

# Science Explorations

## How to Make a Movement Cube

A movement cube is a large die made from cardboard with images of different animals on each face. Along with the image there are short instructions to move like the different animals on each face. Students (or facilitator) can throw the die and students move like that animal. A movement cube is a great time filler and gross-motor movement activity.

### Duration

Varies by number of cubes and group size. About half an hour for one cube.

### Group Size

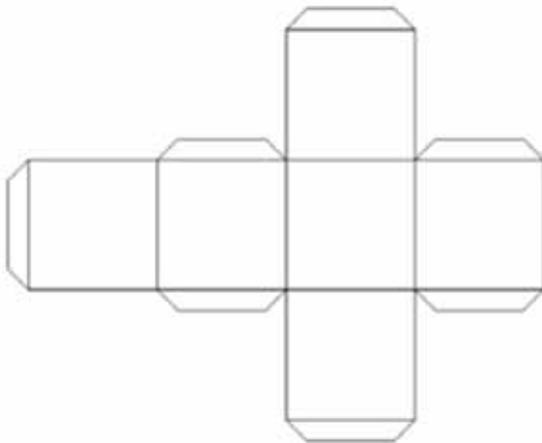
About four students per cube.

### Suggested Materials

- A large piece of cardboard or pre-constructed cardboard cube
- The images in this activity
- Packing tape
- Hot glue, Gorilla glue, or strong tape
- Contact paper or other clear, durable plastic sheets to cover each face of the die

### What to Do

1. Draw this pattern onto your cardboard. The squares should be approximately 12 x 12 inches. You can also print, enlarge, and trace this pattern onto your cardboard.

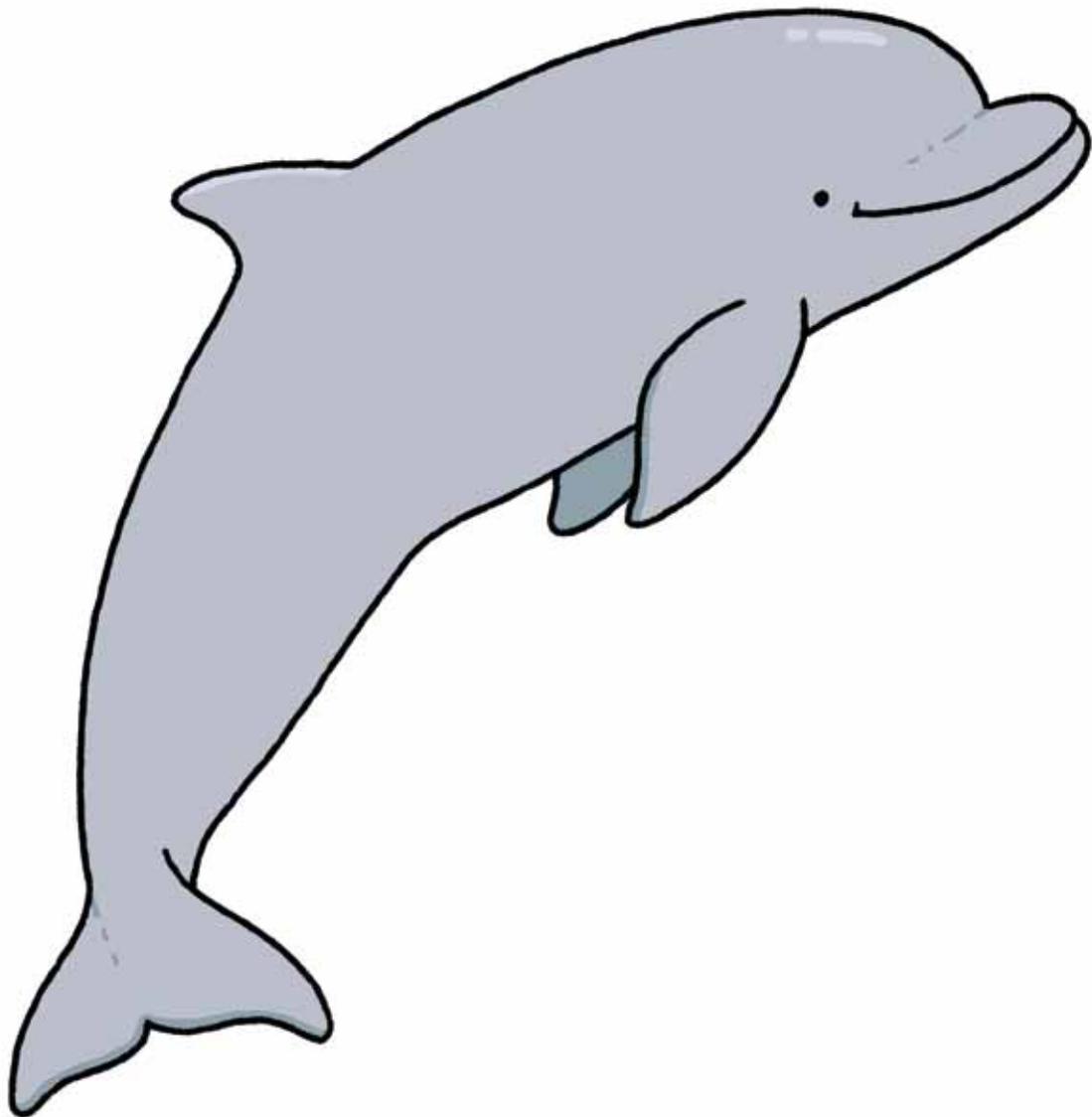


2. Fold your cardboard into a cube. Glue tabs together to begin securing into a cube shape.
3. Print images from this document. Glue or tape them, one onto each face.
4. Cover each face with thin protective plastic, tape edges with packing tape to continue securing everything into place.
5. You can also make your own images, or have students draw their own. The ones provided are just a suggestion.
6. Label the images with the accompanying action:
  - Fish: Swim Like a Fish
  - Snail: Hide Like a Snail
  - Crab: Crawl Like a Crab
  - Jelly: Jiggle Like a Jelly
  - Penguin: Walk Like a Penguin
  - Dolphin: Jump Like a Dolphin

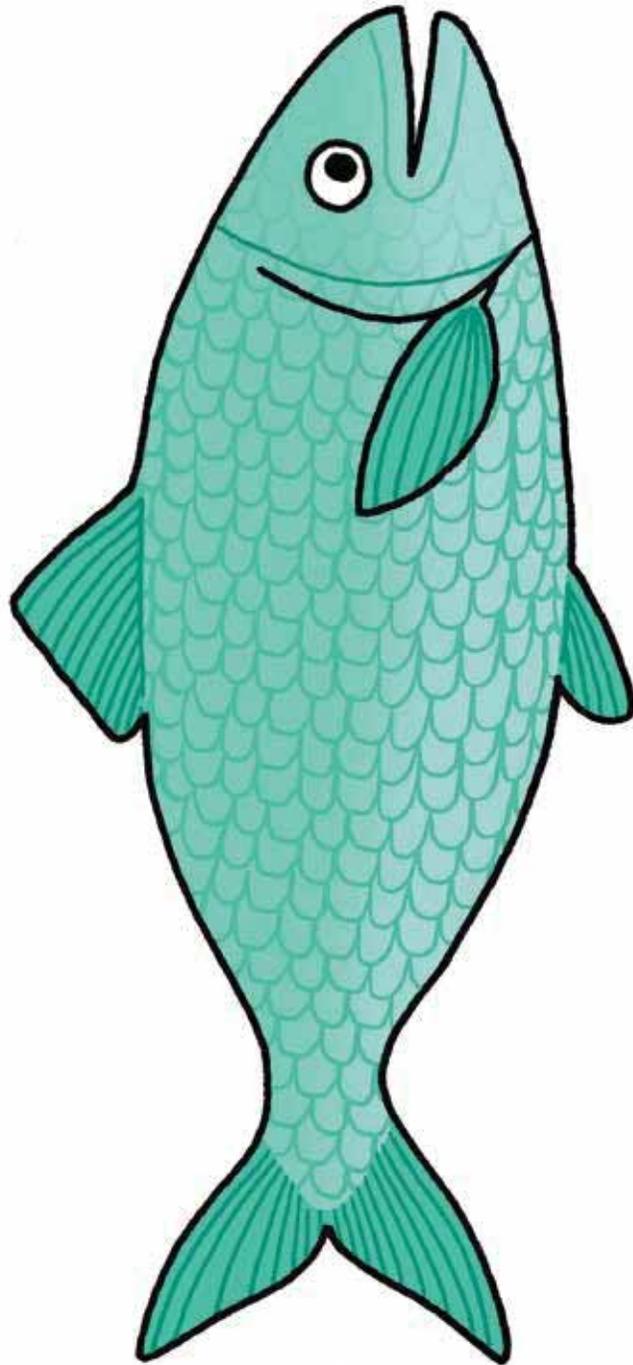
### Extensions/Variations

Come up with your own animals and corresponding movements. Have each team of about four students come up with their own cubes before they make them.

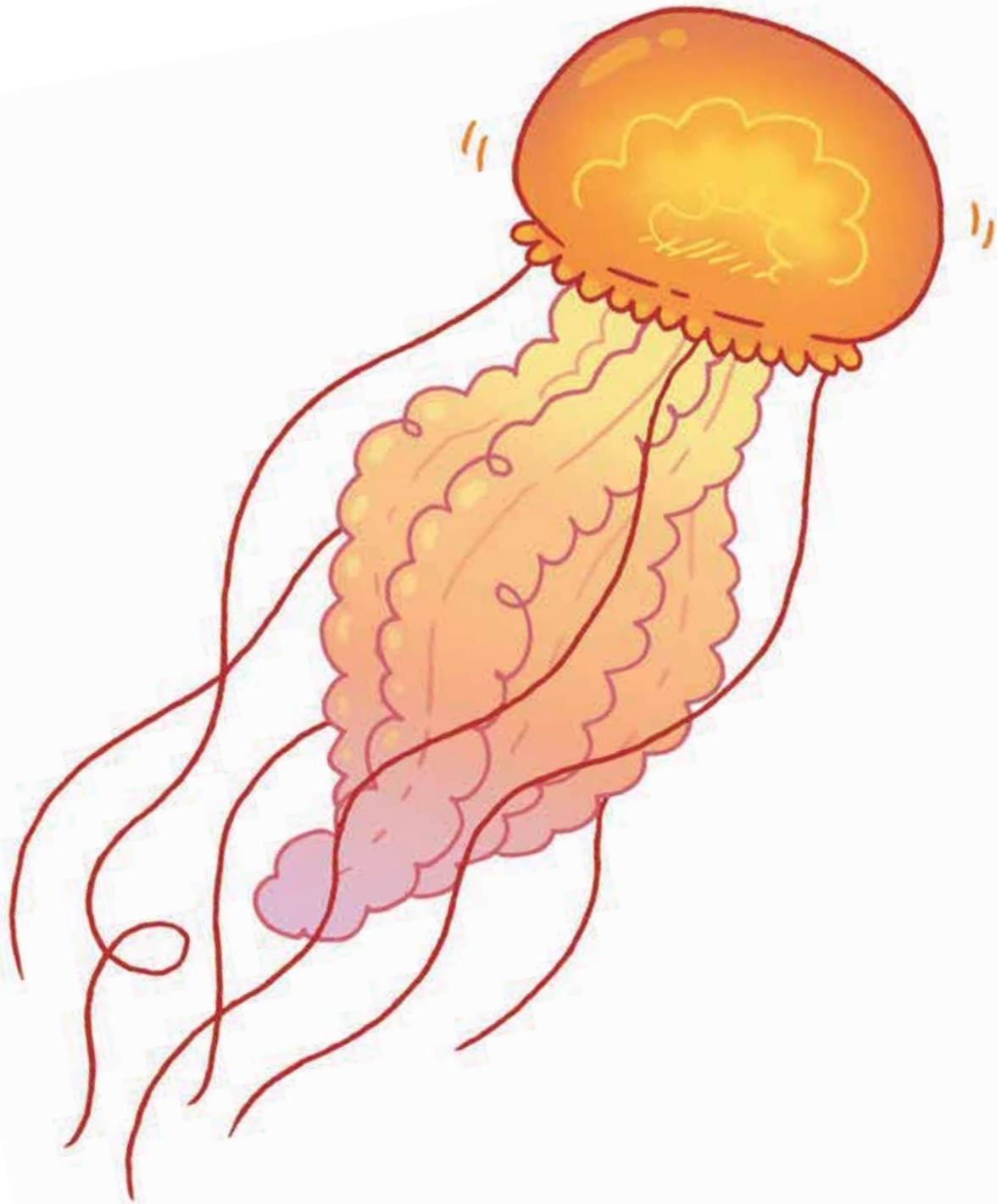
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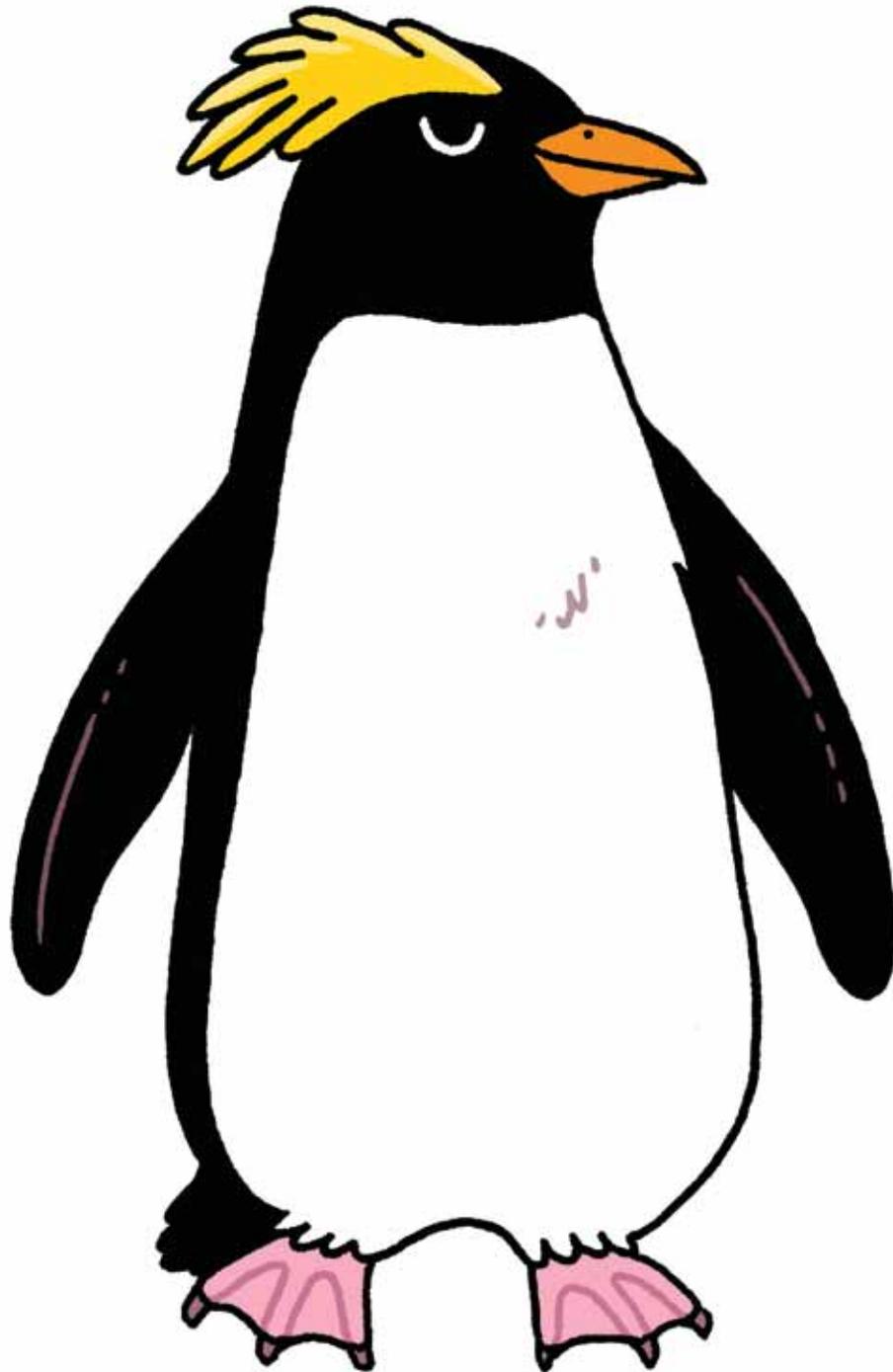
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# *How to Make a Movement Cube*



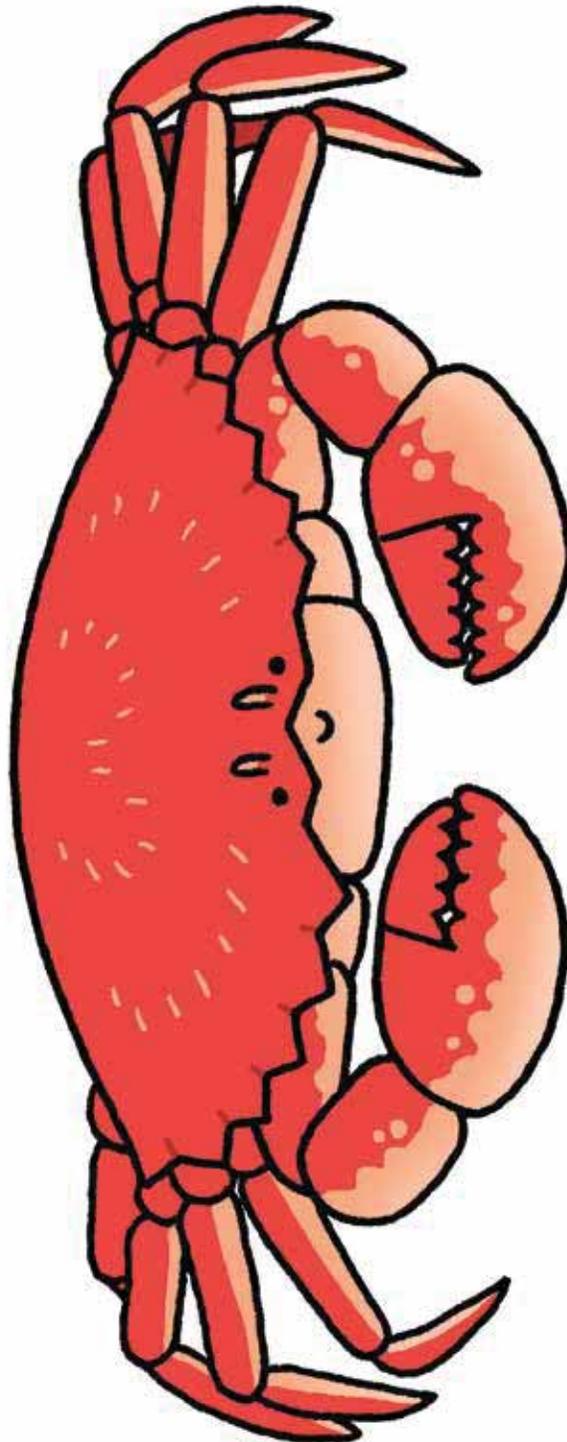
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# Science Explorations

## How to Make a Size Reel

A size reel is a length of string or other material that shows how large a certain animal is. They can be fun to compare to the students' size. (Example: After you make the size reel, figure out how many students it takes to get up to the size of that animal.) They can also be a great way to visually compare the sizes of different animals.

### Duration

Varies based on group size and which size reel and how many size reels used

### Group Size

Any. This activity can work well for a single student as well as a group. Either have a team of students make one of the larger ones together or have each student make their own and then compare and contrast their animal sizes.

### Ages

5 and older. (Skills required: Students will need to measure and cut. For the larger size reels, students will need to coordinate how they will measure the length using a ruler or a measuring tape that may not be long enough to cover the entire reel. While this can be challenging, it is a great exercise in planning, coordinating, and problem solving.)

### Concepts/Skills Developed

Measurement, problem solving, comparing and contrasting

### Suggested Materials

- A length of yarn, twine, string, or any similar material that can be unrolled and cut
- Scissors
- A tape measure or another method of measuring
- Known lengths of the animals that you are interested in measuring

### What to Do

1. Hold the end of the tape measure at one end of the yarn or twine.
2. Begin unrolling until you have reached the length of the animal.
3. Then cut! That's it.

To get students fully involved you can have them do pretty much all the work. Coach and encourage them when they need it, but try to stay as hands off as you can.

Here are some guiding questions to keep in mind as you make multiple size reels with your students: Which animal is the biggest? Which is the smallest? Can we order them from biggest to smallest? Which ones are bigger than us? Smaller than us? How many kids (or hands) fit into each animal?

Here are some examples of animals you can make size reels for:

Very Large Animals	Well-Known Animals	Very Small Animals
Lion's mane jelly: 120 feet Blue whale: 100 feet Saltwater crocodile: 15 feet Giant squid: 60 feet Whale shark: 42 feet	Leatherback sea turtle: 7 feet Orca/killer whale: 26 feet Cod: 3.3 feet Emperor penguin: 3.6 feet Lobster: Up to 3.9 feet	Krill: Up to 6 inches Dwarf lantern shark: 6 inches Clownfish: 4 inches Pygmy seahorse: 0.51 inches

### Extensions/Variations

Have students draw the animal or create a life-size drawing as a team! Encourage students to come up with their own animals to make size reels for. Collect various size reels over time so students can continue to compare and contrast them. If you have space, you could consider hanging them on a wall so students can see them next to each other regularly.