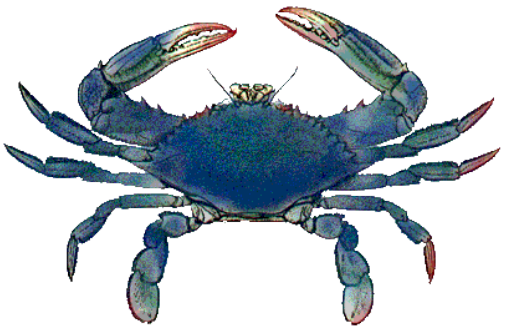
**Biomagnification Mobile Instructions and Materials (can be used to make a mobile or poster)**

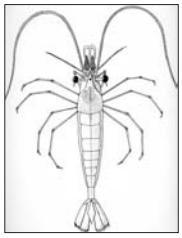
**Created by Christine Pizer of Poughkeepsie High School, 2012**

**Materials per class or per group:**

1 hanger
up to 6 large paper clipss
up to 6 small paper cups
up to 216 pieces of green yarn
1200 + pony beads or white hole punches
2 blue crab pictures
up to 12 grass shrimp pictures
up to 36 mud worms pictures
dice or a spinner (see below)
* consider photocopies on colored card weight paper

1) On one plastic hanger, attach one blue crab on the neck (use 2 and staple or glue edges together to surround neck).
2) Roll die or spin a spinner to see how many grass shrimp the crab will eat. For each grass shrimp, hook one large paper clip on to the hanger and attach a picture of a grass shrimp to either side of the paper clip (staple or glue edges together).
3) Use a piece of string to attach a small paper cup to each paper clip by punching a small hole in the bottom of the cup and looping the string through the paper clip and securing through the hole in the cup.
4) Roll the die again to see how many mud worms each shrimp will eat. Attach the specified amount of mud worms to the rim of each paper cup.
5) Roll the die again and attach green yarn or thread to the bottom of each worm to represent the amount of cattail detritus consumed by each worm.
6) One last time, roll the die to see the amount of cadmium found in each piece of cattail detritus. To represent this material, thread beads onto the thread or attach hole punched dots.

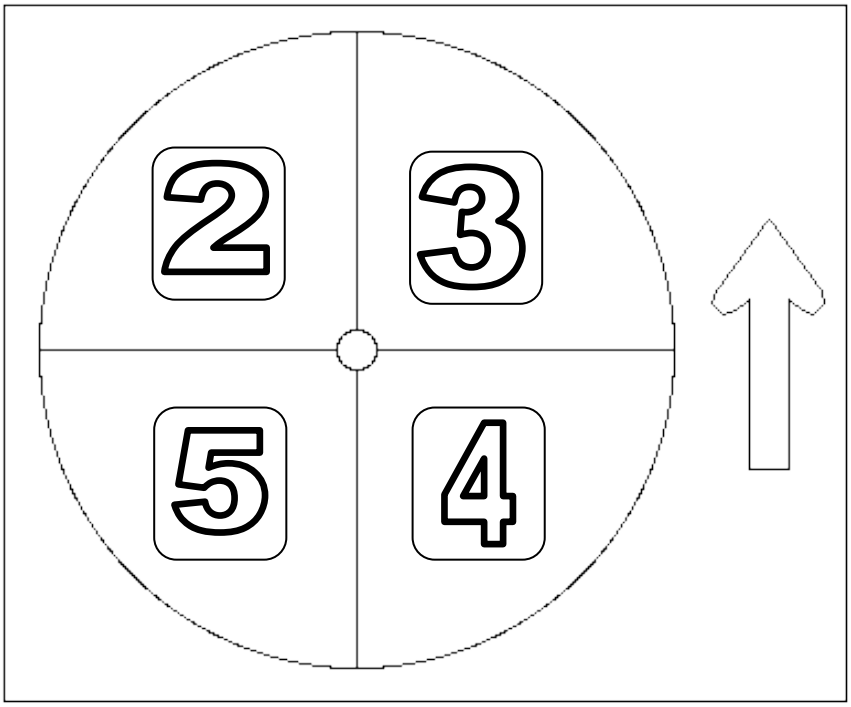


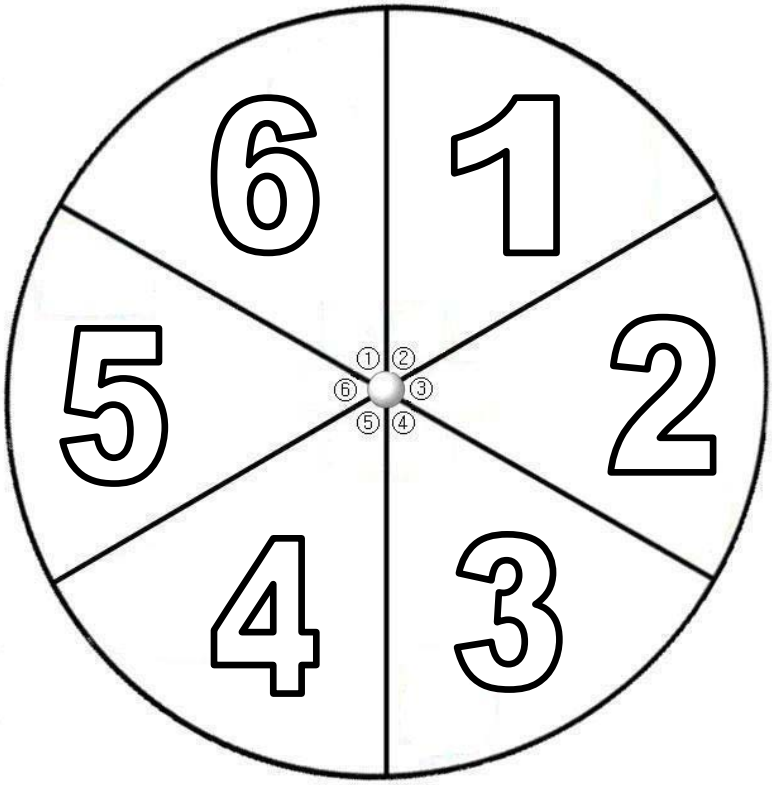


*NOTE: cut and paste or resize to your specifications.
See visual to follow.

For Spinners:

Use paper fasteners by hole punching the spinner then punch through the base. Laminate items if possible or use card weight paper. You should leave a space between the top of the fastener and the paper spinner because this will make it spin more easily.

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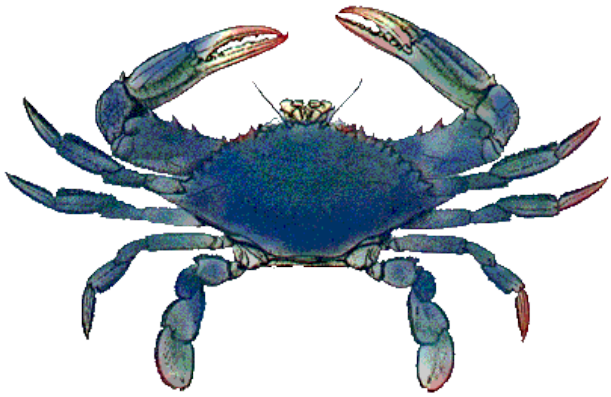

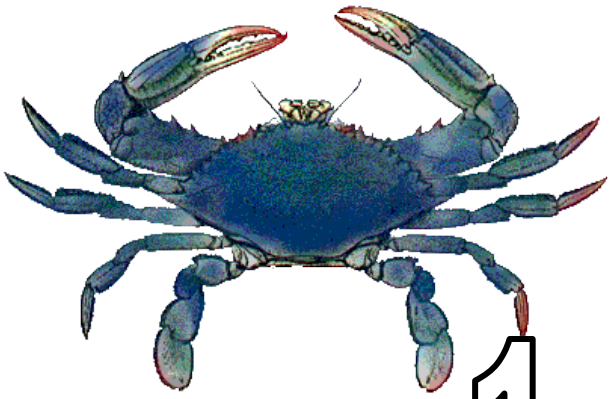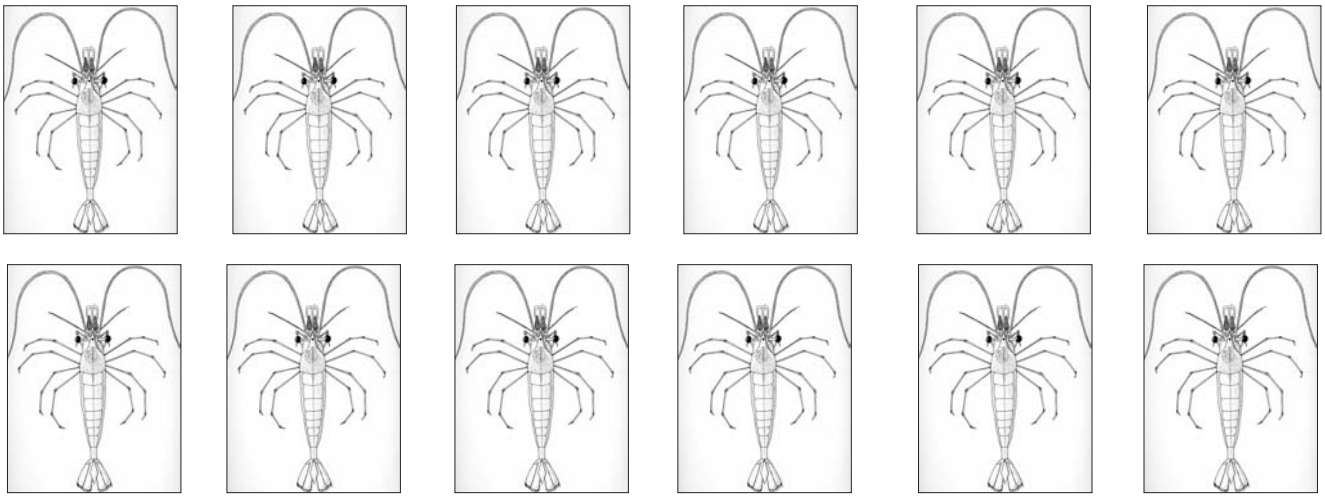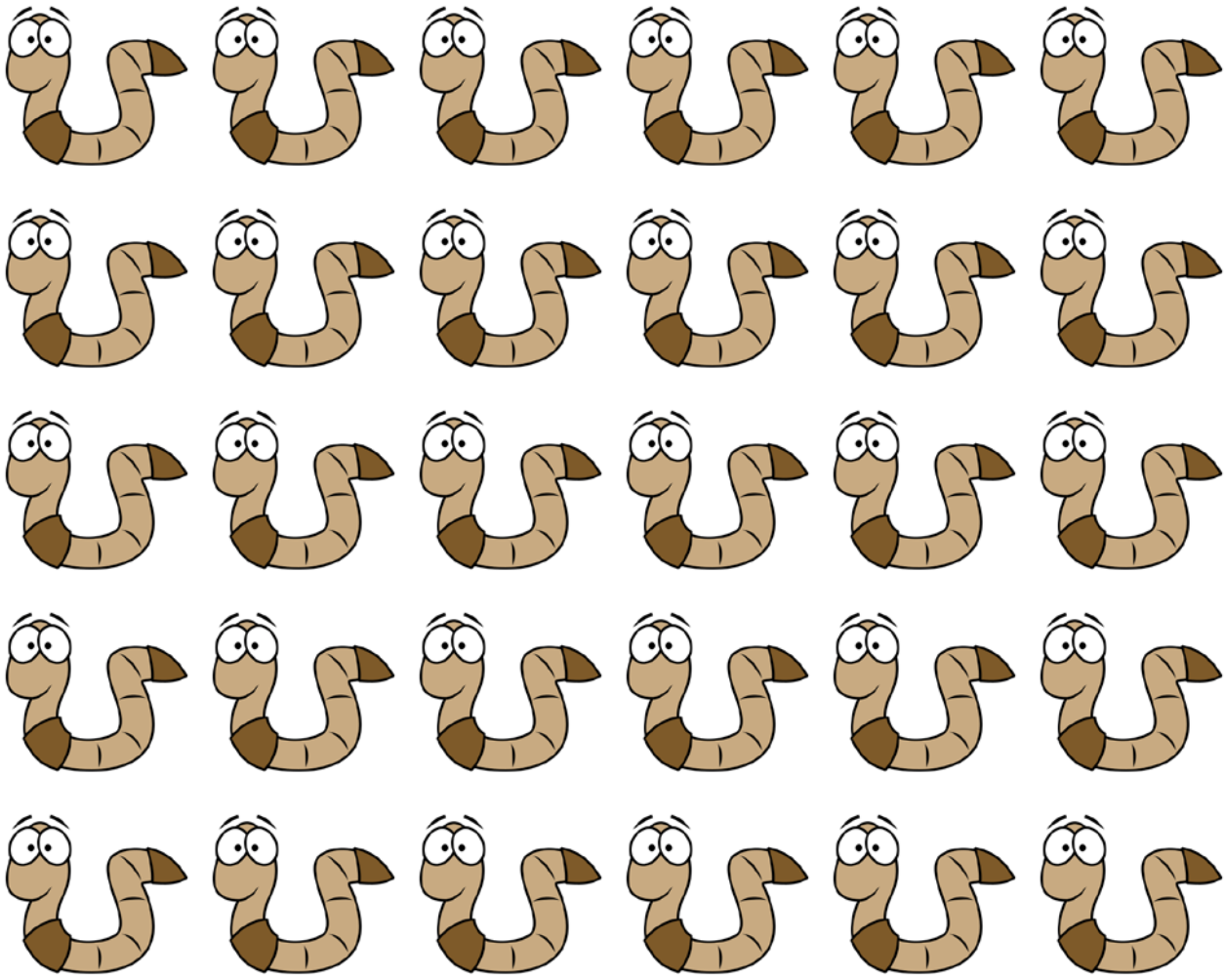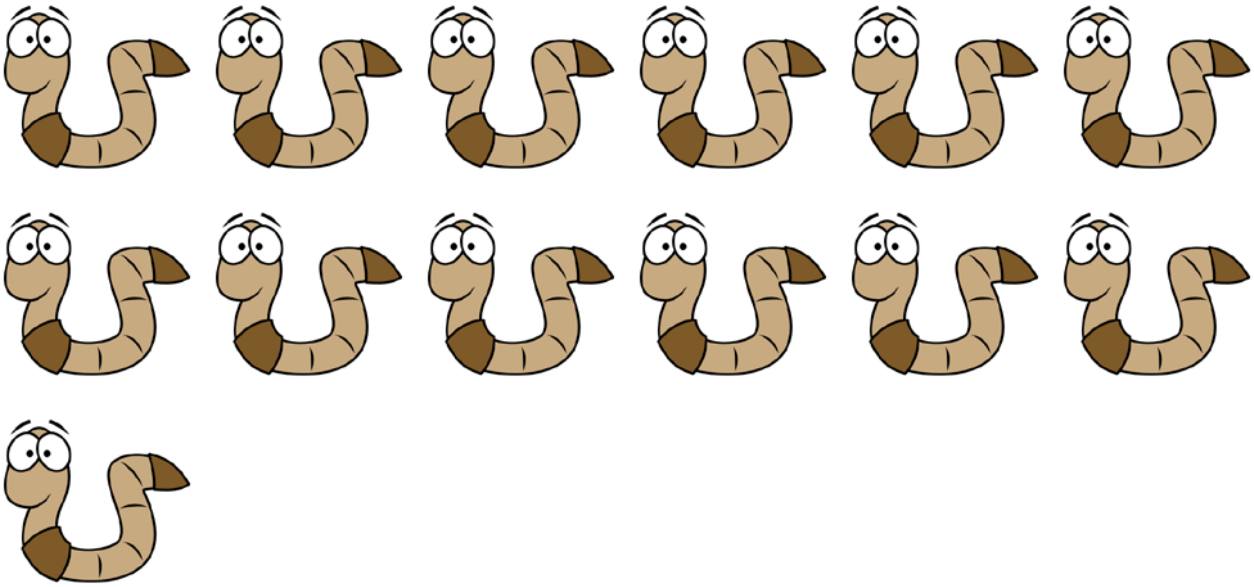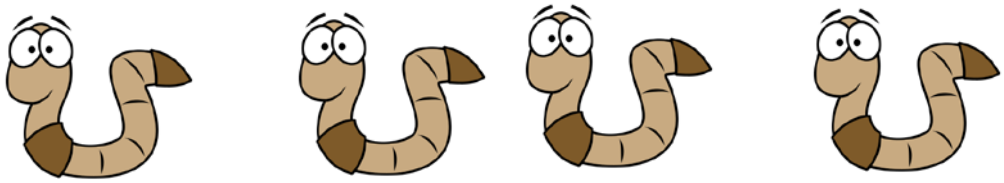
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