Teaching Activities

for

Teaching Activities are intended for use at home, in the classroom, and during story-times.

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Questions to ask children before reading the book

- What do you think the book is about by looking at the cover? (or one or two of the inside illustrations) *Sometimes it is easy to tell from the cover, other times it is not.*

- What does the cover illustration show?

- What kind of animal do you think Octavia is?

- What other animals do you see on the cover?

Read aloud tip: while reading the book, pause long enough for the child(ren) to guess what color comes next.

What do children already know?

- Young children are naturally inquisitive and are sponges for information. The whole purpose of this activity is to help children verify the information they know (or think they know) and to get them thinking "beyond the box" about a particular subject.

- The children should write down their "concepts" (or adults for them if the children are not yet writing) on the provided chart found on the next page.

- Use the questions to get children thinking about what they already know. Feel free to add more questions or thoughts according to the child(ren) involved.

What do children already know—activity chart

Ask children to write down what they think they know before reading the book. If the information is verified while reading the book, check "yes." If the information is wrong, mark "no" and cross it off. Write the correct information in another section, below. Make a note of how you verify the information.

What do I think I know?	Yes	No	Verified
Why is it important for animals to hide?			Text Illustration Info in FCM Other
What are some ways that animals hide?			Text Illustration Info in FCM Other
What are some other ways that animals protect themselves?			Text Illustration Info in FCM Other
What color does an octopus turn when it is scared?			Text Illustration Info in FCM Other
What is different about a flounder's eyes?			Text Illustration Info in FCM Other
What color ink does an octopus shoot?			Text Illustration Info in FCM Other

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Use this chart for any other thoughts the children might have.

What do I think I know?	Yes	No	Verified
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other

After reading the book—writing prompts & thinking it through

- Did the cover "tell" you what the book was about?

- If not, how does the illustration on the front relate to the story?

- Draw your own cover

- Can you think of another title for the book?

- Did the illustrator include anything in the pictures that were not in the story or are there things hidden in the art?

- When did you first see the shark?

- Do you think everything in the story could be true? *Do animals really talk to each other or have human traits?*

- If the author used talking animal or gave the animals human traits, could the story have been told differently? How?

- Write a different ending to the story

Re-read the book looking for more information

Go back and re-read the book studying each page carefully.

- What facts are mentioned in the text?

- What can be seen or inferred from the illustrations that is not or are not mentioned in the text?

- What, if anything, can be inferred from the text?

- Pause during second readings and ask the child(ren) if they remember what happens next.

- What would happen if a character did something different or if something different happened to the character? Would it/could it change the story?

Comprehension Questions

- What type of animal is Octavia?

- How many "legs" does she have?

- Who are some of her "friends?"

- What game do they like to play?

- Why is that an important game for them to play?

- In the beginning of the book, Octavia was boasting that she could shoot a purple ink cloud. Was she as sure about it at the end? Why or why not?

- What happened at the end of the book?

What do children already know activity conclusion

- Do the children have any more questions about octopus or the sea animals mentioned in the book? If so, write them down on the chart.

- Identify whether the information was verified and how.

- If the concept is correct, make a note of how the information was confirmed (illustration, in text, in fun fact notes)

- If the concept was not correct, what IS the correct information – with above confirmation notes as above.

- If the concept was neither confirmed nor denied, look the information up in a reliable source and note where it was confirmed.

- Wrap it all up by adding notes with new information that they learned either through the reading or the research while looking up something else.

Language Arts

Developing a vocabulary "word wall"

If using the book as a way to introduce a topic or subject, this is also a great way to introduce subject-related vocabulary words. If you don't have the time (or the inclination) to develop the word wall by playing the Vocabulary Game (below), we have provided a vocabulary list for you.

Vocabulary words for the "word wall" may be written on index cards, on a poster board, or on a chalk board. If writing on poster board or chalk board, you might want to sort into noun, verbs, etc. right away to save a step later. Leaving the words posted (even on a refrigerator at home) allows the children to see and think about them frequently.

Vocabulary game

This activity is designed to get children thinking of vocabulary words which will then be used as the beginning vocabulary list for a science lesson.

Select an illustration and give children a specific length of time (five minutes?) to write down all the words the children can think of about the particular subject. *If you do not have classroom sets of the book, it is helpful to project an illustration on a white board. Check Web site (www.ArbordalePublishing.com) for book "previews" that may be used for this purpose.*

Their word list should include anything and everything that comes to mind, including nouns, verbs and adjectives. At the end of the time period, have each child take turns reading a word from his/her list. If anyone else has the word, they do nothing. If however, they are the only one with the word, they should circle it. While reading the list, one person should write the word on a flashcard or large index card and post it on a bulletin board or wall.

At the end, the child with the most words circled "wins." And you have a start to your science vocabulary list. *Note if children use an incorrect word, this is a good time to explain the proper word or the proper usage.*

Putting it all together

The following activities may be done all together or over a period of several days.

- Continue to add words to the vocabulary list as children think of them.
- Sort vocabulary words into nouns, verbs, adjectives, etc. and write what it is on the back of the card. When the cards are turned over, all you will see is "noun," etc. *(These can then be used to create silly sentences, below)*
- Now sort the vocabulary words into more specific categories. For example, nouns can be divided into plants, animals, rocks, minerals, etc. They can be divided into living/non-living, or into habitat-related words.
- Have children create sentences using their vocabulary words. Each sentence could be written on a separate slip of paper.
- Have children (individually or in small groups) sort and put sentences into informative paragraphs or a story.
- Edit and re-write paragraphs into one informative paper or a story.

Octavia
And Her Purple Ink Cloud

Suggested vocabulary list

nouns	verbs	adjectives
clown fish	boast	big
colors	brag	blue
coral reef	change	colorful
floor	claim	dark
flounder	cry	green
grass	dart	hungry
holes	explain	orange
ocean	groan	purple
octopus	hide	red
parrotfish	hold	stinging
plant	hope	white
porcupine fish	laugh	yellow
predator	moan	
prey	play	
reef	practice	
rocks	protect	
sand	puff	
sea anemone	shoot	
sea turtle	sigh	
seahorse	squirt	
shark	whine	
shell		
tail		
tentacles		

Octavia
And Her Purple Ink Cloud

Silly sentence structure activity

This is a fun activity that develops both an understanding of sentence structure and the science subject. Use words from the "word wall" to fill in the blanks. After completing silly sentences for fun, have children try to fill in the proper words by looking for the information in the book.

The _____ puffed up to confuse a hungry creature.
noun

The _____ held onto a _____ with his
noun   noun

_____.
noun

The _____ changed _____ and _____
noun   noun   verb
on the ocean floor.

The green _____ hid in the grass.
noun

The _____ darted into the _____. The
noun   noun
_____ tentacles protected her.
adjective

The _____ darted into holes in the _____
noun   adjective
coral reef.

The great big, _____ _____ swam away with an
adjective   noun
empty belly.

Octavia and Her Purple Ink Cloud
Sequence sentence strips

Preparation: Cut into sentence strips, laminate if desired, and place in a "center." Have children put the events in order. Children may work alone or in small groups. Cards are in order but should be mixed up when cut apart.

--✂--

Paul Porcupine Fish puffed up to show how he could confuse a hungry creature.

--✂--

Octavia shot a yellow ink cloud.

--✂--

Sandy Seahorse held onto a plant with his tail.

--✂--

Octavia shot an orange ink cloud.

--✂--

--✂--

Freddy Flounder changed colors and hid on the ocean floor.

--✂--

Octavia shot a green ink cloud.

--✂--

Greta Green Sea Turtle hid in the grass.

--✂--

Octavia shot a red ink cloud.

--✂--

Carolyn Clown Fish darted into a sea anemone.

--✂--

---✂--

Octavia shot a blue ink cloud.

---✂--

Polly Parrotfish hid in a hole in the colorful coral reef.

---✂--

A great big, hungry shark swam around the reef heading right toward them!

---✂--

Octavia turned white with fright but shot a dark, purple ink cloud.

---✂--

The shark swam away with an empty belly.

---✂--

Octavia
And Her Purple Ink Cloud

Word search

Find the hidden words. Even non-reading children can try to match letters to letters to find the words! Easy – words go up to down or left to right.

For older children, identify the coordinates of the first letter in each word (number, letter).

	A	B	C	D	E	F	G	H	I	J
1	F	A	I	N	K	C	L	O	U	D
2	L	W	B	A	S	H	A	R	K	A
3	O	C	T	O	P	U	S	R	O	X
4	U	I	C	U	R	E	J	A	G	U
5	N	E	P	R	E	Y	H	N	U	H
6	D	O	V	D	D	U	S	T	E	I
7	E	I	S	F	A	K	I	P	O	D
8	R	S	E	A	T	U	R	T	L	E
9	S	E	A	H	O	R	S	E	U	I
10	Q	U	M	O	R	Y	O	L	E	Z

__, __ FLOUNDER   __, __ HIDE   __, __ INKCLOUD
__, __ OCTOPUS   __, __ PREDATOR   __, __ PREY
__, __ SHARK   __, __ SEAHORSSE   __, __ SEATURTLE

Octavia
And Her Purple Ink Cloud

Write about it!

Creative Sparks (for stories or pictures):

Pretend that you are an ocean animal and have to camouflage or protect yourself from predators. How would you do it and why?

Suppose you had eight arms, what sport would you play and how would the extra arms help?

In this story, Octavia has to keep practicing. What are some things that you like to practice? What are some things that you have to practice?
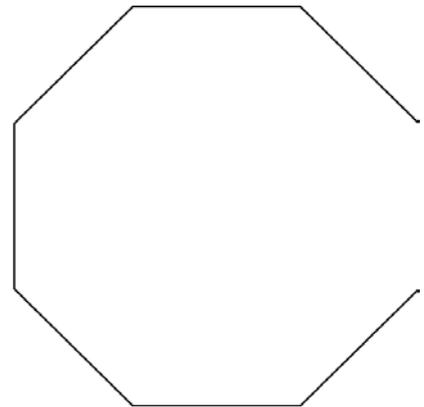
At the root of it all!

"Oct" means eight.

Why is this shape called an octagon?

Why is a musical scale called an octave?

Latin Root Trivia: Sept = 7, Oct = 8, Novem = 9, Dec = 10. Why is October the 10th month and not the 8th? *The Ancient Romans started their year with the spring solstice, so March was the first month, not the third as it is today. That made October the eighth month!*

Science
Edible sorting and classifying activity

Gather together a cup of edible "sorting items." For example:

- As many different kinds of M&Ms as you can find
- Chocolate & peanut butter chips
- Hershey kisses
- Peanuts or other type of nuts

Ask the child to sort the items into groups. There is no right and wrong, only what makes sense to the child. When finished, ask the child:

What criteria or attribute (color, size, ingredient, etc.) did you use to sort the items?

- Are there some items that fit more than one group or don't fit any group?
- Is it easy to sort or were there some items that were a little confusing?

If more than one person did this, did everyone sort by the same criteria? To really extend the learning, graph the attributes used to sort the items. *(blank graph below)*

Sorting by attribute graph

Graph the attributes that children used to sort their items.
What was the most common attribute (size, shape, color, etc.) used?

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					
Attribute:					

Classifying animals

Animals can be sorted too. What are some attributes you might use to sort animals?

- By habitat
- Do they have backbones?
- Do they have arms or legs?
- How many legs do they have?
- Do they have stripes or patterns on their bodies?
- Do they walk, swim, jump, or fly?

Some things are very easy for scientists to sort or classify, other things are not so easy. The first question they will ask is whether the item is (or was) alive or not. Both plants and animals are living things.

If the item in question is an animal, like the animals in the story, scientists will then ask other questions:

- Does it have hair or fur, feathers, or dry skin or scales?
- Does it breathe oxygen from air through lungs or water through gills?
- Are the babies born alive or from eggs?
- Does the baby eat milk from its mother?
- Is it warm or cold-blooded?
- How many body parts does the animal have?

By answering these (and other) questions, scientists can sort or classify the animals into "classes" such as mammal, bird, reptile, fish, amphibian, or insect.

Animal classification chart at class level (vertebrates)

Information on the five classes of **vertebrates** (animals with backbones) is given in the table below. Using information found in the book or below, fill in the blanks for each of the animals mentioned in the book (text and the *For Creative Minds* section). Some of the information may be determined by looking at the illustrations. For example, if the animal breathes water, it will be shown living in the water. If the information is not in the book, it has already been filled in.

Have the children use the chart to determine to which class of animals each animal belongs (mammal, bird, fish, or reptile). The chart may also be used to complete a Venn diagram.

	Breathes oxygen from air or water	Warm or cold-blooded	Lays eggs or live birth
Mammals	Air	Warm	Mostly live
Birds	Air	Warm	Eggs
Fish	Water	Cold	Varies
Reptiles	Air	Cold	Mostly eggs
Amphibians	Water, then air	Cold	Eggs in water to larva
Flounder		Cold	--
Sea turtle*	Air	Cold	eggs
Shark		Cold	varies
Seahorse		cold	Eggs (dad carries)

*Even though the sea turtle lives in the ocean, it breathes air. All other animals in the book breathe water.
The octopus is not mentioned in this chart because it is an invertebrate (mollusk).

A day in the life of . . .

- Pick an animal from the book and pretend that you are that animal.
- Explain where you live (habitat).
- What do you eat?
- What animals might eat you?
- How do you protect yourself from those animals?
- Where do you sleep or rest?
- Write a paragraph about what do you do during the day (or night if nocturnal).

Life Cycles

Pick an animal from the book and research the life cycle of that animal.

- What are the babies called?
- How are the animals born? (hatched from eggs, born alive, etc.)
- How many brothers and sisters might be born at the same time?
- How big is the baby (length, height, weight, etc.) when born?
- What is the "house" like if applicable (nest, den, burrow)?
- Where is it found (underground, in trees, etc)?
- Which parent(s), if any, are involved in raising the young?
- What does the baby eat and for how long?
- How long will the babies stay with the parent (if parents are involved)?
- When is the "baby" considered an adult?
- How will it find a mate and have babies?
- Who prepares the nest/den and how (if applicable)?
- Some animals are only born at specific times of the year (to coincide with food availability). Is the animal born any time or just during special times of the year?

Camouflage

Animals use various methods to camouflage and protect themselves:

- Colors blend into surroundings – this is the most basic form of camouflage. Animals use their colors to blend into their normal environment. Examples: polar bears, deer, sea turtles, frogs.

- Constantly Changing Colors – some animals change their colors based on their surrounding. (Chameleon, flounder, octopus).

- Hiding – sometimes animals just hide in holes, dig down into sand or mud, and hide in tree limbs or other plants. Their colors or shape of their bodies help them to blend in.

- Mimicry – some animals look like other animals or like their habitat (katydids).

- Tricks – some animals use tricks like fake eyes on their tales so that predators go after the wrong end (butterfly fish, moths).

- Bigger than life – sometimes it is nice to be big! Some animals puff up (porcupine fish) and other animals try to look bigger (cats arch their backs when scared, elephants flap out their ears, peacocks spread their tails).

- Counter shading (light on the bottom and dark on top) – if you look up, the sky is light and if you look down, the land or water is dark. Some animals have a light underbelly (birds, fish) to help hide from animals below them but then have a darker top to hide from animals above.

- Octopus, squid and cuttlefish blow very dark (almost black) ink clouds to be able to swim away. Other animals use a smelly spray to get away (skunks).

- Some animals break off parts of their bodies to be able to escape (skinks, sea stars). They can grow new ones to replace the "lost" ones.

- Some land turtles can pull their heads & legs into their shells for protection. The box turtle completely closes, other turtles do not.

- Porcupines and some urchins have quills that can poke into their predators.

- Bumble bees, some jellyfish and sea anemones have stingers or stinging tentacles.

Adaptations

Adaptations help animals to live in their habitat: to get food and water, to protect themselves from predators, to survive weather, and even to help them make their homes.

- Physical Adaptations include body shape. (teeth, feet, body covering, hair, blubber, ability to move, climb, etc.)
- Camouflage: color of skin or pattern to blend into background.
- Mimicry: Pretending to be something else to fool predators (Katydid)
- Behavior: opossum plays dead, social groups
- Migration: the seasonal movement of animals from one location to another
- Hibernation: a long, deep sleep in which the animals breathing and heartbeat are lower than usual.

Pick an animal from the book and try to figure out some of the animal's adaptations.

- How does it move and what parts of its body does it use to move?
- How does it see?
- How does it hear?
- How does it get its food?
- What parts of its body does it use to gather the food?
- How does it eat its food?
- What parts of the body does it use to eat the food? (teeth are different for carnivores than herbivores…)
- How does it hide from predators or prey (so it can catch the prey)?
- How does it protect itself from predators?
- In what habitat does it live?
- What adaptations does the animal need to help it survive in that habitat? (heat, cold, land, water, underground, high altitude, et.)
- Where does the animal live and does it make a "house?"
- Does it live alone or with a group?
- How does it "communicate" with others of its kind?
- How does it sleep?
- When does it sleep?
- Is food readily available all year?
- How does the animal deal with seasonal changes (if applicable)?

Science journal

Have children draw a picture to define the vocabulary word or concept
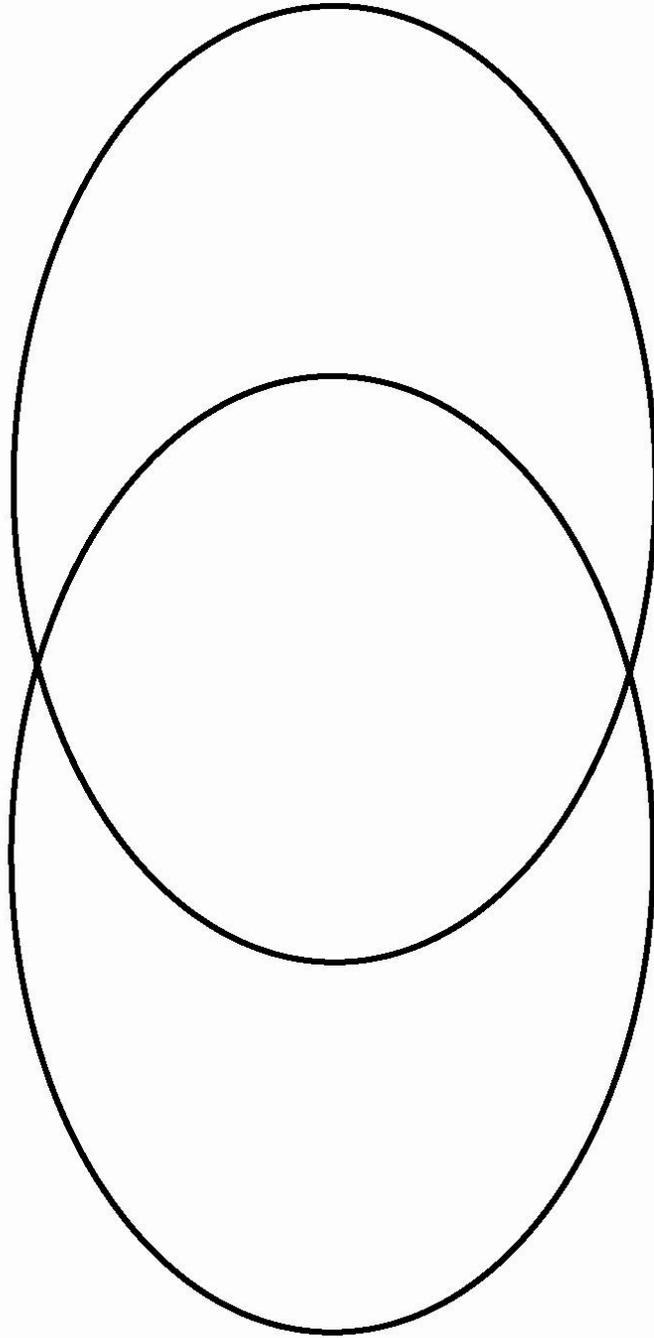
camouflage
predator
prey
invertebrate

Venn diagram

Two Animal Comparison
Pick any two animals and compare and contrast them.

Common

Octopus Math – count the octopi then write how many there are

_____ octopi

_____ octopi

_____ octopi

_____ octopi

_____ octopus

_____ octopus   +   _____ octopi   = _____ octopi

Each octopus has 8 legs or tentacles

How many tentacles are there with two octopi? _____

How many tentacles for three octopi? _____

Research and geography

Range and distribution of the common octopus

http://www.fao.org/fi/website/FIRetrieveAction.do?dom=species&fid=3571

Range and distribution of the giant pacific octopus

Pacific Ocean

http://channel.nationalgeographic.com/animals/invertebrates/giant-pacific-octopus.html

If you are in Alaska, which octopus might you see?
If you are in Florida, which octopus might you see?
List the continents where you might find a common octopus.

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Character

Persevere: keep on trying!
Always do your best

Every person has different talents but that doesn't mean that we can do things without trying and practicing.

- Could Octavia do what she needed to do right away?

- Do you think she was getting frustrated that she couldn't shoot a dark, purple ink cloud?

- What would have happened if she had given up and not practiced?

- What are some things that you like to do?

- Did you have to learn how to do it by practicing?
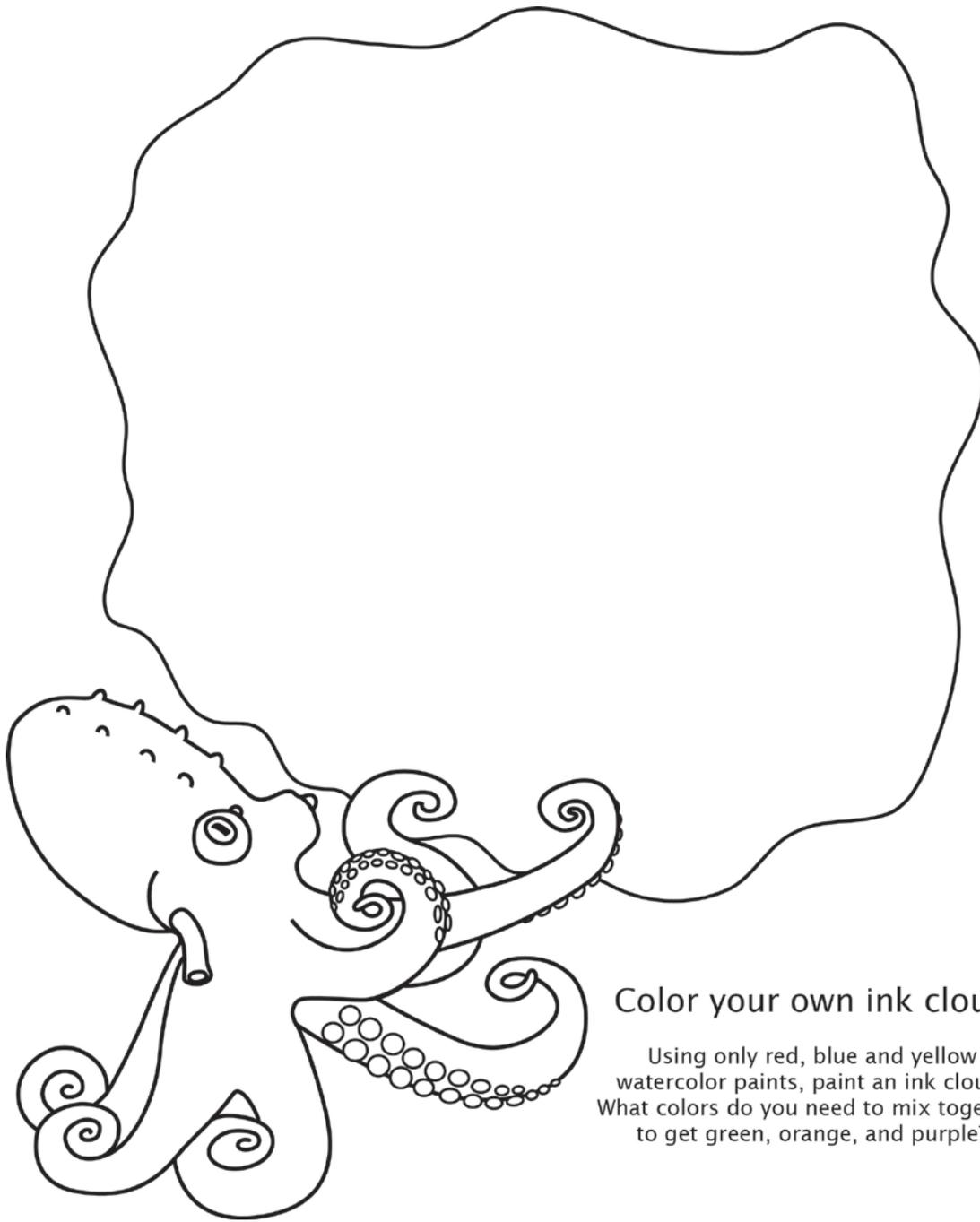
- Do you still practice to get even better?

Other
Fine Arts: Food coloring craft

You can make lots of colorful food with food colors. How many shades of each color can you make? What happens when you add more of one primary color? Try coloring vanilla pudding, frosting, vanilla cupcakes, or even "stir" food coloring into a little ice cream! Using the three primary colors of yellow, red and blue; here is how to make Octavia's colors:

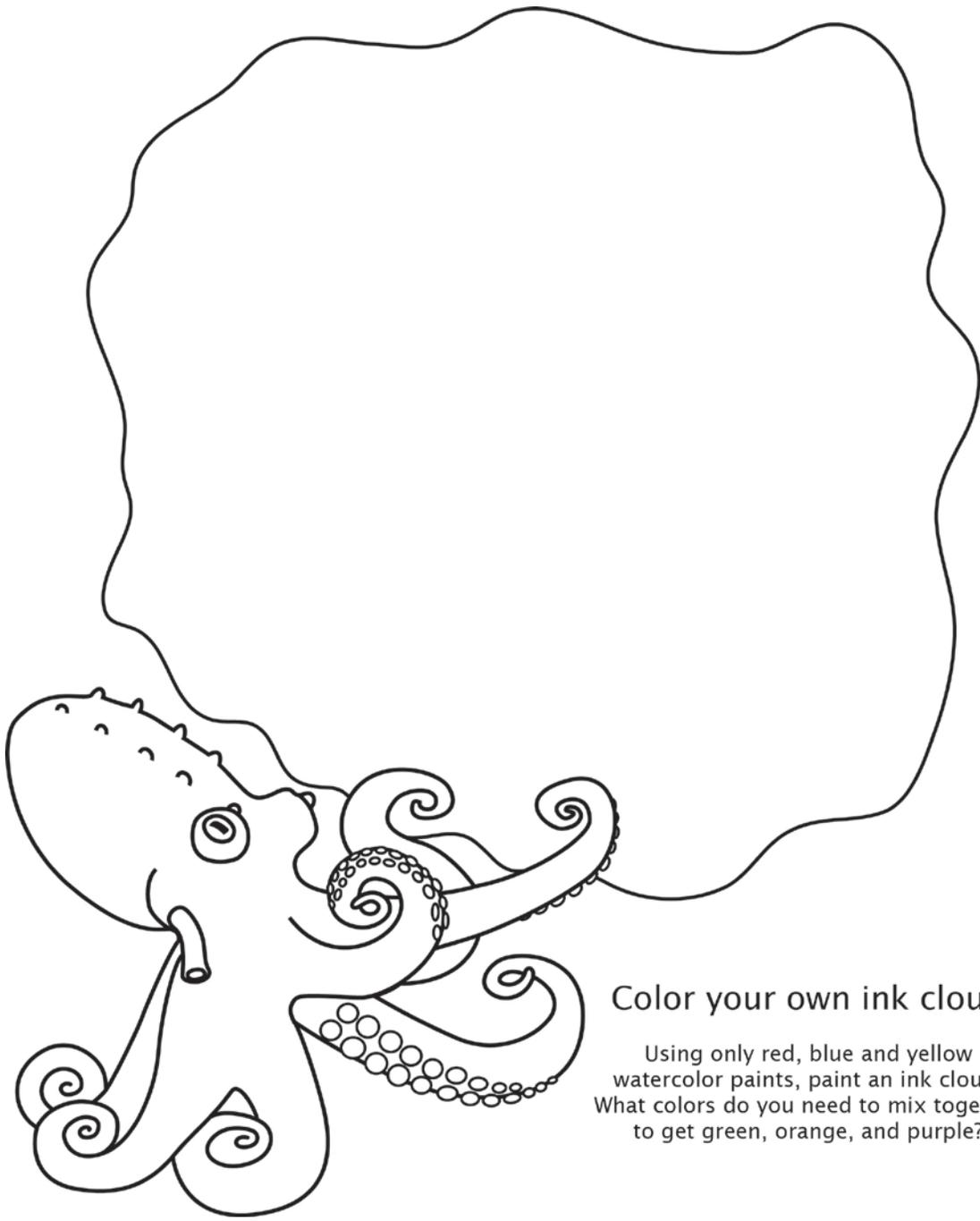|	
Red	primary color – use 4 or 5 drops
Orange	2 drops red, 6 drops yellow
Yellow	primary color – use 4 or 5 drops
Green	2 drops yellow, 3 drops blue
Blue	primary color – use 4 or 5 drops
Purple	3 drops red, 2 drops blue

Color your own ink cloud

Using only red, blue and yellow watercolor paints, paint an ink cloud. What colors do you need to mix together to get green, orange, and purple?

Color your own ink cloud

Using only red, blue and yellow
watercolor paints, paint an ink cloud.
What colors do you need to mix together
to get green, orange, and purple?