



First Lego League Curriculum - Ontario

Activity Sheet	
Gr 7 - Lesson #8	Animal Adaptions
Date:	Name(s):

Check That I'm Done <input checked="" type="checkbox"/>
This will require coding skills learned through lessons 1-7

Learn
<p>Animals have certain adaptations which help them to survive in a given ecosystem.</p> <p>They must adapt to become effective predators, or effective prey and seek out the resources they need.</p> <p>For example, lions have large fangs for tearing through meat, whilst buffalo have flat teeth for grinding grass. Buffalo are also very skittish and will run away if something approaches, where a lion's instinct is to attack. Lions have also evolved to make loud aggressive noises, whereas buffalo are great at being quiet. To preserve energy, lions will only seek out water when they're thirsty, whilst buffalo are always on the move.</p> <p>All of these behaviours can be coded into an EV3 robot. For example, the display allows you to choose different teeth, the ultrasonic sensor can tell when other threats are around, the speaker on the EV3 robot is capable of making tons of various sounds, and finally the light sensor can tell if its changed environment such as moved over a body of water.</p>



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Predict and Plan

It is going to be your task to develop a new species of animal! You will need to think about the

Circle your choices:

My robot is mostly a predator / prey
 producer / consumer
 travels in a pack / travels lone
 is warm blooded / cold blooded

Describe your animal's habitat:

Describe your animal's behaviour:

Demonstrate/Design/Discover

- ✓ Using your EV3 robot and software, create a program which can demonstrate at least 5 of your robot's behaviours. All of which are adaptations to survive.
- ✓ You may need to go back and adjust the behaviours to make sure you're capable of demonstrating them with your robot.
- ✓ Your program should include the screen display, brick buttons, lights, sounds, ultrasonic sensor, light sensor, motors, and the switch block



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in your program.

Tips: Don't be afraid to go back and forth between programming and your animal's characteristics until you have something that is believable and achievable. Remember, you want all of these behaviours to happen at more or less the same time. Lastly, ask your teacher if its ok to use construction paper and tape to make your animal even more believable.

Record

Record the 5 animal adaption you are demonstrating with your robot. Make sure to explain how it makes sense for your animals survival AND how your robot is able to demonstate this behaviour.

- 1.
- 2.
- 3.
- 4.
- 5.