|  |  |
| --- | --- |
| C:\Users\pke16769\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\4YERSS6M\MC900053046[1].wmf Amazing Animal Features | |
| **Background Information** | |
| * We just learned about five habitats of Georgia and features that many organisms have that help them survive in their environment. Each plant or animal has unique characteristics that allow them to thrive in the habitat they live in. We also learned what happens to an organism if the habitat is changed by: flooding, fires, loss of habitat, pollution……. | |
| **Design Challenge** | |
| * You have been called on by the producers of America’s Best Animals to create and build a three-dimensional animal that is native to Georgia. The producers will be looking for the top three animals to showcase in their next TV show. You need to include in your design at least two adaptations that allow your organism to thrive and survive in its habitat. Your animal must stand on its own, fit on a desktop, and have a least one moving part. You will need to include with your animal what would happen to the organism if the habitat changed. You may use computers and the Internet to research facts about your animal. Good luck and have fun! | |
| **Criteria** | |
| Your animal must:   * Be three dimensional   [http://ts3.mm.bing.net/th?id=H.5007112528397890&pid=1.7&w=132&h=150&c=7&rs=1&url=http%3a%2f%2fwww.50states.com%2fgeorgia.htm](http://www.bing.com/images/search?q=picture+of+georgia&qpvt=picture+of+georgia&FORM=IGRE#view=detail&id=66C7E9EE1E76E5024162432B729AD4D868A6BAEF&selectedIndex=195)   * Stand on its own * Fit on a desktop * Include at least 2 adaptations * Have at least one moving part * Name the habitat it is found in Georgia * Tell what would happen to your animal if the habitat changed * Create an Amazing Animal Features Journal as teams share their designs | |
| **Materials/Tools:** | |
| * Student Journal Pages (below) * Construction paper * Tissue Paper * Cotton balls * Plastic containers * Brads * Pipe cleaners * Cloth/felt * Cardboard/boxes * Boxes * Newspaper * Paste/glue | * Scissors * Ruler * Hole Punch * Markers * Crayons * Colored Pencils * Aluminum foil * String/Yarn * Cardboard tubes * Ribbon Craft sticks * Computers for research * Other materials may be needed at student’s request |
| **Standards** | |
| **Science**  S3L1 Students will investigate the habitats of different organisms and the dependence of organisms on their habitat.  c. Identify features of animals that allow them to live and thrive in different regions of Georgia.  d. Explain what will happen to an organism if the habitat is changed. | |
| **Assessments** | |
| * Teacher Observation/anecdotal notes * Completion of student journal | |

**NOTES:**

\*We recommend individuals or pairs for this activity. Small groups of 3 could work if the group is cooperative, but any larger than that isn’t a very good idea for this particular lesson. You can decide how to organize it based on the needs of individual students.

\* Animals may be based on an existing animal (with some modifications) or a completely new animal of the creator’s invention.

\* Visit the website [www.switcheroozoo.com](http://www.switcheroozoo.com) for a fun introduction. You can combine features of different animals and discuss how those adaptations would dictate the habitat.

\*We highly recommend compiling a list of animals that are native to Georgia to give the students guidance (no polar bears, please!)

\*If you don’t get all of the requested materials, no big deal. Just work with what you have.

\*While the goal is for the students to construct their models independently, if you see a student struggle it is always a good idea to help guide their thinking.

\*The improvement step is very important to the STEM process. It is the step that teaches students to stick with it, “if at first you don’t succeed…” and all that. If their model worked great the first time, this step pushes them into a higher level of thinking about their invention. If their prototype didn’t work well the first time, this step teaches them to continue thinking, evaluate their own work, and possibly change strategies. This is what we are trying to get to transfer over to their academics.

\*Student journal pages are attached to this lesson. Feel free to alter them to suit your needs or create brand new ones (send me a copy if you do so we can share the resource).

\*Your team may decide on another “hook” or “wrap up”. Video clips, introductory activities, closing activities, etc. Totally up to you and your team. Study the lesson to decide how to break up your day.

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|  |  |  |
| --- | --- | --- |
| **Animal** | **Georgia Habitat** | **Amazing Features** |
|  |  |  |
|  |  |  |
|  |  |  |
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|  |  |  |
|  |  |  |

Explain what would happen to two of the animals if their habitat was changed.

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**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Amazing Animal Features STEM Challenge**

**3rd Grade**

**Challenge:** *You have been called on by the producers of America’s Best Animals to create and build a three-dimensional animal that is native to Georgia. The producers will be looking for the top three animals to showcase in their next TV show. You need to include in your design at least two adaptations that allow your organism to thrive and survive in its habitat. Your animal must stand on its own, fit on a desktop, and have a least one moving part. You will need to include with your animal what would happen to the organism if the habitat changed. You may use computers and the Internet to research facts about your animal. Good luck and have fun!*

**Criteria/Constraints:**

Your animal must:

• Be three dimensional

• Stand on its own

• Fit on a desktop

• Include at least 2 adaptations

• Have at least one moving part

• Name the habitat it is found in Georgia

• Tell what would happen to your animal if the habitat changed

• Create an Amazing Animal Features Journal as teams share their design

**1.ASK / ENGAGE: What is the problem you are being asked to solve?**

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1. **IMAGINE/BRAINSTORM:** What are some possible solutions to the problem that you are trying to solve? After you brainstorm, draw and label your ideas below.

|  |  |
| --- | --- |
| **Idea #1** | **Idea #2** |

1. **PLAN/DESIGN:** Share your ideas with your group and collaborate to decide on a final design plan. Draw your team’s design below and make a list of the materials that you will need to complete your design.

|  |  |
| --- | --- |
| **Team Design Plan** | **Materials List** |

1. **CREATE/TEST**: Use your Final Design Plan to create and build your solution. Test your design. Did it work? Why or Why not?

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1. **EVAULATE/IMPROVE:**  How well did your design work? Did your solution solve the problem within the given constraints?

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How can you improve your design? How can you make it better? Draw and label your improved design below.

|  |
| --- |
| **Improved Design Plan** |