Life Science Lesson Plan
Date: Wednesday, March 24, 2021

Grade: First	**Subject: Physical Science**
Materials: **Stuffed animals of various animals** **Video on What is Biomimicry**	**Technology Needed: Teacher will use active board and display a video.**

Instructional Strategies:

- ☐ Direct instruction
- ☐ Guided practice
- ☐ Socratic Seminar
- ☐ Learning Centers
- ☐ Lecture
- ☐ Technology integration
- ☐ Other (list)
- ☐ Peer teaching/collaboration/ cooperative learning
- ☐ Visuals/Graphic organizers
- ☐ PBL
- ☐ Discussion/Debate
- ☐ Modeling

Guided Practices and Concrete Application:

- ☐ Large group activity
- ☐ Independent activity
- ☐ Pairing/collaboration
- ☐ Simulations/Scenarios
- ☐ Other (list)
- ☐ Hands-on
- ☐ Technology integration
- ☐ Imitation/Repeat/Mimic

Explain:

Standard(s)

1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow and meet their needs.

Objective(s)

By the end of the lesson, students will be able to solve problems by analyzing and mimicking nature with biomimicry. Students will pick an animal and an ability that they have and try to mimic that ability to themselves, so they are more alike the animal.

Bloom's Taxonomy Cognitive Level: Analyze

Differentiation

Below Proficiency:
For students who are below proficiency, I give suggestions on animals and give them ideas to think of what they have or need to live, their ability.
Above Proficiency:
For students who are above proficiency, I will have these students help with the below proficiency with the ideas for the animal ability.
Approaching/Emerging Proficiency:

Modalities/Learning Preferences:

- **Visual: Students will follow along with the PowerPoint, displayed on the active board.**
- **Auditory: Students will listen to the teacher explaining what biomimicry is and what they will be doing.**
- **Kinesthetic: The**
- **Tactile: The moving around while sorting objects into transparent, translucent, opaque, and reflective.**

Classroom Management- (grouping(s), movement/transitions, etc.)

- **Large group – when other are talking, voice off and listening to the speaker.**
- **Group work – Students are to have voice level of 1 or 2 and should take turns respectively. Students should be focused on the game and not be talking about other things.**
- **Students will use flashlights and not shine them in others' eyes.**
- **Transitions – I will use an attention getter to get their attention to move on to the next activity. I use a timer for each round of activities.**

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

- **When other are talking. Students are expected not to be talking.**
- **Students are expected to raise their hand if they have a comment or a question.**
- **Students are expected to give full attention and listening earing to whoever is speaking.**
- **Students will be working in groups and should be respectful of everyone and when speaking in groups they should only hear their group members and no other group.**

Minutes	**Procedures**
5	**Set-up/Prep:** • **Find stuffed animals** • **Print out paper of biomimicry invention – write name of animal and its ability and then write what invention you would make that is similar to that animal's ability** • **PowerPoint of biomimicry** • **Video of "What is Biomimicry"**
10	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** • **Watch video – What is Biomimicry? https://www.generationgenius.com/videolessons/inspired-by-nature-biomimicry-video-for-kids/** • **Ask questions about the animals and what makes them special or the way they have to survive in their habitat**
5	**Explain: (concepts, procedures, vocabulary, etc.)**

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	• Students will brainstorm of an animal that they will choose and find an ability that it has to survive in their habitat and invent something that would help themselves to have that ability that the animal has. • I will have stuffed animals displayed in the front of the room so students can have a visual of what some animals have and it will assist them in thinking of what they want to invent. • Biomimicry is the design and production of materials, structures, and systems that are modeled by nature and animals.
20	Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) • Students will work independently but can collaborate with each other for ideas. Students will each pick an animal and find an ability that animal has and invent something that would make themselves more like that animal.
5	Review (wrap up and transition to next activity): The summative assessment will be the students making an invention through their understanding of biomimicry. Start cleaning up materials and move on to next activity.

Formative Assessment: (linked to objectives, during learning)	Summative Assessment (linked back to objectives, END of learning)
• Progress monitoring throughout lesson (how can you document your student's learning?) • The formative assessment will be intertwined in the lesson with the students brainstorming ideas of animals and their abilities and check for that understanding of biomimicry (something is modeled by nature -airplane wings, bird wings.) • I will use turn in talks to help share ideas.	The summative assessment will be the students making an invention through their understanding of biomimicry.

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):
This lesson was a little hard for the students to understand. We just went over the PowerPoint because the video was not working at the time and the teacher said they would watch it the next day they did science. The first day we went over the PowerPoint and then we brainstormed animals and their abilities which I wrote on an anchor chart. The students had trouble understanding what the ability was on an animal. I had also brought in some stuffed animals to help the students visualize the animal and its ability. For the animal of cheetah, its ability is to run fast away from predators or towards its prey. So the students would have to each think of their own animal and write its ability and then write and invention for themselves to be more like that animal that has that certain ability.
On Friday, they had gotten to do science again and the teacher (Mrs. Steiner), had the video working so she showed the students it and they seemed to get the idea of biomimicry more so they were able to think of an animal and its ability then eventually would make an invention. There was no time on Friday, so I am guessing they would finish it up in the coming weeks of school.
The students enjoyed my stuffed animals, I had brought in. ☺

Amy Steiner

Google image example: