

Bonnie Kelso
artistbkelso@gmail.com
www.BonnieKelso.com
702-556-0442

PB Nonfiction STEAM
(Narrative + Expository)
Word count: 610
10/30/20

WHAT IT TAKES TO BUILD A MASTERPIECE

Pages 2-3

(Art: A girl and her mother are paddling a canoe by moonlight
observing phosphorescent life forms in the sea.)

Pages 4-5

At the bottom of the warm sea,
in a seagrass meadow,
a tiny veliger emerges from her egg...
and drifts.

(Art: Underwater in a seagrass meadow.)

A veliger (vee-li-ger) is a free-swimming baby *marine gastropod mollusk*, also known as a seashell. When first hatched, a veliger is so small that it can only be seen with a microscope.

Pages 6-7

The veliger spreads her two lobes,

feeling for food in the water.

BUMP!

GULP!

(Art: diagram of a veliger with call-outs written below.)

- A veliger has a beating heart, just like you do.
- Tiny feelers, called cilia, line the edges of each lobe and direct food toward the mouth like fingers.
- The stomach can absorb food and eject what is not.
- Two eye spots that cannot see... yet.

Pages 8-9

The more the veliger feeds, the more she grows,

until each of her lobes split in two.

SWOOSH-BUMP!

GULP!

(Art: Predators are shown lurking nearby.)

After only five days of life, the veliger's two lobes grow into four. It eats microscopic sea plants called phytoplankton (fahy-tuh-**plank**-tuhn).

Pages 10-11

The veliger's four lobes become six.

Now she can really swim!

SWISH-SWOOSH!

GULP!

(Art: narrow escape from a fish predator.)

After two weeks, the veliger is fully formed, making a tasty snack for fish and other predators. Only the luckiest veligers will survive.

Pages 12-13

Finally, she is ready to rest.

She settles...

DOWN

DOWN

DOWN

to the bottom of the sandy sea floor.

After 21 days of drifting and swimming, the veliger settles to the seafloor to begin its metamorphosis (met-a-**more**-fa-sis). At this stage of life, the veliger is about 1/2 inch long.

Pages 14-15

Under in the sand...

the most amazing thing happens.

Pages 16-17

Her lobes disappear.

She collects minerals from the water, plants, and sand.

Her soft shell grows larger and more solid.

Her body turns from squishy to firm.

Her foot muscle becomes stronger.

The veliger is changing into a mollusk.

SHUFFLE-SHUFFLE

The developing mollusk (**mol**-uhsk) releases calcium from its body that quickly crystallizes and becomes part of its hardening shell. After one month of life, it resembles an adult queen conch (**konk**) in miniature.

Pages 18-19

The mollusk presses and packs.

She sifts and stacks.

Piece by piece she adds to her shell.

SIFT-SHIFT!

CRUNCH!

Her foot grows strong and one day...

Two year-old conchs are about six inches long. They are known as *rollers* because they grow spikes to help keep them from rolling back and forth in the currents.

Pages 20-21

she LEAPS!

(Art: The conch evades a stingray predator.)

A conch uses its powerful foot to move itself around on the sea floor. It can lunge forward half its body's length in one leap.

Pages 22-23

To keep herself safe,
the conch constructs a hard door
attached to the bottom of her amazing foot.

SLAM! GO AWAY!

(Art: Crab attack.)

When the conch is three years old and 9 to 12 inches long, it stops growing. It shifts its attention to strengthening and flaring the outer lip of its shell. The shell becomes thick and heavy.

(Art: Diagram of mollusk with call-outs written below.)

- The living mollusk inside the shell.
- Eyestalks with eyes that see very well.
- A muscular foot.
- The operculum or trapdoor.

Pages 24-25

(Art: Wordless image of two conchs pairing by moonlight.)

Pages 26-27

When the time comes, the conch spawns.

She releases her egg case and attaches it

to a blade of seagrass before moving on.

TIP-TUCK

(Art: New veligers hatching from an egg case.)

One egg case can contain over 400,000 eggs. After four to five days the microscopic veligers emerge, but only a few of them will become conchs one day. A full-grown conch can live up to 30 years.

Pages 28-29

The pink, polished shell of the queen conch remains for many years.

You can hear the song of the seagrass meadow singing through her.

A beautiful masterpiece created by one lucky veliger.

SWISH-SWOOSH!

(Art: The girl from the beginning finds the conch on the beach and holds it to her ear listening to the sound of the ocean.)

Pages 30-31

(Art: Diagram of the conch's life cycle.)

Queen Conch Life Cycle

- pelagic zone (open sea)
- egg case
- newly hatched veliger (2 lobes)
- 5 day-old veliger (4 lobes)
- 15 day-old veliger (6 lobes)
- benthic zone (sea floor)
- metamorphosis
- 1 year-old "roller"
- 3 1/2 year-old adult
- mating and spawning

Page 32

(Art: Empty conch shell lying on the beach.)

###