OIMB GK12 CURRICULUM

2nd grade **45 minutes**

JELLIES

Oregon Science Content Standards:
2.1 Structure and Function: Living and non-living things vary throughout the natural world.
2.1L.1 Compare and contrast characteristics and behaviors of plants and animals and the environments where they live.
2.2 Interaction and Change: Living and non-living things change.
2.2L.1 Describe life cycles of living things.
2.3 Scientific Inquiry: Scientific inquiry is a process used to explore the natural world using evidence from observations.
2.3S.2 Make predictions about living and non-living things and events in the environment based on observed patterns.

Ocean Literacy Essential Principles:
5. The ocean supports a great diversity of life and ecosystems

Goals:
- To introduce the group called Cnidarians.
- To explain that jellies, corals and sea anemones all belong to the same group, Cnidarians.

Concepts:
- The Cnidarian group includes jellies, corals, and sea anemones.
- These animals are all in the same group because they have jelly-like bodies, one body opening and stinging cells.

Materials:
- Cnidarian PowerPoint
- Videos: Jellies Swimming, Bloom of Jellies, Budding of Jellies (available from www.arkive.org)
- optional - jellies and containers to hold them
- optional Jellies Anatomy and Life Cycle Worksheets

Lesson Plan:
1. Ask the students what sorts of things wash up onto beaches during storms. If jellies aren't brought up, ask if anyone has ever seen a jelly washed up on the beach. Tell them we are going to call them jellies, rather than jellyfish, because they are NOT fish!

2. Show the Cnidarian PowerPoint. Tell them that there are lots of different kinds of jellies and they belong to a special group of animals called Cnidarians. Tell the students that

cnidarians have jelly-like bodies, one body opening, and stinging cells. Anemones and corals are also Cnidarians. Talk about the body plan of jellies and sea anemones (a sea anemone can be thought of as a jelly flipped upside down): they have a bell or umbrella, tentacles with stinging cells, one opening (mouth). Tell them that jellies swim by filling their umbrella with water and then pushing the water out, propelling themselves forward.

3. Show video clips of jellies swimming.

4. Tell the students that jellies often occur in high densities (many together, called "blooms"). Show the video called Bloom of Jellies.

5. Explain how jellies and sea anemones have stinging cells on each of their tentacles and ask the students what the jellies and anemones would use these stinging cells for (protection and catching food). Ask why most jellies are translucent (camouflage in water). Ask the class what eats jellies (only three animals: other jellies, sea turtles, and the sunfish). Ask why more animals don't eat jellies (they are mostly water so do not provide a lot of food, and they have stingers). Ask what jellies eat (plankton--baby animals and small plants; fish; crabs; shrimp, etc.). Talk about one way jellies and some anemones reproduce: budding (pulling apart). Show the Budding of Jellies video. (Note: Jellies have a complex life cycle involving the spawning of eggs and sperm that combine and develop into a larva, which then settles as a polyp. This polyp grows and then buds young medusa—see worksheet).

6. If you have live animals, group the students and have them make observations on how jellies move. Have the students point out the jellies' different characteristics. If you don't have live animals, you can show more videos from arkive.org

7. Optional Jellies Anatomy and Life Cycle Worksheets

Assessment: Have the students point out the characteristics of cnidarians

GK12 Fellows: Alix Laferriere, Zair Burris and Josh Lord

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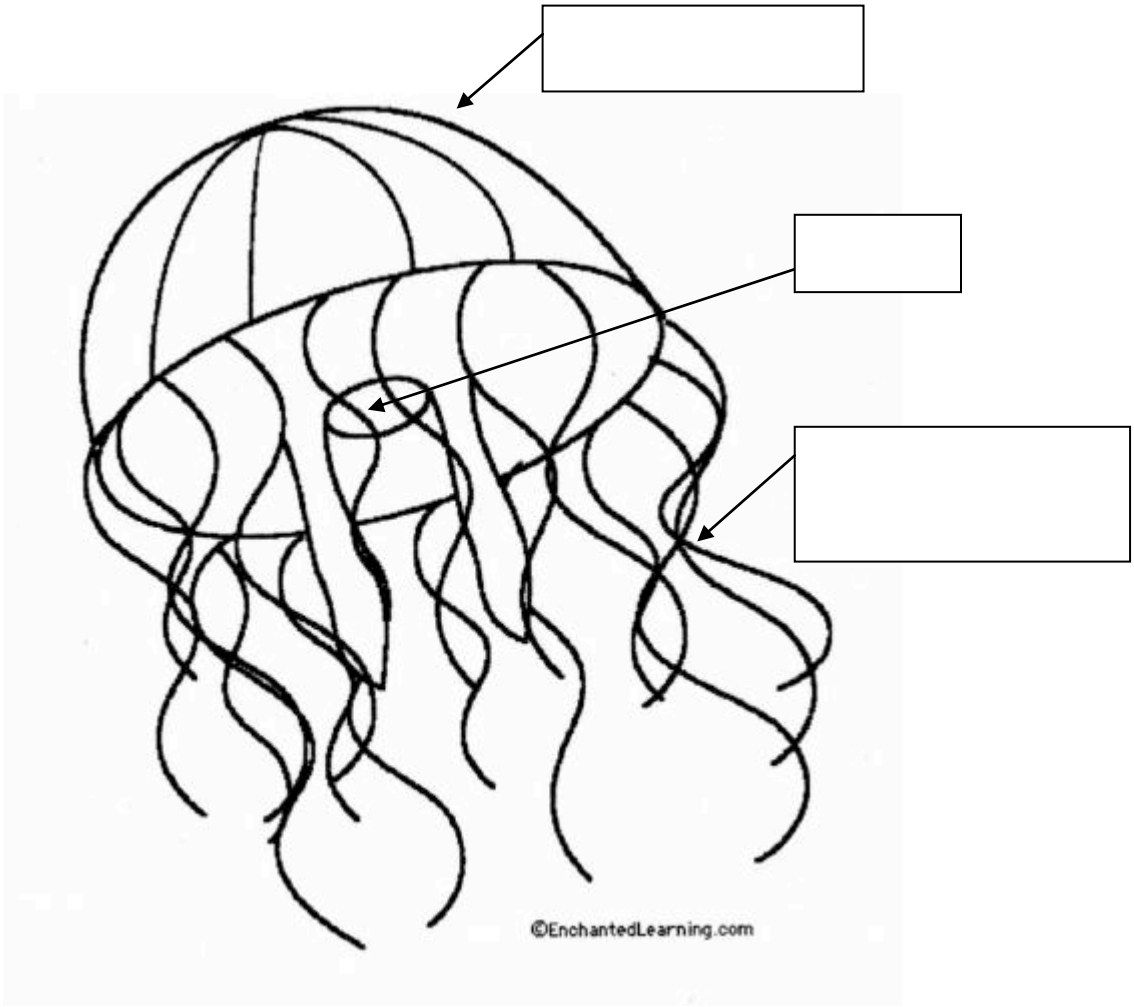
JELLIES



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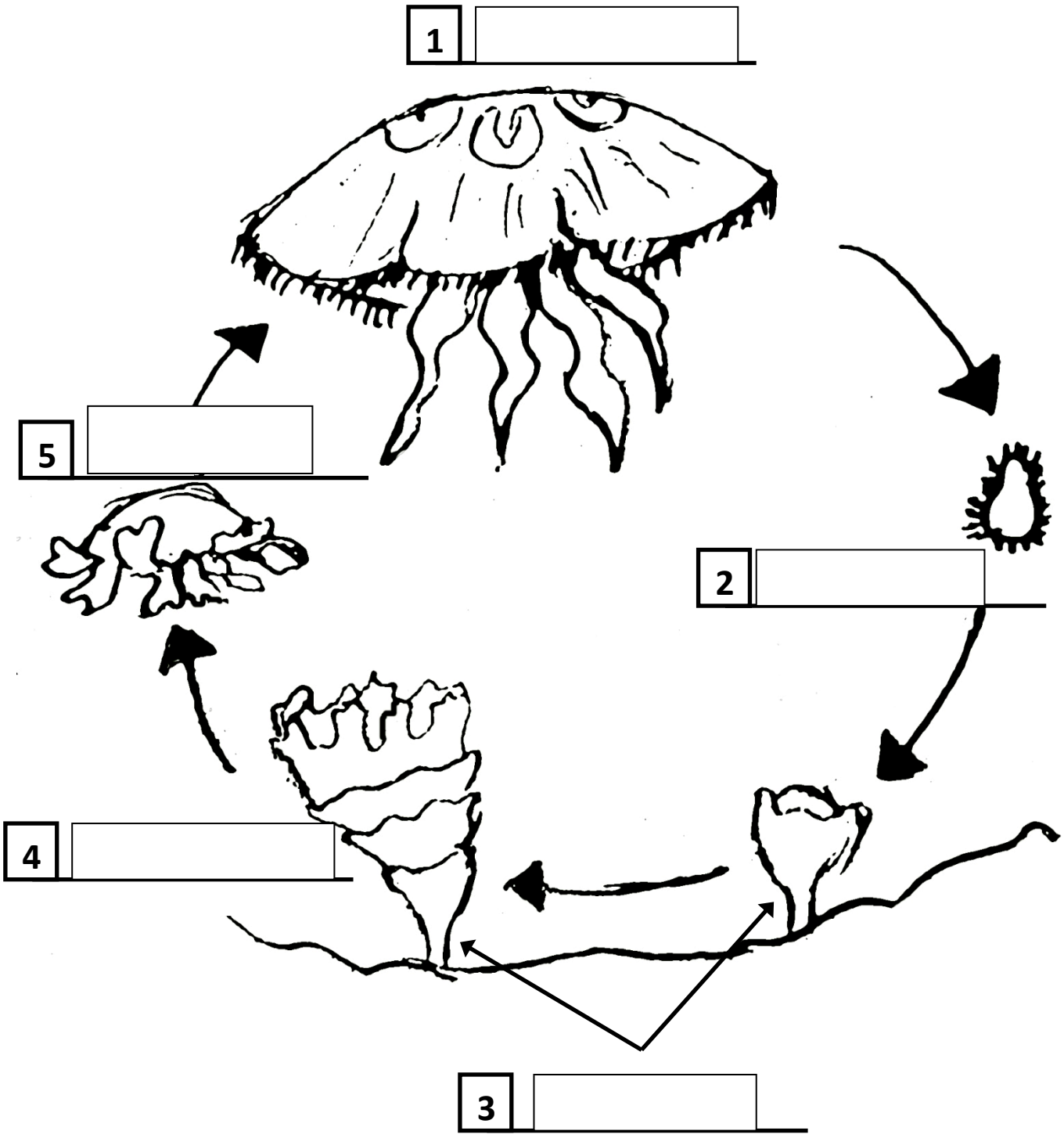
Jellies Life Cycle



Source: Sea Science
http://www.dnr.sc.gov/marine/pub/seasicence/jellyfi.html

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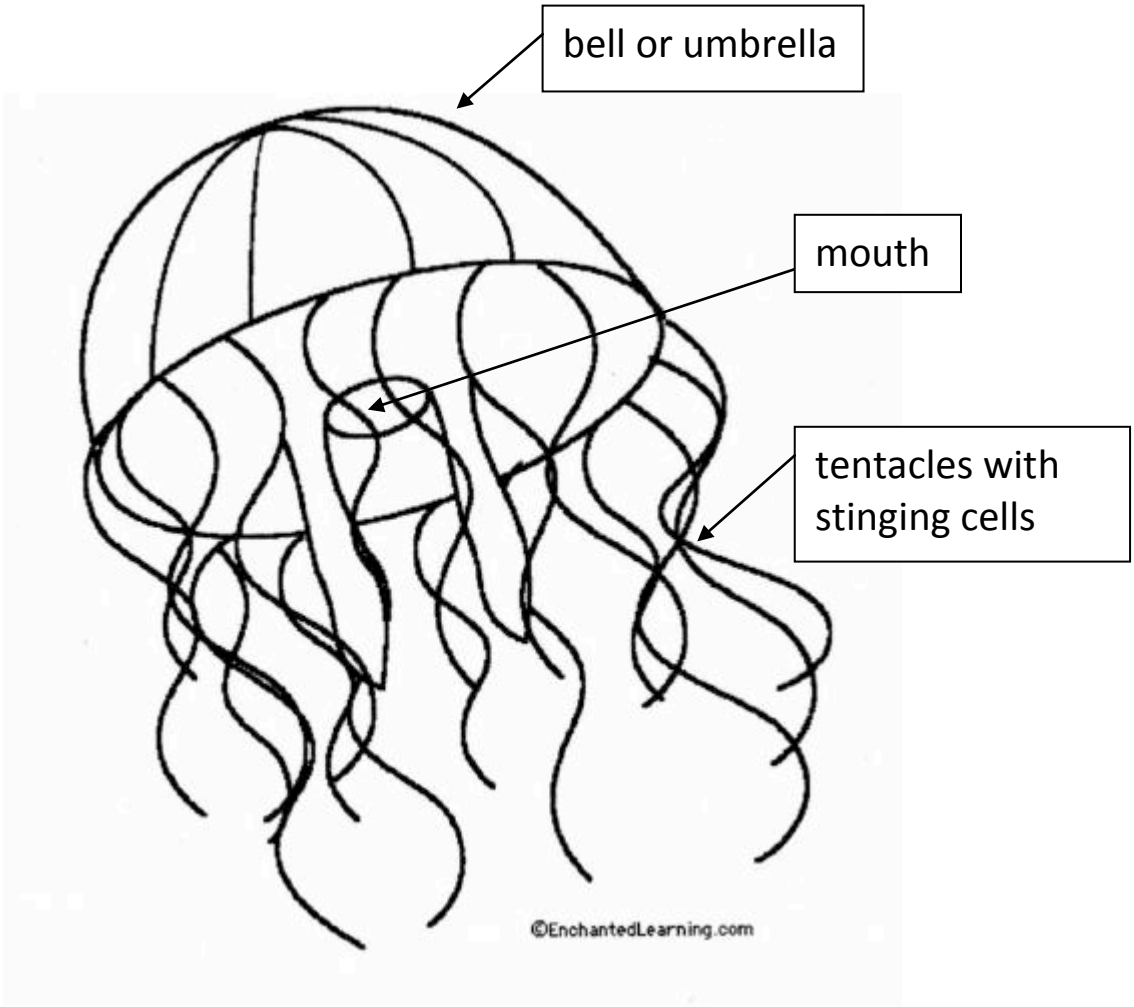
JELLIES



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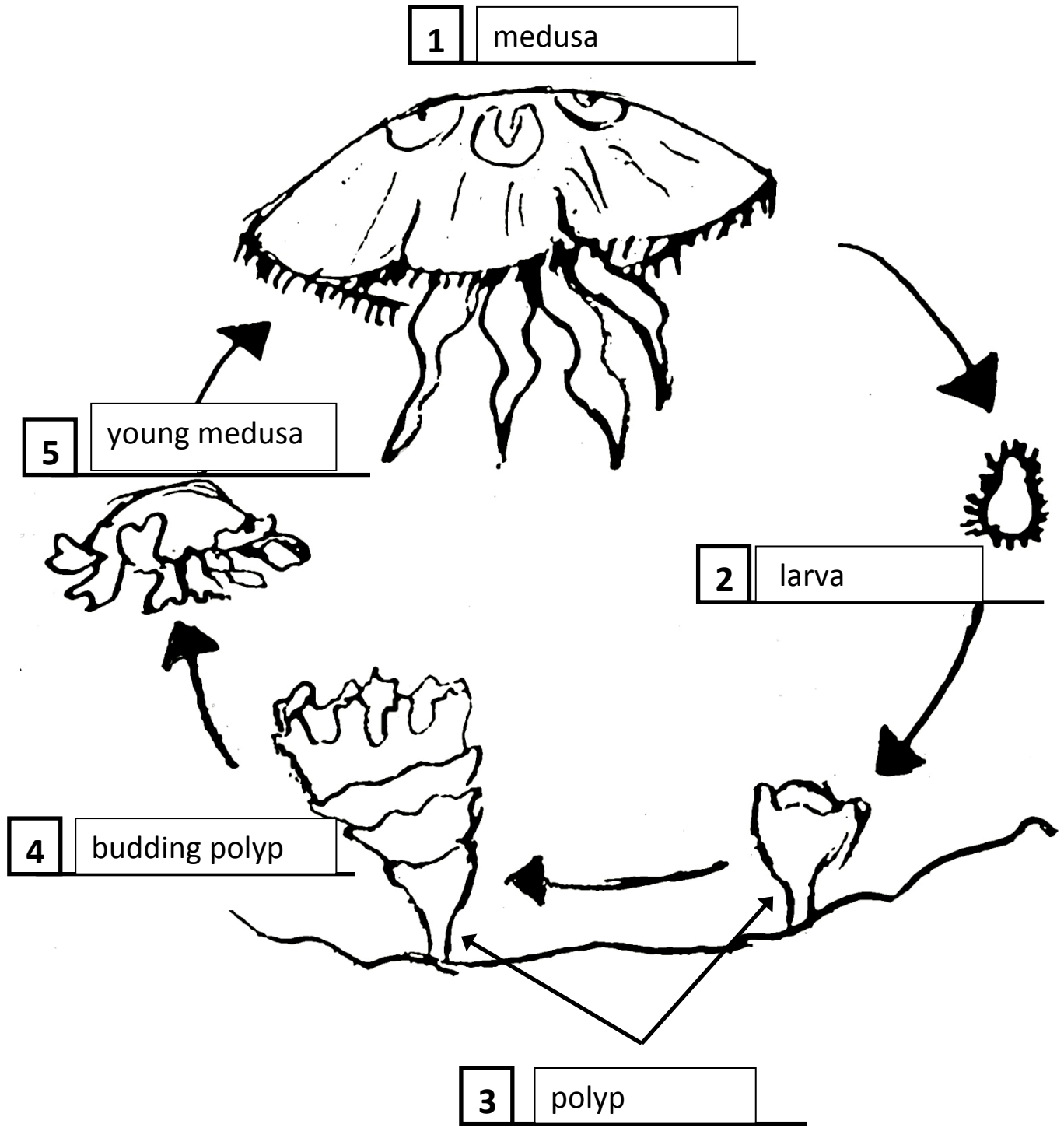
Jellies Life Cycle



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