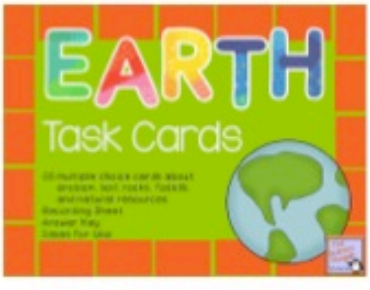
5TH GRADE SCIENCE STAAR BUNDLE

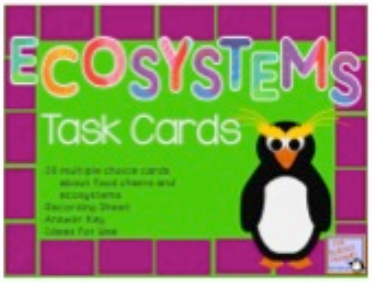
The Science Penguin

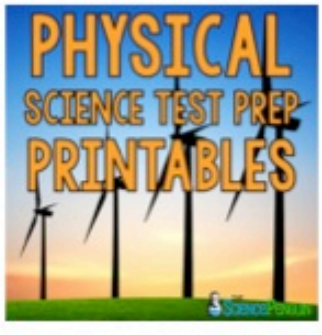












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