For Creative Minds

This For Creative Minds educational section contains activities to engage children in learning while making it fun at the same time. The activities build on the underlying subjects introduced in the story. While older children may be able to do these activities on their own, we encourage adults to work with the young children in their lives. Even if the adults have long forgotten or never learned this information, they can still work through the activities and be experts in their children's eyes! Exposure to these concepts at a young age helps to build a strong foundation for easier comprehension later in life. This section may be photocopied or printed from our website by the owner of this book for educational, non-commercial uses. Cross-curricular teaching activities for use at home or in the classroom, interactive quizzes, and more are available online. Go to www.ArbordalePublishing.com and click on the book's cover to explore all the links.

Instinct versus Learned Behaviors

Animals do some things without even thinking about it. These behaviors, called instinct, help animals live in their habitats. These behaviors come naturally to the animals and all animals of the same type will do them without being taught.

For example, if you have a baby brother or sister, you'll see that the baby cries when hungry and laughs or smiles when happy. Other examples of instinctual behavior include birds building nests, turtles (cold-blooded reptiles) basking in the sun to warm up, and skinks breaking off their tails to escape predators.

Many animals are born without ever knowing their parents. They don't have anyone to teach them how to find food or how to survive—they survive purely on instinct. These behaviors are inherited from parents, even if the animals never know their parents. Any behavior that is not learned is considered instinct.

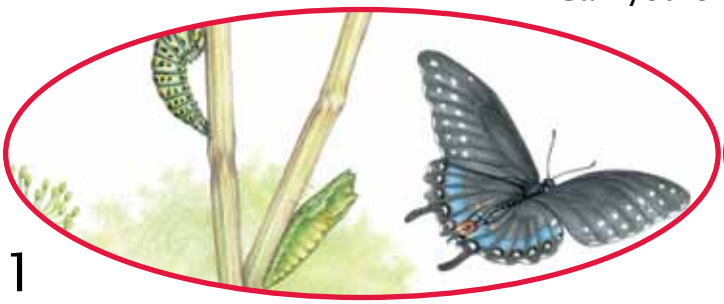
Most mammal and bird parents raise their young. Adults teach so that the young learn how to do things. Young humans learn to read, ride bikes, and write. Young birds learn to fly. Young wolves learn to hunt for food.

Some behaviors are a combination of instinct and things they learn. For example, between 6 and 9 months old, human babies instinctually start to babble to communicate. Their parents will teach them a language, like English or Spanish.

Sometimes animals learn things by observing other animals or by figuring something out. A young bear might learn where to go to find juicy berries. Eagles may figure out that salmon swim upstream at certain times of year and are easy to catch. A young human might learn that it's easier to make friends by being nice than by being mean.

What are some things that you have learned how to do? Who taught you or how did you figure it out?

Identify which behaviors are instinct and which are learned.
Can you explain why?



1

A caterpillar spins into a chrysalis. After a few weeks, it emerges as a butterfly.

2

Sharks are born knowing how to swim.

3

Humans take swimming lessons to learn how to swim.

4

Ladybugs know how to fly.

5

Tadpoles know how to swim.

6

Children sing songs.

7

Sea turtle hatchlings move towards the brightest light to get to the ocean.

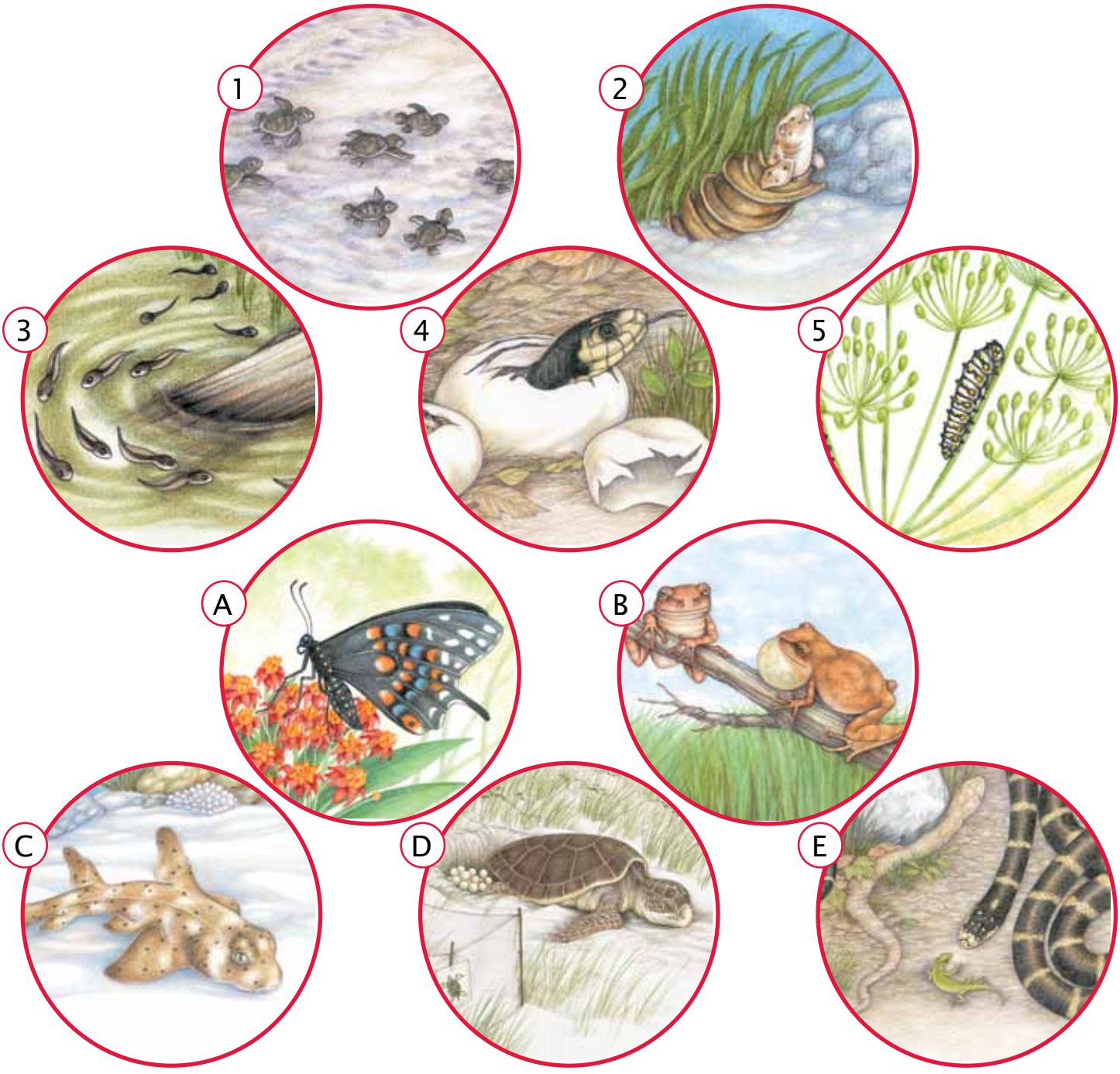
8

Kingsnakes know how to hunt for food.

Instinct: 1, 2, 4, 5, 7, 8 Learned Behavior: 3, 6

Young and Their Parents

Some young animals look like small versions of the adults they will become. Other young look very different from adults. They may undergo a complete change as part of their life cycle, their eye color might change, or the color of their fur or feathers might change as they get older. Can you match the young (numbers) to the adult animals (letters)?



Answers: 1D: sea turtle, 2C: horn shark, 3B: frog, 4E: snake, 5A butterfly

Life Cycles: Metamorphosis

All living things have life cycles. Plants grow from seeds. Animals are born or hatch and grow into adults. Some animals go through a complete change, called metamorphosis, from the time they hatch or are born to what they eventually look like as adults. Butterflies, frogs and ladybugs all undergo a complete metamorphosis.

- Eggs hatch into larvae that don't look anything like the adults.
- The larvae eat, grow, and molt. When they are grown, they turn into pupae.
- The pupa stage is a time of change.
- Adult insects emerge from pupae.
- The adults lay eggs to start the process all over again.

Can you find some life-cycle changes in the illustrations?