

Summary Description

This is the tenth in a series of 11 lessons that introduces the student to Biology.

Learning Objectives

To have the student learn a few key facts about mammals.

Approximate Time for Lesson

35 minutes

Suggested Maturity Level for Instruction

Student should be able to read simple words and perform simple addition and subtraction. Also, student should be able to sit still and engage in one-on-one conversation.

References:

"Mammals", Yahoo Kids - <http://kids.yahoo.com/animals/mammals>

"Mammal", Yahoo Education -

http://education.yahoo.com/reference/encyclopedia/entry/mammal;_ylt=Aj2HRX4MWRBtuDa72lh5ivpVt8wF

"All About Mammals", Kidzone Fun Facts for Kids - <http://www.kidzone.ws/animals/mammals.htm>

Materials Needed

1. Internet Access - Pull up the following:
 - a. Picture of a dolphin (go to <http://i.treehugger.com/files/dolphin.jpg>)
 - b. Picture of a killer whale (go to <http://www.seaworld.org/animal-info/small-wonders/killer-whale/images/killer-whale.jpg>)
 - c. Video of porcupine and lions (go to http://www.youtube.com/watch?v=_r2rDBVFAv4)
 - d. Picture of a bat (go to <http://www.nearfamous.com/Images/NearFamousWebImagesOptimized/NectarBats/06081272NectarBatWingsUp.jpg>)

Preparation

Make sure you have materials open, printed and/or available prior to beginning the lesson.

Script

Introduction (5 minutes)

1. **Teacher:** Alright - so last lesson we learned about reptiles. Can you tell me a few things about reptiles? [Engage the Student in conversation but come to the point that reptiles are vertebrates that are cold-blooded, lay eggs, and must breathe air on land. Also most reptiles have teeth.]

2. Teacher: Great. Now today, we're going to learn about another group of animals called mammals. So, are you ready to learn about mammals? [\[Get positive response from Student and begin lesson\]](#)

Lesson (25 minutes)

1. Teacher: Ok - so mammals are the first kind of animal that we've learned about so far that are warm-blooded. This means that they can keep their body temperature warm even if it isn't warm outside. This is great for mammals since this means they don't need sunlight to keep warm and so, can live almost anywhere. In fact, mammals live on land, in the water, in the air, and even underground. But one bad thing about being warm-blooded is that mammals must eat more compared to cold-blooded animals such as fish, amphibians, or reptiles. This is because mammals need the extra food to keep their body temperatures warm.
2. Teacher: Mammals also have fur. In fact, mammals are the only animals to have fur or hair so one good way to see if an animal is a mammal is to find out if that animal has fur or hair on any part of its body. Fur or hair helps keep the mammals warm and also protects them from getting hurt. In some mammals, like the Polar Bear, each hair is hollow and has air inside it. This is to help them float when they are swimming. Isn't that cool?
3. Teacher: Mammals also have bigger brains compared to other animals. The bigger brain size helps mammals learn new things so that they can survive as their environment changes around them.
4. Teacher: Another thing about mammals is that the mothers can create milk for babies. In fact, mammal mothers are the only animals that can create milk for their young. And finally, almost all mammals give birth to live babies, instead of laying eggs.
5. Teacher: OK - let's stop for a second and think about this. There is one more lesson after this one and it will be on birds. But so far, out of all the kinds of animals we learned about so far, what kind of animal do you think we humans are? [\[Engage the Student in conversation but come to the point that humans are mammals based on each of the characteristics presented above\]](#)
6. Teacher: That's right - people are mammals. And so, you may already know a lot about mammals just by thinking about how you and your family behave. For example, think about how much your mother takes care of you - do you think that she takes a little care of you or does she take care of you a lot? [\[Engage the Student in conversation but come to the point that the Student's mother take great care of her\]](#)
7. Teacher: Well, the fact that your mother takes care of you a lot has a lot to do with the fact that you are a mammal. You see, compared to all other animals, baby mammals are born helpless and so, mammal mothers take more time to take care of and train their young.

8. Teacher: Now, what kind of food do you think mammals eat? Meat, plants, or both? [\[Engage the Student in conversation but come to the point that some mammals eat only meat while other eat only plants and still others, like humans, eat both\]](#)
9. Teacher: That's right - Sorry that was a trick question, but some mammals are carnivores (meaning they eat only meat) like lions, while others are herbivores (meaning they only eat plants) like deer, while still others are omnivores (meaning they eat both meat and plants) like humans.
10. Teacher: And speaking of lions, deer, and humans, these are animals that live on land. But don't think that mammals only live on land, because some mammals also live in the water (in fact, there are about 4,000 kinds of mammals living today). Yes, these mammals that live in the water can hold their breath for hours at a time before needing to come to the surface of the water to breath air. Now, if you've gone swimming before, I bet you can imagine how hard it is to hold your breath and swim underwater, then come back up for air and swim this way. But for these mammals that live in the water, holding their breath underwater and coming up for air for them feels as easy as you are breathing right now.
11. Teacher: And here are 2 kinds of these mammals. The first one is a dolphin whale [\[Show the Student the picture of a dolphin\]](#), and the second is a killer whale. [\[Show the Student the picture of a killer whale\]](#)
12. Teacher: And let's not forget about mammals that fly in the air. Yes, there are mammals out there that can fly with wings and they are not birds (we will learn about birds in our next lesson). Can you think of a mammal that flies in the air with wings? [\[Engage the Student in conversation but come to the point that bats are mammals that fly with their wings\]](#)
13. Teacher: That's right, if you think about a bat, it has all the things that mammals do - they're warm-blooded, they have fur, mother bats make milk for their young, and mother bats have live baby bats, instead of laying eggs. And so, bats are mammals. In fact, here's a picture of a bat. [\[Show the Student the picture of a bat\]](#)
14. Teacher: Now, mammals live in the wild so they need to be able to defend themselves against enemies. And the ways that mammals use to protect themselves are similar to the ones used by the other animals we learned about. Camouflage, teeth and claws, and incredible speed - theses are common ways to defend against enemies. But some weirder ways that some mammals defend are to shoot an extremely nasty smelling liquid onto your enemies (like the skunk) or shooting razor sharp quills into your enemy (like the porcupine). In fact, even the mighty lions know better than to attack a porcupine because of its quills. Check out this video. [\[Click on the video below\]](#)
15. Teacher: Now mammals are important to the Earth since they, like all the animals we learned about so far, make up part of the food chain. In fact, I guess you could say that humans are at the top of the food chain. And since we are at the top, we need to take

special care to make sure that all the animals in the food chain don't disappear anytime soon.

16. Teacher: Ok - time for review. Stand up and get in front of the class (consider inviting other members of the family also to set the stage). [Ask Student the following:
- a. Can you name one thing that makes an animal a mammal? Any one of the following: 1) mammals are warm-blooded, 2) mammals have hair/fur, 3) mammals have bigger brains compared to other animals, 4) mammal mothers create milk for their babies, and 5) mammal mothers give birth to live babies instead of laying eggs
 - b. What do mammals eat, meat, plants, or both? Some mammals eat meat, some eat plants, and others eat both meat and plants
 - c. Are mammals carnivores, herbivores, or omnivores? They are all 3 - some eat only meat, some only plants, and still others eat both.
 - d. Can you name a mammal that lives in water? Any one of the following: 1) whales and 2) dolphins
 - e. Why are mammals important to our planet? Because they are part of the food chain

Teacher reviews any questions that the Student missed].

Wrap Up (5 minutes)

Teacher: [Clapping] You did GREAT! Wonderful job! Are there any questions that you have regarding mammals? [Engage in conversation with the Student and follow up with questions you cannot answer by researching the Internet]