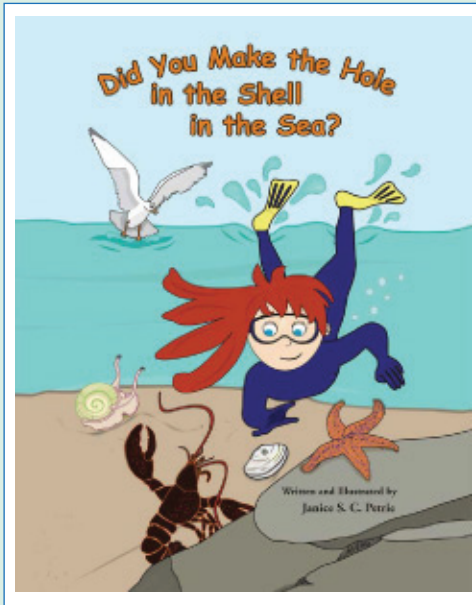


Story Elements for the book: *Did You Make the Hole in the Shell in the Sea?*



Title: *Did You Make the Hole in the Shell in the Sea?*

Author: Janice S. C. Petrie

Illustrator: Janice S. C. Petrie

Main Characters: a girl diver, a man in charge of the beach, a sea star, a seagull, a lobster, and a moon snail.

Additional Characters: A monk fish, a haddock, and a cod become the audience for the story. They listen to the story and comment on what they hear.

Setting: the beach and shallow ocean water just offshore.

Problem: A girl needs to solve the mystery of what drilled a hole through a clamshell to have the beach reopened and to squelch a shark scare.

Solution: The girl learns how several different sea animals eat clams, until she finds one that drills a hole, the moon snail. With this discovery, the beach is reopened.

Events:

A. A girl diver finds a clamshell with a hole drilled through it, and shows it to the man in charge of the beach.

1. What did the girl diver find under the sea? (a clamshell with a hole in it) Fact
2. What did the girl do with the clamshell? (She showed it to a man at the beach.) Fact
3. Why did the girl show the clamshell to the man at the beach? (The girl didn't know what made the hole in the shell, and thought he would know.) Inference
4. What's a clam? (A clam is a sea animal that lives in the ocean. It has two shells held together by a hinge, and a soft body living inside that people and other sea animals eat.) Vocabulary

B. The man at the beach thinks a shark bit a hole through the clamshell and closed the beach.

1. What does the man think made the hole in the clamshell? (a shark) Fact
2. When the man thought a shark bit a hole in the clamshell, what did he do? (The man closed the beach.) Fact
3. Why do you think the man closed the beach? (He was afraid a shark would attack a swimmer.) Inference
4. What's a shark? (Sharks are fish with skeletons made out of cartilage, like your ear, rather than bone. They have rows of teeth that can replace a tooth that's been lost. Sharks often swim with their dorsal fin above the water, and their body below the water.) Vocabulary

C. The girl doesn't really think a shark made the hole in the clamshell, and she goes to find the sea creature that did make the hole.

1. Does the girl think the shark bit a hole through the shell with its tooth? (No) Inference
2. Why doesn't the girl think a shark made the hole? (No one's seen one around, sharks don't usually make just one hole, they make many.) Fact
3. What is the girl's plan for solving the mystery of what made the hole in the shell in the sea? (She's going to find other sea animals and ask them if they made the hole.) Fact

D. The girl meets a sea star and finds out how it eats a clam.

1. What sea animal does the girl meet first? (a sea star) Fact
2. What's a sea star? (A sea star is a sea animal that looks like a star, and usually has five or more rays that extend out from the sea star's center. The sea star's skin is rough or spiny) Vocabulary
3. What is a tube foot? (A sea star has many rows of tube feet underneath its rays, which have suction cups on the end used for moving and capturing food.)
4. Do sea stars eat clams? (Yes) Fact
5. How does a sea star eat a clam? (A sea star crawls on a clam, hugs it with its rays, and sticks its tube feet to open the clam's shells. Then it drops its stomach out of its mouth and into the clam, to eat the soft body from its shells.) Fact
6. Do sea stars drill a hole in clamshells? (No) Fact

E. The girl meets a seagull and finds out how it eats a clam.

1. What sea animal does the girl meet next? (a seagull) Fact
2. What is a seagull? (A seagull is a bird that lives at the beach, and eats all kinds of sea animals, among other things. They live in flocks with lots of other seagulls, have white and grey feathers, and strong yellowish-orange beaks.) Vocabulary
3. What does shatter mean? (to break into many small pieces) Vocabulary
4. Do seagulls eat clams? (Yes) Fact
5. How do seagulls eat a clam? (A seagull scoops the clam up with its beak, flies up in the air, and drops the clam on a rock to shatter its shell. Then it flies down to eat the soft clam body inside. The seagull has to protect its food from other seagulls that may want to eat it.) Fact
6. Do seagulls drill a hole in clamshells? (No) Fact

F. The girl meets a lobster and finds out how it eats a clam.

1. What sea animal does the girl meet next? (a lobster) Fact
2. What is a lobster? (A lobster is a sea animal that has a long body covered by a hard shell, two eyes, two powerful claws, two antennae, and a tail that it flaps really fast to swim backwards away from its enemies to hide.) Vocabulary
3. Do lobsters eat clams? (Yes) Fact
4. How do lobsters eat clams? (A lobster cracks open the clamshell with its crusher claw, then tears the soft body of the clam with its scissor claw, and eats it.) Fact
5. Do lobsters drill a hole in clamshells? (No) Fact

G. The girl meets a moon snail and finds out how it eats a clam.

1. What sea animal does the girl meet next? (moon snail) Fact
2. What is a moon snail? (A moon snail is a meat-eating snail that lives in the sea. It has a huge, soft, sometimes slimy foot, two antennae, and a smooth, rounded shell.) Vocabulary
3. Do moon snails eat clams? (Yes) Fact
4. How do moon snails eat clams? (A moon snail crawls on top of a clam with its foot, and hugs it. Then it releases a slime that helps to soften the clamshell. The moon snail's tongue that has teeth on the end scrapes a hole through the clamshell, and then the tongue reaches into the hole and scoops up the soft body inside. When finished, the moon snail leaves behind a perfectly drilled hole in the shell.) Fact
5. Do moon snails drill a hole in a clamshell? (Yes) Fact

H. The girl brings the moon snail back to show the man at the beach.

1. Is the girl able to convince the man at the beach that the moon snail made the hole? How do you know? (Yes. The man let swimmers go back in the water.) Inference
2. How did the girl know the moon snail makes holes in clamshells? (She saw it drill a hole.) Fact
3. What's a culprit? (The one that's responsible for something that's happened.) Vocabulary
4. What does precisely mean? (exactly or perfectly) Vocabulary

Vocabulary: Sea Animals

shark: Sharks are fish with skeletons made out of cartilage, like your ear, rather than bone. They have rows of teeth that can replace a tooth that's been lost. Sharks often swim with their dorsal fin above the water, and their body below the water.

clam: A clam is a sea animal that lives in the ocean. It has two shells held together by a hinge, and a soft body living inside that people and other sea animals eat.

sea star: A sea star is a sea animal that looks like a star, and usually has five or more rays that extend out from the sea star's center. The sea star's skin is rough or spiny. (For more information, see the *Did You Make the Hole in the Shell in the Sea?* page.)

seagull: A seagull is a bird that lives at the beach, and eats all kinds of sea animals, among other things. They live in flocks with lots of other seagulls, have white and grey feathers, and strong yellowish-orange beaks. (For more information, see the *Did You Make the Hole in the Shell in the Sea?* page.)

lobster: A lobster is a sea animal that has a long body covered by a hard shell, two eyes, two powerful claws, two antennae, and a tail that it flaps really fast to swim backwards away from its enemies to hide. (For more information, see the *Did You Make the Hole in the Shell in the Sea?* page.)

moon snail: A moon snail is a meat-eating snail that lives in the sea. It has a huge, soft, sometimes slimy foot, two antennae, and a smooth, rounded shell. (For more information, see the *Did You Make the Hole in the Shell in the Sea?* page.)

Vocabulary

creatures: an animal of any type

clamshell: the hinged shell of a clam

tube feet: A sea star has many rows of tube feet underneath its rays, that have suction cups on the end used for moving, holding onto rocks and things, and capturing food.

possibly: something might be true or happen

snatch: to take something quickly or eagerly

shatter: to break into many small pieces

swoop: to suddenly fly down through the air

slimy: covered with a thick, slippery liquid

guarantee: a promise that something is true

crusher claw: The lobster's claw that is the biggest and strongest. It's used for holding and crushing the lobster's food. Whatever side the crusher claw is on, that's the side that's considered its dominant side. (as a person is right handed or left handed)

scissor claw: The lobster's claw that is used to tear apart its food. The scissor claw isn't as strong as the crusher claw, but it's sharper. Scissor claws are also known as pincher claws.

precisely: exactly or perfectly

glide: to move in a smooth way

mystery: something not known

involved: having a part in something

culprit: The one that's responsible for something that's happened

Compound Words

clamshell

seagull

Rhyming Words

be – see – me – sea – disagree – guarantee

snappy – happy

around – found

do – true

hug – tug

wide – inside – glide

cry – sky

shell – fell

spot – caught – hot

air – share

air – share

crunch – lunch

foot – put

goo – through

solved – involved

Activating Prior Knowledge & Predicting

Examining the front cover:

1. Students look at the cover of the book and identify the author, the illustrator, and the title of the book.
2. From the illustration on the front cover, where do students think the story is set?
3. Have students identify the different sea creatures on the cover, and the clamshell with the hole in it. Ask students if they think one of those sea animals made the hole in the clamshell? If students volunteer an animal, ask how they think the sea animal made the hole? If no animals are suggested, ask if they think a lobster could make the hole? Why or why not? Continue with each animal pictured.

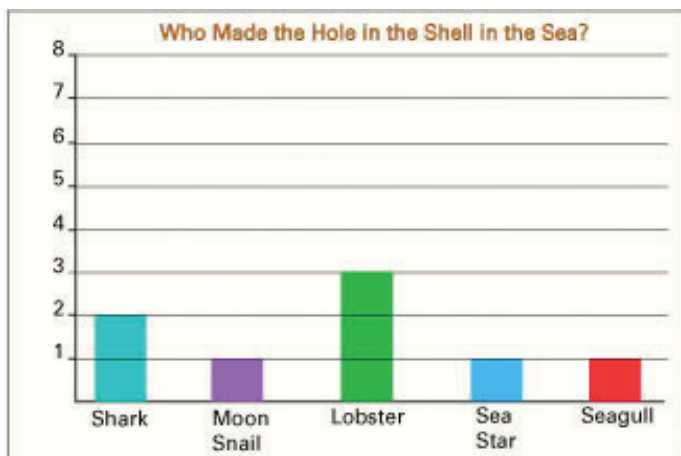
After reading that the man has closed the beach:

1. Ask students if they've ever seen a shark before?
2. Can sharks be a problem for swimmers?
3. Ask students if they think a shark could have made the hole in the clamshell? Why or why not?

Activities for Preschool and Elementary Students

Lesson One: Make a chart predicting who made the hole in the shell in the sea? Math (Language Arts, Reading)

Objective: Each student will predict which sea animal made the hole in the shell, then as a group, students will create a bar graph to measure the class results.



Materials Needed:

chart paper
a ruler
5 different colored markers
half sheets of math paper, one for each student
pencil

Prior to reading the book, *Did You Make the Hole in the Shell in the Sea?*, tell students:

When you visit the beach, if you look carefully, you might find a clamshell with a perfect hole in the top of it, just like the one on the cover of our story. But its a mystery what sea creature made the hole. One of the sea animals on the cover of this book may have made the hole, or maybe it was a shark that made the hole! Let's take a group vote to predict which sea animal our class thinks made the hole in the clamshell. Then we'll read the story to solve the mystery.

To keep students from voting more than once, try this:

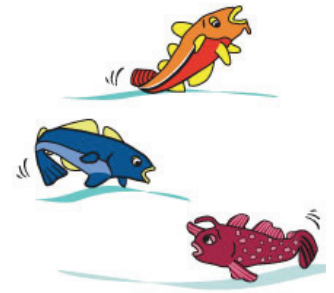
1. Students will identify the sea animals on the cover of the book, and talk about the possibility of a shark making the hole.
2. Each student will decide , on their own, which of the five sea animals on the chart made the hole in the shell.
3. On a sheet of paper, each student will write the name (or draw a quick picture) of the sea animal they think was the culprit.
4. Each student will, one by one, hold up their paper and tell the class what sea creature they've chosen.
5. The teacher will use a marker to add onto each bar, as each student's sea animal name is read.
6. Using the chart, students will identify which sea animal was voted most likely to have made the hole.
7. Using the chart, students will identify which sea animal is least likely to have made the hole.
8. Read the story, *Did You Make the Hole in the Shell in the Sea?* to discover which sea animal made the hole in the shell, and how the hole was made.
9. Was the class prediction correct?

Lesson Two: Which fish are you?: Writing (Language Arts, Reading, Art)

Objective: Students will brainstorm adjectives to describe each fish's personality. Then students will choose the fish whose personality best matches their own, and write a five sentence paragraph.

In the book, *Did You Make the Hole in the Shell in the Sea*, the three fish:

- are the audience for the story.
- react to & remark about the story's events.
- each have different personalities.



Materials Needed:

chart paper
marker
pencil
writing paper
drawing paper
crayons or markers

Elementary Students:

The teacher will write the names of the three fish on a piece of chart paper, and point to the illustration of each fish in the story, to identify each one. (red and pink spotted monk fish; blue and yellow haddock; red and yellow codfish) The teacher will scribe as students brainstorm adjectives to describe the personality of each fish. Some examples are as follows:

Monk Fish (red with pink spots)

cautious
wary
timid
concerned
likes to play it safe

Haddock (blue and yellow)

curious
adventurous
inquisitive
loves to explore
questioning

Cod (red and yellow)

fearless
brave
knowledgeable
confident
loves to learn & share what he knows

Would you be excited to see a sea star's stomach, or would you think it's icky or nasty? Would you be curious to examine a sea star's tube feet, or would you rather keep your distance? If you saw a clam falling from the sky, would you warn your friends, or hide or run away? Would you like to see and maybe touch a moon snail's goo and its silky, smooth foot, or would you rather keep a safe distance? Do you love to learn new things and share them with your friends?

Students will:

1. decide which fish is closest to their personality.
1. write a great first sentence telling which fish matches their personality best, and why?
2. write three real life examples of when they acted like the fish they chose.
3. write a great closing sentence.

When finished, students will:

1. illustrate their story by drawing a caricature of what they would look like if they were the fish they chose. If they have short hair that stands up on end, maybe their fish will, too. If they wear glasses, so will their fish. Students think of 3 or 4 things about the way they look that makes them special, and add them to their fish.
2. choose if they want to share their stories and illustrations from a classroom author chair.

Name:			Date:		
	Beginning 1	Developing 2	Accomplished 3	Exemplary 4	Score
Topic	Key words are near the beginning of the paragraph.	Fish chosen is mentioned in first sentence.	Good sentence including fish chosen and why it's a match.	Interesting, well-written sentence including fish chosen and why it's a match.	
Organization	Ideas not organized.	There is a main idea, followed by at least one real-life experience that matches the personality of their fish.	There's a topic sentence followed by at least two sentences citing real-life experiences that relate to the personality of their fish.	Good flow of ideas from topic sentence to three sentences telling real-life experiences that relate to the personality chosen.	
Paragraphs	Weak topic sentence or off topic sentences supporting the main idea.	Paragraph beginning with topic sentence, followed by supporting sentences about one idea.	Paragraph beginning with topic sentence, followed by at least two supporting ideas, with a closing sentence.	Paragraph starting with a topic sentence, followed by three supporting sentences, ending with a great closing sentence.	
Sentences	Mostly complete sentences, some fragmented or run-on sentences.	Complete sentences, limited amount of run on sentences.	Complete sentences, no run-on sentences, some variety in length and type.	No sentence errors, variety in length and type.	
Vocabulary	Limited basic vocabulary.	Uses words beyond basic vocabulary.	Uses some new vocabulary correctly.	Uses new vocabulary words, or interesting words that suit the topic.	
Grammar	Many errors in agreement, number, and tense.	Some errors in agreement, number, and tense.	Few errors in agreement, number, and tense.	No errors in agreement, number and tense.	
Punctuation & Case	Many errors in punctuation and case.	Few errors in punctuation and case.	Minor errors in punctuation and case.	Correct punctuation and case.	
Spelling	Many spelling errors.	Some spelling errors.	Few spelling errors.	No spelling errors.	
Handwriting	Difficult to read. Not well-formed.	Mostly legible.	Well-formed letters.	Neat and easy to read. Well-formed letters.	

* Based on the rubrics included in *The Reading Teacher's Book of Lists*, Fourth Edition, 2000 by Prentice Hall.

Lesson Two: Which fish are you? Preschool Students: (Template on the following page.)

Fish:

Red with spots (monk fish): careful, likes to play it safe

Blue with yellow (Haddock): curious, loves to explore

Red with yellow (Cod): wise, loves to learn and share what he knows with others



Students will think about the fish in the story, and choose the one that's most like them. (If you're careful, you'd be the red fish. If you're curious, you'd be the blue fish. If you're wise and know a lot about things, you'd be the orange fish.)

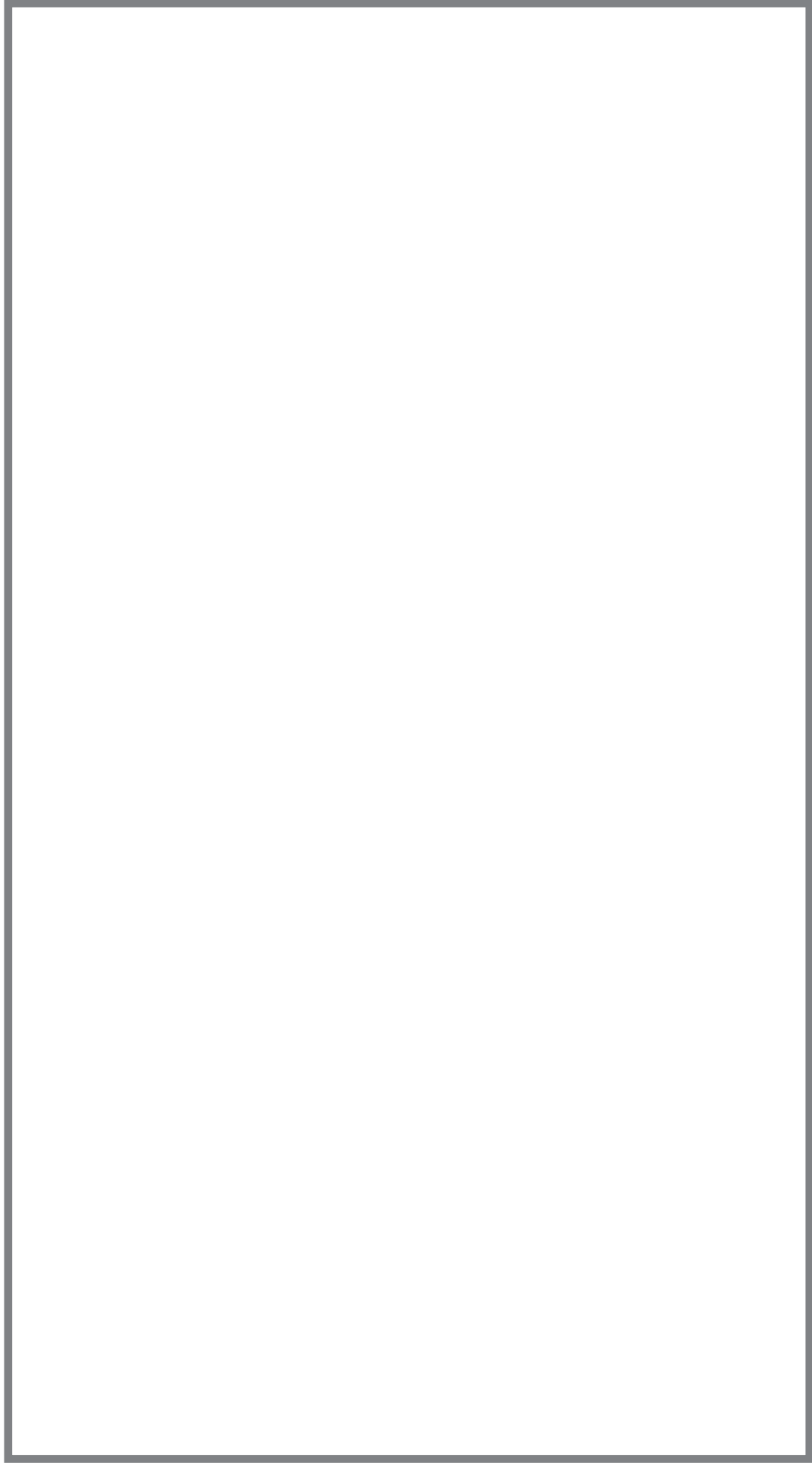
Students will fill in the blanks in the sentence below, and draw a picture of the fish that's most like them, doing something they both would like to do.

I'm like the _____ fish because we both like to _____.

Teachers will come around and help students to fill in the blanks. This sentence is the caption for the illustration.

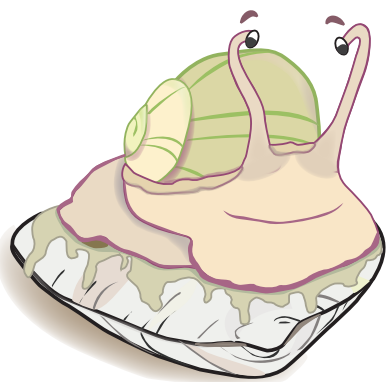
At circle time, students can share which fish they chose, and give one reason why they're a good match.

Name _____



I'm like the _____ fish
because we both like to _____.

Lesson Three: How Sea Animals Eat: Writing a Sequential Paragraph: Science (Reading, Writing, Language Arts, Cooperative Learning)



Objective: Students will work in groups to choose a sea animal, and complete a sequential organizer telling, step by step, how the sea animal eats a clam.

Elementary Students:

Did You Make the Hole in the Shell in the Sea? tells, step by step, how sea stars, seagulls, lobsters, and moon snails eat a clam. In this activity, students will work in groups of two or three. Each group will choose one of the four sea animals and complete a sequential organizer telling how their sea animal eats a clam, using *Did You Make the Hole in the Shell in the Sea?* as a reference.

Topic Sentence: A sea star has a unique way of eating a clam. (sample)

Materials Needed:
sequential organizer
pencil
writing paper
crayons or markers

First: The sea star crawls on a clam.

Next: It hugs the clam and sticks its tube feet to pull clam shells apart.

Then: Sea star opens its mouth and drops its stomach into clam's shells to eat.

Finally: The sea star pulls its stomach back into its body and crawls away.

To extend the assignment, students may individually write a paragraph with a topic sentence that includes the sea animal that's being written about, and the student's intent to tell how this animal eats a clam. The next three or four sentences will tell which step is first, and conclude with the last step that was identified on the sequential organizer. The paragraph can end with a great concluding sentence telling why the way their sea animal ate the clam was the most interesting of all the sea animals.

An illustration of the sea animal eating a clam would be a great addition to the story. When finished, students may choose to have the opportunity to share their stories from an author's seat. (Previous rubrics can be used for assessment.)

Follow up game for Elementary or Preschool:

Sea Animal Charades:

Each student chooses his/her favorite sea animal from the story, and acts out how this sea animal eats a clam in the story. Remaining students guess which sea animal is being portrayed.

Extension: Each student chooses a character from the story and acts out a scene from the story that this character was in. Remaining students guess which character is being portrayed.

Sample Clams:

1. There are many brands of fried clams to choose from in your grocer's freezer. Buy a box, and heat them up to allow students to sample eating a clam for themselves.
2. Clam chowder is another easy way to have students sample the flavor of clams. Snow's New England Clam Chowder is a great choice. Just heat and serve.
3. For the adventurous, go to where ever you purchase fine seafood, and buy some little necks. You'll have to steam these in boiling water to cook them, which is really easy to do.

Recipe for boiling little neck clams:

- Buy at least one clam for each student.
- Boil water.
- Throw away any open clamshells prior to boiling.
- Pour clams into boiling water and steam for 5 to 10 minutes, until shells have opened.
- Discard any unopened shells after boiling.
- Melt butter
- Give each student a clam to sample.
- Clean the clamshells, and students can polish their shells with mineral oil and a rag and take them home as a souvenir.

Sequential Paragraph Organizer

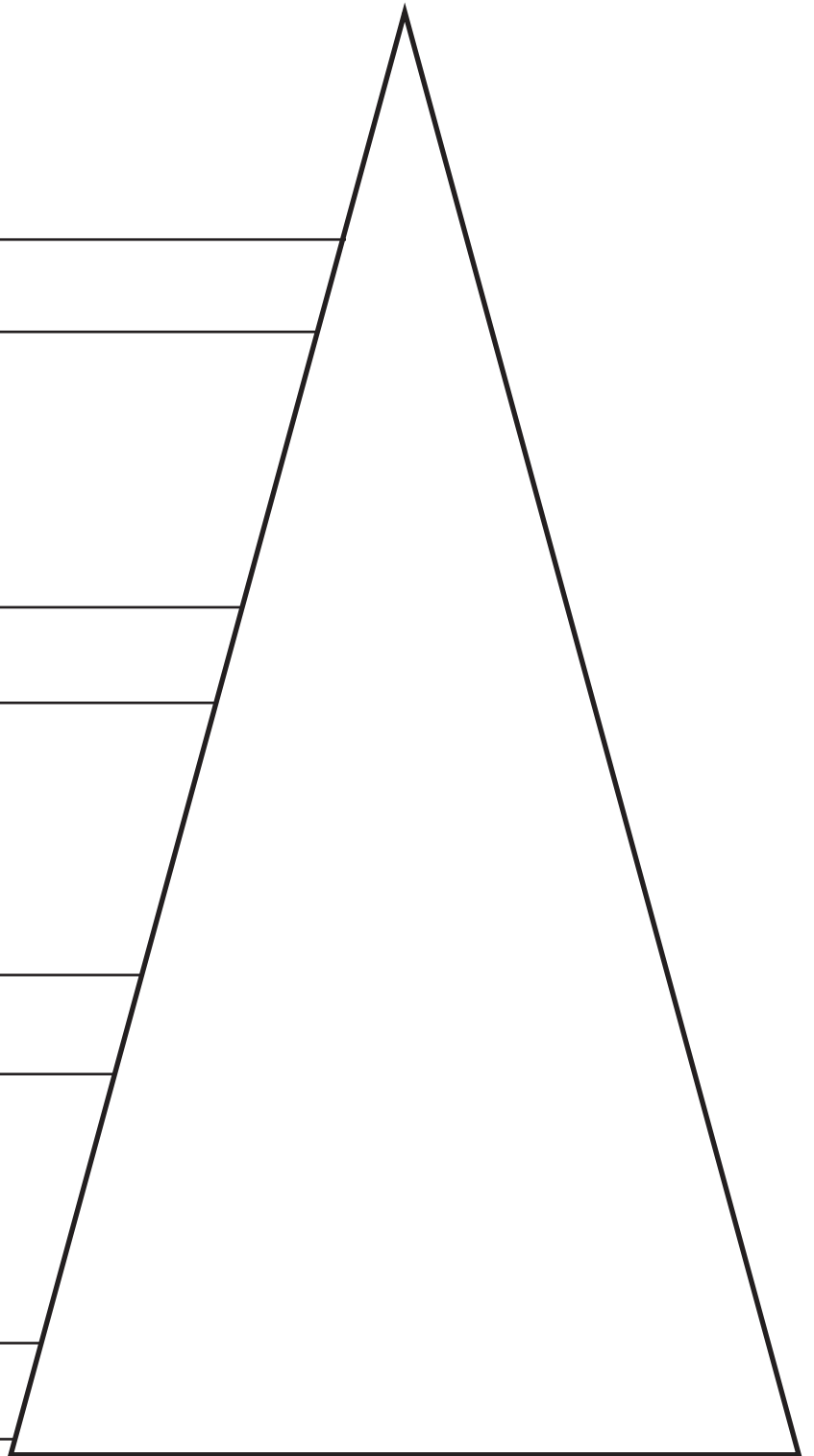
Topic Sentence: _____

First:

Next:

Then:

Finally:



Did You Make the Hole in the Shell in the Sea?

Word Search

shark
lobster

clam
moon snail

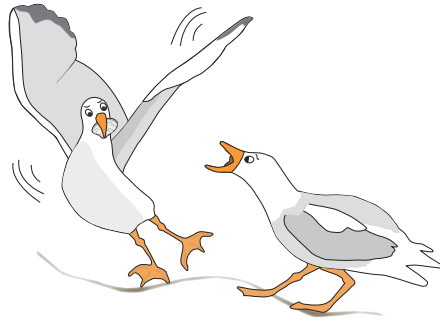
sea star
diver

seagull
clamshell



Did You Make the Hole in the Shell in the Sea?

Word Search



wide
inside

glide
spot

caught
hot

shell
fell

G	Z	D	R	F	F	S	E	E	Z	S	G	O	W
O	O	M	O	N	F	R	T	U	L	F	E	L	L
P	G	D	H	B	Q	Q	Z	V	H	W	I	D	E
B	L	X	R	J	G	W	N	V	N	W	Q	W	N
E	I	N	S	I	D	E	D	U	K	W	I	E	U
X	D	O	W	I	L	A	Y	K	N	B	Y	D	M
W	E	F	K	N	E	S	H	A	I	B	S	S	J
P	M	F	M	W	G	B	S	Y	L	O	P	O	I
U	N	W	C	A	U	G	H	T	J	B	O	N	A
R	P	J	W	W	A	L	E	L	B	O	T	F	S
G	H	U	P	L	A	I	L	U	S	M	K	F	U
P	F	H	O	T	V	F	L	O	B	S	X	I	G
X	T	O	F	J	U	T	E	T	R	X	I	G	C
L	T	H	Y	F	E	H	P	K	P	Z	T	E	C
J	D	E	T	R	V	J	Z	A	N	G	U	F	L



Did You Make the Hole in the Shell in the Sea?

Word Search

air
share

crunch
lunch

foot
put

goo
through

P D
 E B
 Z V Z N
 B Y W V
 F D V N C V
 T B C W R M
 K D S L J W N H N I P S G F F C G O O T
 L P K E B K D R T Q W H O P A S R V P J
 U O G R N C O P B G A S A I R V R O
 F V J Q B U X I D R K E M B E I
 M P U T G N K S E R B G A G
 P D O H U P O B I A E Q
 P D W R T I U E B F E X G P
 Z H F O O T H C D K E L U C
 B L G L H T L U N C H X T H R P
 K B N Z L R J C C O P X U L
 F A J D W L W G K T D N Y A
 B Z K Z A K D C D K
 Z H C K H N S P
 G E S A

Did You Make the Hole in the Shell in the Sea?

Word Search

precisely
glide

mystery
involved

culprit
crusher

scissor
seagull



Did You Make the Hole in the Shell in the Sea?

Word Search

be
see

me
sea

disagree
guarantee

cry
sky



If Your Shells Are Still Inhabited?

There's a dilemma in taking a pretty shell, even though the sea animal inhabiting it is alive and well. Everyone has to struggle with this moral dilemma for themselves. As for me, it's a no-brainer. If the animal's alive, it stays at the beach. There are plenty of beautiful shells that wash up on shore that I can take, guilt-free. But sometimes it's really difficult to know if a sea animal is still alive and living in the shell or not, so here are some pictures to help identify living shells:



A Moon Snail, crawling around (left), and tucked inside its shell (right) with its trap door, or operculum, closed tightly.



A Hermit Crab, out and about (left), and hidden in its shell (right), that once housed a periwinkle. Small hermit crabs who've moved into large shells, can actually disappear when tucked away inside. Place them in salt water and leave them alone for a minute or so, and they will usually come out enough so they can be seen.



A Periwinkle, moving around (left), and hidden in its shell (right), with its trap door closed tightly.

If Your Shells Are Still Inhabited? (continued)



1. **A Dog Whelk**, opening it's trap door to come out and crawl around (left), and tucked inside it's shell (right).

What if the shell is empty, but a piece of the deceased animal remains?

There are several methods to clean these shells:

- Boiling sea shells for about twenty minutes usually does the trick, but be very careful not to touch the shell without tongs until it has thoroughly cooled.
- Soak the shells in water for about five to seven days, changing the water at least daily. The more often the water is changed, the quicker the process.
- Soak the shells in a chlorine bleach and water solution. I use 1 part bleach for every 9 parts water. Even with such a weak solution, it takes a week or two for the chlorine smell to go away, even when left out in the air. Be sure to wear old clothes and protect your eyes from splashing.
- If all else fails, bury the shells in an area where ants are prevalent, and leave them for a few days. Insects will eat whatever remains in the shells, and then any of the above three methods will work nicely.

Once shells are clean, you might want to lightly sand them with extra fine sand paper, and rub them with a cloth soaked with mineral oil. This will bring the luster back to the shells that may have become dry and dull while being cleaned.

Handprint Crab



We've seen great examples of handprint crabs hanging on preschool walls. But for a look at an average handprint crab, this photo was taken from the website:: Learn Create Love (<http://learncreatelove.com/?p=4015>)

Great for ages three through ten. Makes a perfect gift for parents and grandparents because it captures a child's handprint at this exact moment in time. Coordinates well as an activity for both ***The Bumpy, Lumpy Horseshoe Crab*** and ***Did You Make the Hole in the Shell in the Sea?*** There's at least one crab in each story. A great follow-up activity would be to look through each book and see if you can spot all of the crabs.

Materials:

Newspaper (to protect your table)
Paper Plate (to hold paint)
Red Paint
Black Marker
White Paper
2 Googly Eyes with adhesive backs

Directions:

1. Spread newspaper to protect your table.
2. Pour paint into a paper plate.
3. Have a child put his/her hands in paint, one at a time, with palms down. Then place the left hand on the white paper as indicated above, sideways with thumb up. (Turning the paper will make this easier!) Place right hand on the paper, sideways in the opposite direction with thumb up, being sure palms overlap a little.
4. Let paint dry.
5. Apply one googly eye to the top of each thumb on the print.
6. Draw a mouth with the black marker, just below where the base of the two thumbs merge. Be creative. He doesn't have to be smiling!



Happy



Surprised



Scared



Goofy



Confused

For more fun activities, short interesting videos, and free, downloadable teacher curriculum, please visit our website at www.janicepetrie.com. Be on the lookout for our third book in the series: *Something's Tugging on My Claw* which is scheduled to be released in the summer of 2015.