



# Lionfish Dissection Activity Materials

This lionfish dissection activity demonstrates how invasive species can impact the dynamics of a habitat or food web through predation. Lionfish are voracious piscivores (fish eaters) and their predation of native species is a top concern regarding their invasion.

Students perform a stomach content analysis of a lionfish “puppet” and discover which native species are being consumed. Students record data and identify stomach contents of each lionfish. This hands-on experience mimics procedures that researchers at the Dauphin Island Sea Lab perform to understand the impact of invasive lionfish in the northern Gulf of Mexico.

Leave the gloves and goggles behind and see what species your lionfish has consumed!

Please refer to the full lesson plan, *Using Lionfish to Teach About Invasive Species*, which is available online at <http://www.disl.org/educational-programs/professional-development-for-educators/teacher-resources/>.

## Materials Included in this document

### **Lionfish dissection puppet:** (page 2)

Fold page in half on the dotted line. Insert filled stomach, fold corners on diagonal dotted lines to create an enclosed puppet and tape closed.

### **Lionfish stomachs:** (page 3)

Cut out stomach puppets on solid lines. Fold on the dotted line. Fill with stomach contents, fold over corners to make an enclosure and tape closed.

### **Stomach contents & partially digested stomach contents:** (pages 4+5)

Cut shapes out on the solid lines.

### **Stomach Content Key:** (page 6)

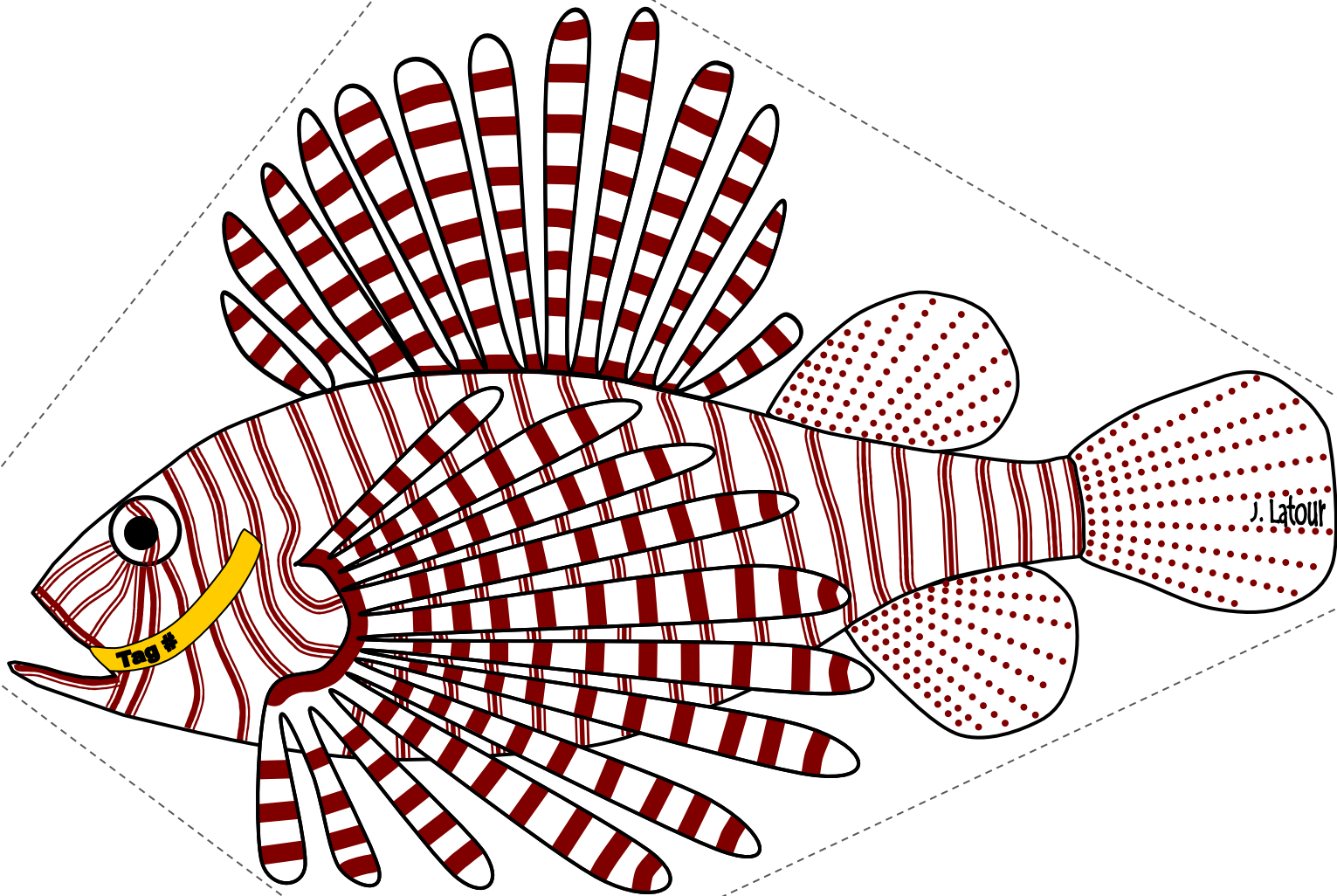
Hand out to individuals or groups of students.

### **Data sheets:** (page 7)

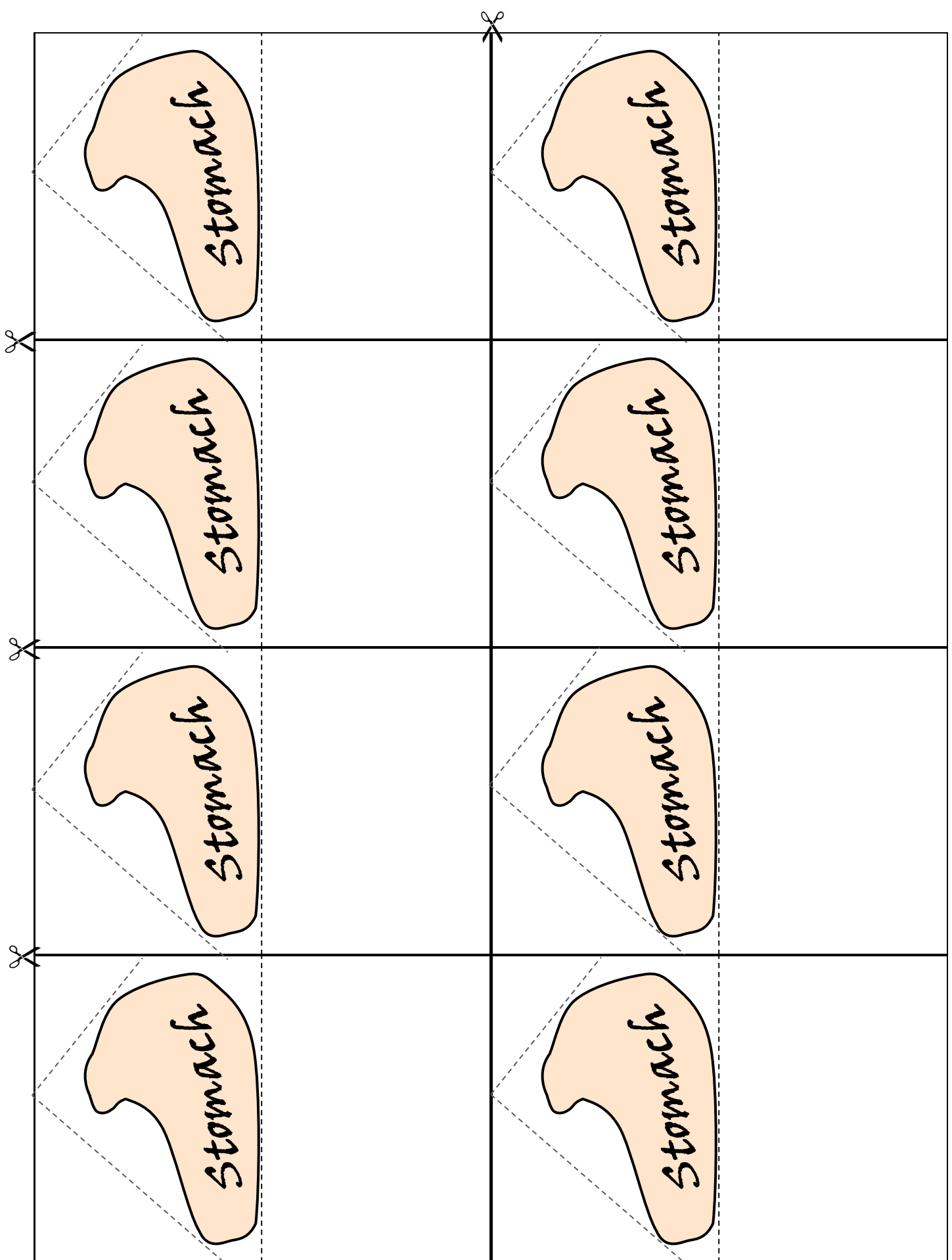
Cut apart each data sheet strip and hand out with each lionfish puppet.

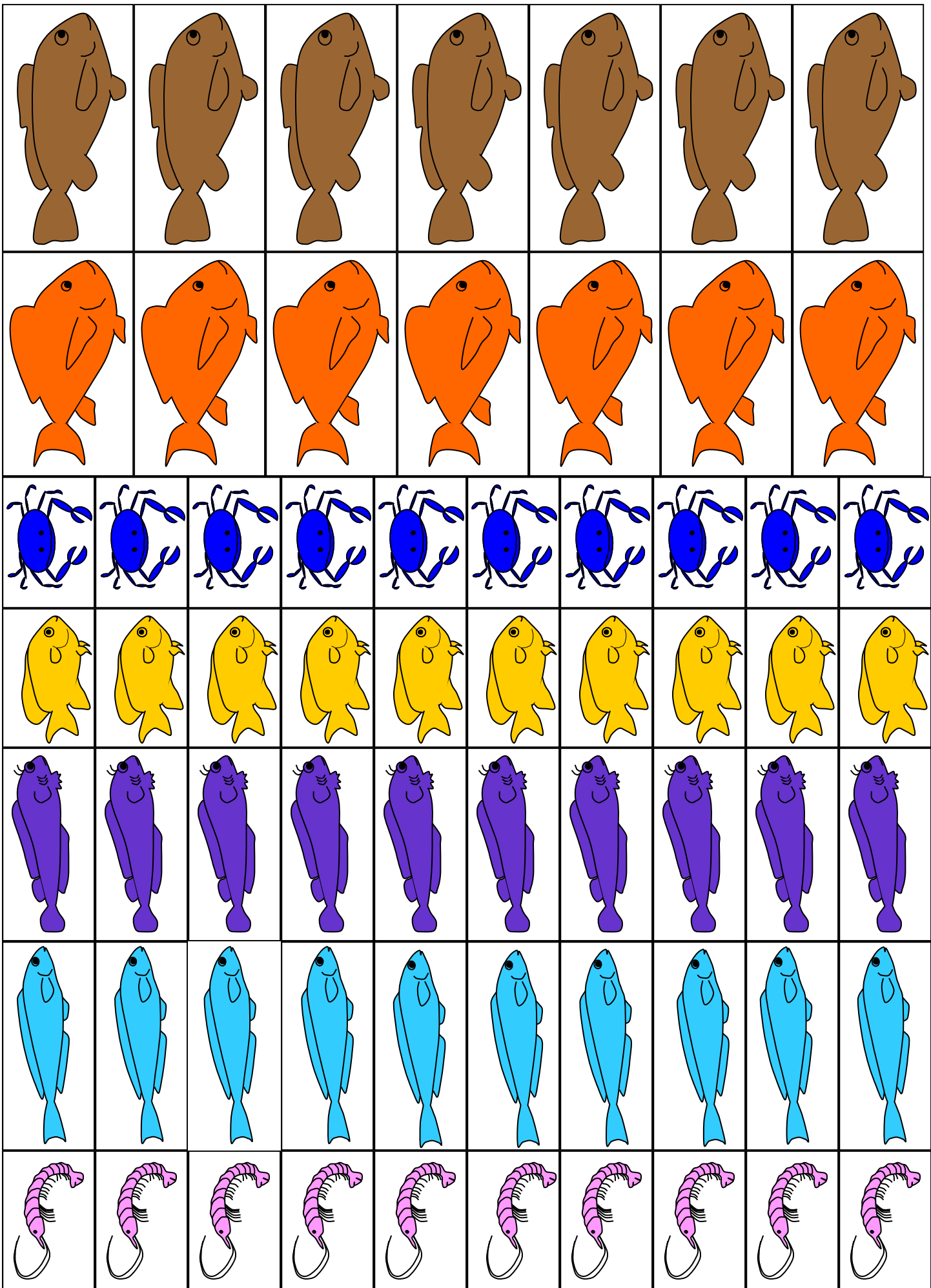
### **Data Compilation Sheet:** (page 8)

Use to collect data from each lionfish for analysis.

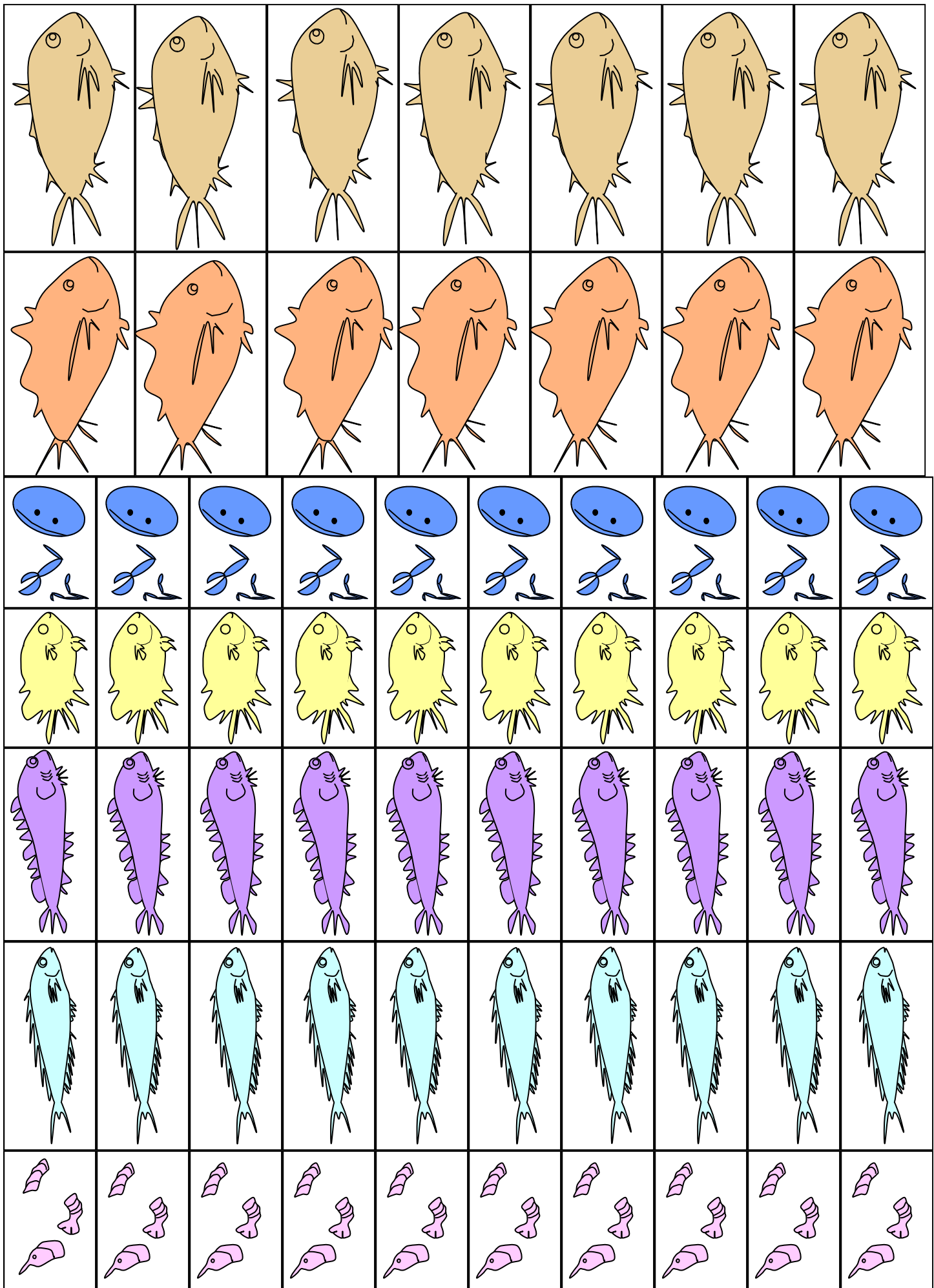


**Lionfish Dissection Puppet:** Fold page in half on the dotted line. Insert filled stomach, fold corners on diagonal dotted lines to create an enclosed puppet and tape closed.





Stomach contents:  
Cut shapes out on the solid lines

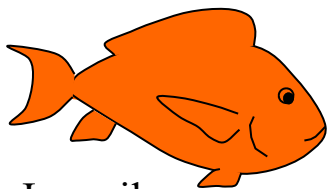


Partially digested stomach contents:  
Cut shapes out on the solid lines

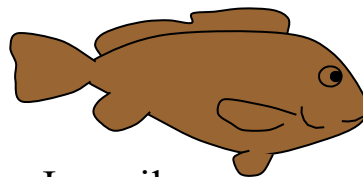
## Stomach Contents Key

Use this key to identify what is found in your lionfish's stomach. Look at color, fin shape and size to determine which type of fish or crustacean your lionfish ate!

Remember, lionfish digest food quickly. If you notice a little discoloration or tattered fins, your stomach contents may be partially digested! Use body shape, size and other features to figure out what it is.



Juvenile snapper

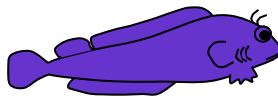


Juvenile grouper

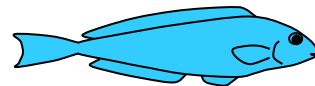
Snapper and Grouper are economically important fish species in **commercial and recreational fisheries**. They feed on the same trophic level as lionfish and could possibly become outcompeted for food. Some species of grouper may grow large enough to become a possible lionfish predator. Juvenile (young) and adult fish of these species prefer to hang out around reef structures, eating smaller fish and crustaceans.



Damselfish

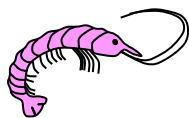


Blennies



Wrasses

Damselfish, blennies and wrasse are demersal (feed and dwell near the bottom) **reef fish** and are heavily preyed upon by lionfish. They are secondary consumers feeding on plankton and small invertebrates. Many native species feed on small reef fish such as these.



Shrimp



Crabs

Crabs and shrimp are a common food source for many native species in the Gulf of Mexico. These **crustaceans** are both primary and secondary consumers depending on species and stages of their lifecycles.

Please note: These figures are designed to symbolize types of fish and crustacean and do not represent any individual species.

Data Sheets: Cut out and hand out with each lionfish puppet.

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Name: \_\_\_\_\_

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp

Data Compilation Sheet: Use to collect data from each lionfish for analysis.

Tag #	# of prey	Snapper	Grouper	Damselfish	Wrasse	Blenny	Crab	Shrimp