

ICE⁵ GPS LAB – INDIVIDUAL PROJECT
SUMMER, 2009
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Blue Springs School District
BL 6151 Biology Content Through Pedagogy II
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GPS Adaptation Vocabulary Lab – 3rd Grade

Timeline: The GPS lab will be used in 3rd grade as an end of unit evaluation tool to check for understanding of vocabulary terms used throughout our Adaptation Unit. Additional GPS units will be borrowed from Valley View High School who is located next door. They have a set of GPS units.

Glossary:

Vocabulary Words used for GPS Adaptation Vocabulary Lab

- adapt – to change in order to survive in an environment
- behavior – the way in which a living thing acts
- camouflage – colors or markings that help an animal blend in with its surroundings
- hibernate – to spend the cold winter in a deep sleep
- mimic – to copy the traits of another living thing
- survive – to stay alive

Keys to Terms:

- GPS – Global Position System – handheld device that helps you map to different points
- waypoint – the place where each clue will be set; your GPS unit should beep when you are close to this point

Management of GPS Adaptation Lesson:

- Contact Valley View High School and borrow additional GPS units.
- The first time the GPS is used, try to get older students from Valley View High School or parents to assist students and managing the area. Safety is important as there is a street and parking lot close to the area.
- Explain to students the purpose of the GPS and how it relates to the Adaptation Unit.

- Show students the perimeter (use math terms!) of the front lawn of the school. Set rules of where they are allowed and not allowed. Make sure they understand that their GPS will not take them outside this perimeter.
- Take the walkie talkie outside in case assistance is needed.
- Take Band-Aids and tissues outside so students will not need to leave the area.
- Check the weather the day before and day of the outside GPS activity. Make sure an alternative plan is in place in case of inclement weather.
- When setting out envelopes the morning of the GPS lesson, pay close attention to make sure trees and bushes have not been removed. Also verify that there are no unwanted items in the area (trash, dead animals, dog feces, etc.).
- Verify that the grounds crew will not be doing any work on the front lawn.
- Model how to use the GPS. Explain how students will take turns using the GPS, getting the clue out of the envelope, reading the clue, and recording information. Everyone has a different job each time you answer a clue.
- Have the key to each group's clues in case clues are lost or moved.

GPS Adaptation Unit

Goal: You will gain experience using your GPS units while reviewing the information from our unit on Adaptation. (All GPS waypoints are within the perimeter of the front lawn.)

Directions

1. Each group will have a different and UNIQUE set of instructions. DO NOT FOLLOW other groups.
2. The order of the stations is NOT the same for every group.
3. You will be given your first waypoint number. Using the “Find” command on your GPS, proceed to that waypoint, find the paper with your group’s color, and then follow the directions after you answer the question. If your group’s name is NOT in the envelope you find, then you’re at the wrong location. Backtrack to your last waypoint, and redo the steps to find your next waypoint. Choose the BEST answer to the question.
4. Take turns using the GPS. Each person gets to use the GPS at least one time.
5. Record elevation, latitude, and longitude from the GPS. Your teacher may ask you to skip this step.
6. Continue this pattern until you have found all four waypoints.
7. Summarize the data you collect in the table.

Group name: _____

		Answer to Question	Next waypoint #
Current Waypoint			
Elevation			
Latitude			
Longitude			
Current Waypoint			
Elevation			
Latitude			
Longitude			
Current Waypoint			
Elevation			
Latitude			
Longitude			
Current Waypoint			
Elevation			
Latitude			
Longitude			

**GPS Adaptation Unit
KEY FOR JNE GPS PATHS**

Green Toads	Brown Shrews	Purple Rabbits	Red Chameleons	Blue Frogs	Orange Butterflies	Pink Snakes
JNE234	JNE123	JNE456	JNE567	JNE890	JNE134	JNE901
JNE345	JNE789	JNE678	JNE234	JNE567	JNE123	JNE476
JNE890	JNE901	JNE134	JNE789	JNE456	JNE567	JNE678
JNE664	JNE298	JNE565	JNE565	JNE298	JNE565	JNE664

Wayward Points Used

JNE123
JNE134
JNE234
JNE298
JNE345
JNE456
JNE476
JNE565
JNE567
JNE664
JNE678
JNE789
JNE890
JNE901

Wayward Points in Incorrect Answers

JNE112	JNE113	JNE114
JNE212	JNE213	JNE214
JNE312	JNE313	JNE314
JNE412	JNE413	JNE414
JNE512	JNE513	JNE514
JNE612	JNE613	JNE614
JNE712	JNE713	JNE714
JNE812	JNE813	JNE814
JNE912	JNE913	JNE914

SEE POWERPOINT FILE WITH GPS MAP OF WAYPOINTS AND PATHS OF GROUPS

STUDENT GPS CLUES – ADAPTATION UNIT
1ST CLUE FOR EACH GROUP

Green Toads	Brown Shrews	Purple Rabbits	Red Chameleons	Blue Frogs	Orange Butterflies	Pink Snakes
JNE234	JNE123	JNE456	JNE567	JNE890	JNE134	JNE901

STUDENT ENVELOPE GPS CLUES – ADAPTATION UNIT

JNE234 Green	<p>Toads use this to keep safe from harm?</p> <ul style="list-style-type: none"> a. hop (go to waypoint JNE112) b. sounds (go to waypoint JNE314) c. camouflage (go to waypoint JNE345)
JNE345 Green	<p>To change in order to survive in an environment?</p> <ul style="list-style-type: none"> a. camouflage (go to waypoint JNE513) b. hibernate (go to waypoint JNE612) c. mimic (go to waypoint JNE890)
JNE890 Green	<p>Living things adapt in order to _____ in their environment.</p> <ul style="list-style-type: none"> a. hibernate (go to waypoint JNE812) b. survive (go to waypoint JNE664) c. behave (go to waypoint JNE414)
JNE664 Green	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>
JNE123 Brown	<p>What means to stay alive?</p> <ul style="list-style-type: none"> a. survive (go to waypoint JNE789) b. adapt (go to waypoint JNE112) c. camouflage (go to waypoint JNE213)

<p>JNE789 Brown</p>	<p>Some animals _____ harmful animals to scare enemies.</p> <ul style="list-style-type: none"> a. mimic (go to waypoint JNE901) b. poison (go to waypoint JNE512) c. camouflage (go to waypoint JNE713)
<p>JNE901 Brown</p>	<p>Colors or markings that help an animal blend in with its surroundings?</p> <ul style="list-style-type: none"> a. red (go to waypoint JNE813) b. camouflage (go to waypoint JNE298) c. mimic (go to waypoint JNE712)
<p>JNE298 Brown</p>	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>
<p>JNE456 Purple</p>	<p>Animals do this only in the winter?</p> <ul style="list-style-type: none"> a. camouflage (go to waypoint JNE113) b. hibernate (go to waypoint JNE678) c. mimic (go to waypoint JNE212)
<p>JNE678 Purple</p>	<p>When an environment changes, plants and animals must _____ to survive.</p> <ul style="list-style-type: none"> a. adapt (go to waypoint JNE134) b. hibernate (go to waypoint JNE612) c. mimic (go to waypoint JNE112)
<p>JNE134 Purple</p>	<p>The colors and markings on an animal's body are forms of</p> <ul style="list-style-type: none"> a. fur (go to waypoint JNE812) b. camouflage (go to waypoint JNE565) c. poison (go to waypoint JNE613)
<p>JNE565 Purple</p>	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>

<p>JNE567 Red</p>	<p>A harmless animal might _____ a dangerous one.</p> <ul style="list-style-type: none"> a. mimic (go to waypoint JNE234) b. survive (go to waypoint poison (go to waypoint JNE112)) c. poison (go to waypoint JNE314)
<p>JNE234 Red</p>	<p>Toads use this to keep safe from harm?</p> <ul style="list-style-type: none"> a. hop (go to waypoint JNE712) b. sounds (go to waypoint JNE513) c. camouflage (go to waypoint JNE789)
<p>JNE789 Red</p>	<p>Living things adapt in order to _____ in their environment.</p> <ul style="list-style-type: none"> a. hibernate (go to waypoint JNE812) b. survive (go to waypoint JNE565) c. behave (go to waypoint JNE713)
<p>JNE565 Red</p>	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>
<p>JNE890 Blue</p>	<p>What do plants and animals do to fit in with their environment?</p> <ul style="list-style-type: none"> a. survive (go to waypoint JNE112) b. adapt (go to waypoint JNE567) c. camouflage (go to waypoint JNE512)
<p>JNE567 Blue</p>	<p>A harmless animal might _____ a dangerous one.</p> <ul style="list-style-type: none"> a. mimic (go to waypoint JNE456) b. survive (go to waypoint poison (go to waypoint JNE812)) c. poison (go to waypoint JNE712)

JNE456 Blue	<p>Animals do this only in the winter?</p> <ul style="list-style-type: none"> a. camouflage (go to waypoint JNE614) b. hibernate (go to waypoint JNE298) c. mimic (go to waypoint JNE813)
JNE298 Blue	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>
JNE134 Orange	<p>The colors and markings on an animal's body are forms of</p> <ul style="list-style-type: none"> a. fur (go to waypoint JNE813) b. camouflage (go to waypoint JNE123) c. poison (go to waypoint JNE712)
JNE123 Orange	<p>What means to stay alive?</p> <ul style="list-style-type: none"> a. survive (go to waypoint JNE567) b. adapt (go to waypoint JNE414) c. camouflage (go to waypoint JNE812)
JNE567 Orange	<p>A harmless animal might _____ a dangerous one.</p> <ul style="list-style-type: none"> a. mimic (go to waypoint JNE565) b. survive (go to waypoint poison (go to waypoint JNE512) c. poison (go to waypoint JNE713)
JNE565 Orange	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>
JNE901 Pink	<p>Some animals _____ harmful animals to scare enemies.</p> <ul style="list-style-type: none"> a. mimic (go to waypoint JNE476) b. poison (go to waypoint JNE413) c. camouflage (go to waypoint JNE612)

<p>JNE476 Pink</p>	<p>Different body parts help living things _____ in different environments.</p> <ul style="list-style-type: none"> a. survive (go to waypoint JNE678) b. mimic (go to waypoint JNE712) c. die (go to waypoint JNE813)
<p>JNE678 Pink</p>	<p>When an environment changes, it plants and animals must _____ to survive.</p> <ul style="list-style-type: none"> a. adapt (go to waypoint JNE664) b. hibernate (go to waypoint JNE912) c. mimic (go to waypoint JNE813)
<p>JNE664 Pink</p>	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>

GREEN
GPS CLUES – ADAPTATION UNIT – KEY

JNE234 Green	Toads use this to keep safe from harm? a. hop (go to waypoint JNE112) b. sounds (go to waypoint JNE314) c. camouflage (go to waypoint JNE345) ***
JNE345 Green	To change in order to survive in an environment? a. camouflage (go to waypoint JNE513) b. hibernate (go to waypoint JNE612) c. mimic (go to waypoint JNE890) ***
JNE890 Green	Living things adapt in order to _____ in their environment. a. hibernate (go to waypoint JNE812) b. survive (go to waypoint JNE664) *** c. behave (go to waypoint JNE414)
JNE664 Green	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.

BROWN
GPS CLUES – ADAPTATION UNIT – KEY

JNE123 Brown	What means to stay alive? a. survive (go to waypoint JNE789) *** b. adapt (go to waypoint JNE112) c. camouflage (go to waypoint JNE213)
JNE789 Brown	Some animals _____ harmful animals to scare enemies. a. mimic (go to waypoint JNE901)*** b. poison (go to waypoint JNE512) c. camouflage (go to waypoint JNE713)
JNE901 Brown	Colors or markings that help an animal blend in with its surroundings? a. red (go to waypoint JNE813) b. camouflage (go to waypoint JNE298) *** c. mimic (go to waypoint JNE712)
JNE298 Brown	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.

PURPLE
GPS CLUES – ADAPTATION UNIT – KEY

JNE456 Purple	Animals do this only in the winter? a. camouflage (go to waypoint JNE113) b. hibernate (go to waypoint JNE678)*** c. mimic (go to waypoint JNE212)
JNE678 Purple	When an environment changes, plants and animals must _____ to survive. a. adapt (go to waypoint JNE134)*** b. hibernate (go to waypoint JNE612) c. mimic (go to waypoint JNE112)
JNE134 Purple	The colors and markings on an animal's body are forms of a. fur (go to waypoint JNE812) b. camouflage (go to waypoint JNE565)*** c. poison (go to waypoint JNE613)
JNE565 Purple	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.

RED
GPS CLUES – ADAPTATION UNIT – KEY

JNE567 Red	A harmless animal might _____ a dangerous one. a. mimic (go to waypoint JNE234)*** b. survive (go to waypoint poison (go to waypoint JNE112) c. poison (go to waypoint JNE314)
JNE234 Red	Toads use this to keep safe from harm? a. hop (go to waypoint JNE712) b. sounds (go to waypoint JNE513) c. camouflage (go to waypoint JNE789)***
JNE789 Red	Living things adapt in order to _____ in their environment. a. hibernate (go to waypoint JNE812) b. survive (go to waypoint JNE565)*** c. behave (go to waypoint JNE713)
JNE565 Red	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.

BLUE
GPS CLUES – ADAPTATION UNIT – KEY

JNE890 Blue	What do plants and animals do to fit in with their environment? a. survive (go to waypoint JNE112) b. adapt (go to waypoint JNE567)*** c. camouflage (go to waypoint JNE512)
JNE567 Blue	A harmless animal might _____ a dangerous one. a. mimic (go to waypoint JNE456)*** b. survive (go to waypoint poison (go to waypoint JNE812) c. poison (go to waypoint JNE712)
JNE456 Blue	Animals do this only in the winter? a. camouflage (go to waypoint JNE614) b. hibernate (go to waypoint JNE298)*** c. mimic (go to waypoint JNE813)
JNE298 Blue	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.

ORANGE
GPS CLUES – ADAPTATION UNIT – KEY

JNE134 Orange	The colors and markings on an animal's body are forms of <ul style="list-style-type: none">a. fur (go to waypoint JNE813)b. camouflage (go to waypoint JNE123)***c. poison (go to waypoint JNE712)
JNE123 Orange	What means to stay alive? <ul style="list-style-type: none">a. survive (go to waypoint JNE567)***b. adapt (go to waypoint JNE414)c. camouflage (go to waypoint JNE812)
JNE567 Orange	A harmless animal might _____ a dangerous one. <ul style="list-style-type: none">a. mimic (go to waypoint JNE565)***b. survive (go to waypoint poison (go to waypoint JNE512)c. poison (go to waypoint JNE713)
JNE565 Orange	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.

PINK
GPS CLUES – ADAPTATION UNIT – KEY

JNE901 Pink	Some animals _____ harmful animals to scare enemies. <ul style="list-style-type: none">a. mimic (go to waypoint JNE476)***b. poison (go to waypoint JNE413)c. camouflage (go to waypoint JNE612)
JNE476 Pink	Different body parts help living things _____ in different environments. <ul style="list-style-type: none">a. survive (go to waypoint JNE678)***b. mimic (go to waypoint JNE712)c. die (go to waypoint JNE813)
JNE678 Pink	When an environment changes, it plants and animals must _____ to survive. <ul style="list-style-type: none">a. adapt (go to waypoint JNE664)***b. hibernate (go to waypoint JNE912)c. mimic (go to waypoint JNE813)
JNE664 Pink	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.

GPS CLUE – ADAPTATION UNIT – MASTER QUESTION BANK

JNE123	<p>What means to stay alive?</p> <ul style="list-style-type: none"> a. survive (go to waypoint JNE)*** b. adapt (go to waypoint JNE) c. camouflage (go to waypoint JNE)
JNE134	<p>The colors and markings on an animal's body are forms of</p> <ul style="list-style-type: none"> a. fur (go to waypoint JNE) b. camouflage (go to waypoint JNE)*** c. poison (go to waypoint JNE)
JNE234	<p>Toads use this to keep safe from harm?</p> <ul style="list-style-type: none"> a. hop (go to waypoint JNE) b. sounds (go to waypoint JNE) c. camouflage (go to waypoint JNE)***
JNE298	<p>Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.</p>
JNE345	<p>To change in order to survive in an environment?</p> <ul style="list-style-type: none"> a. camouflage (go to waypoint JNE) b. hibernate (go to waypoint JNE) c. mimic (go to waypoint JNE) ***
JNE456	<p>Animals do this only in the winter?</p> <ul style="list-style-type: none"> a. camouflage (go to waypoint JNE) b. hibernate (go to waypoint JNE)*** c. mimic (go to waypoint JNE)
JNE476	<p>Different body parts help living things _____ in different environments.</p> <ul style="list-style-type: none"> a. survive (go to waypoint JNE)*** b. mimic (go to waypoint JNE712) c. die (go to waypoint JNE813)

JNE565	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.
JNE567	A harmless animal might _____ a dangerous one. a. mimic (go to waypoint JNE)*** b. survive (go to waypoint poison (go to waypoint JNE) c. poison (go to waypoint JNE)
JNE664	Have a seat with your group. Discuss animals and insects that you think use camouflage to survive in their environment.
JNE678	When an environment changes, it plants and animals must _____ to survive. a. adapt (go to waypoint JNE)*** b. hibernate (go to waypoint JNE) c. mimic (go to waypoint JNE)
JNE789	Living things adapt in order to _____ in their environment. a. hibernate (go to waypoint JNE) b. survive (go to waypoint JNE)*** c. behave (go to waypoint JNE)
JNE890	What do plants and animals do to fit in with their environment? a. survive (go to waypoint JNE) b. adapt (go to waypoint JNE)*** c. camouflage (go to waypoint JNE)
JNE901	Some animals _____ harmful animals to scare enemies. a. mimic (go to waypoint JNE)*** b. poison (go to waypoint JNE) c. camouflage (go to waypoint JNE)