VISIONARY ACTIVITIES FOR THE CLASSROOM

Green Monkeys by Johanna Burke

THE SECRET LIFE OF EARTH

AMERICAN VISIONARY ART MUSEUM
Polli-Nation

Grades 6-8
Inspired by the artwork of Peter Eglinton

In AVAM’s exhibition, *The Secret Life of Earth*, artists reflect on the natural environment and changes in our environment due to human behavior over time. Included in the exhibition is a large mandala created by Australian artist, Peter Eglinton. Peter is fascinated by the role bees deities play in ancient cultures, and believes bee-inspired cultural cross-pollination can be applied metaphorically to modern day society.

Objectives:
- Students will define pollination and explore the role of bees in the natural world.
- Students will think about cross-pollination in plants & apply this metaphor to our modern day society.
- Students will sketch a flower that they would be attracted to if they were a bee.

MD Content Standards:

6th-8th MD Fine Art Standards
- E:6-8:3: Apply visual organizational strategies to create works of art and design that clearly communicate main/central idea.
- E:6-8:1: Explain how a person’s artistic choices are influenced by culture, values, and the environment.
- E:6-8:1: Collaboratively interpret and construct meaning by describing the feelings experienced, subject matter, formal characteristics, and art-making approaches, key concepts, and contextual information.

Critical Questions
What is a bee’s job?
Why are bees important?
How are bees role models for humans?
What is ‘cross pollination’?

Materials
Internet and laptop / projector
8x10” White drawing paper

Pencils, colored pencils, markers, paint markers
Large mural paper

Activity
1. To get their brains warmed up, ask students what ‘pollination’ is, or what role bees play in our eco-systems. After a couple of hypotheses, share the following YouTube video about pollination with students: “Pollination: Trading Food for Fertilization” by the account naturalistoutreach at https://www.youtube.com/watch?v=LiczM-w3V-U
2. After playing 0:00-4:19, pause the video to review with students. To reinforce learning, lead a discussion on:
a. What is pollination? A: the act of a pollinator, like a bee, butterfly, or bird, visiting the **anther** of one plant’s flower, picking up pollen, and carrying it to the **pistil** of another plant’s flower.
b. Why does a bee visit flowering plants, or, angiosperm? A: Bees collect protein-packed pollen and feed it to their babies.
c. How does the pollen get from the flower to the bee’s babies? A: Bees have fuzz that collects the powdery pollen, and special ‘baskets’ called scopa, that fill with pollen and easily transport it back to the hive.
d. Why are bees important? What would happen if we didn’t have bees? A: Flowering plants need to be fertilized to grow fruit or vegetables, which means that ‘female’ flowers need the pollen from ‘male’ flowers in order to produce. The bees carry pollen from one flower to another, because plants are firmly rooted in the ground and can’t pollinate one another directly. If we didn’t have pollinators, such as bees, flowering plants wouldn’t produce fruit or vegetables. Therefore, our food source would be impacted negatively.
e. What are some examples of flowering plants that produce food, that bees help pollinate? A: So many! But here is a short list of examples: Apples, mangoes, raspberries, watermelon, cantalope, avocado, cotton, onion, beans, coffee, walnuts, limes, coconut, cantalope, beets, vanilla bean, eggplant, and peppers.

3. Play the rest of the video, from 6:50-end. At the end, discuss the following?
   a. Why do bees visit flowers? A: Because flowers offer the reward of food.
   b. How does the flower attract the bee? A: Flowers ‘advertise’ with colors and scents they know will attract bees. For example, bees can’t see red very well, so flowering plants that need bees do not produce red flowers.
   c. Prompt students to imagine they were a pollinator, and think about what a flower would need to attract them.

4. Complete the attached activity from the ‘Smithsonian In Your Classroom’ publication. The drawing students create should be a sketch, a final flower will be created later.

5. Introduce Peter Eglington’s painting “Polli-Nation.” A digital version can be found on his website, [https://www.petereglingtonart.com/](https://www.petereglingtonart.com/) under the ‘Mandalas’ subheading, or see the attached image.

6. Use Visual Thinking Strategies to discuss the drawing:
   a. What do you see?
   b. What makes you say that?
   c. What else can you find?

7. If students do not come to a conclusion on their own, **point out that the bees are morphing into airplanes.**
   a. Ask students how people on airplanes are like bees.
   b. Read this definition of a new term, cross-pollination:

   Cross pollination is when one plant pollinates a plant of another variety. The two plants’ genetic material combines and the resulting seeds from that pollination will have characteristics of both varieties and is a new variety.

   c. As an example, see the result of cucumber-squash cross pollination in a vegetable garden below.
   d. The artist Peter Eglington is representing cultural cross-pollination in this work of art.
   e. If people traveling to new places on airplanes are like bees, then what is the pollen in this metaphor? Pollen = ideas, cultural practice, art, music, literature, languages, etc.
f. Following this metaphor: how do people cross-pollinate?
g. Why is it important for people to be like bees and cross-pollinate cultures?
h. Can we think of any examples of cultural cross-pollination?
   i. Examples: When we dine out and eat ‘Indian food’, the dishes we see are actually a blend of Anglo-Indian cuisine. When the British occupied portions of India 1858 to 1947, the two cultures blended their tastes. British influence is why we see things like kedgeree (a fish-based rice dish), mulligatawny soup and chutney on menus in Indian restaurants.
   ii. Yoga is a great example: is a group of physical, mental, and spiritual practices or disciplines which originated in ancient India. The first Hindu teacher to actively advocate and disseminate aspects of yoga, to a western audience, Swami Vivekananda, toured Europe and the United States in the 1890s. Now? Everyone does yoga. This wouldn’t have happened if Swami Vivekananda hadn’t brought the ideas here.
   iii. Lil Nas X shows cross-pollination in his music, popularized by the song ‘Old Town Road.’ Nas X blends ideas and sounds from country music with stylings of rap and hip hop. In fact, arguments broke out when the song gained popularity whether it should chart on ‘Hot Country Songs’ or ‘Hot R&B/Hip Hop Songs’.
   i. What other examples can students think of?
j. **A note about cultural appropriate:** When Peter Eglington talks about the importance of travel and communication to exchange ideas, art, music, and spirituality, he is talking about communication, sharing, learning about and accepting differences. Sometimes culture can be appropriated in a negative or offensive manner - intentionally or otherwise. This concept might come up with your students and it is important to address and explain. ‘Culture is not a costume’ is a handy example - it’s not appropriate to assume the identity of another culture, or mimic their appearance - such as dressing up as a Native American or Japanese Geisha. This is a blurry line sometimes when it comes to the exchange of cultural practices and ideas, and we should communicate to students that this occurrence should be taken on a case-by-case basis.

**Final Project**
Student will make a fully realized sketch of their original flower from step #4 on white drawing paper using drawing media of their choice. They will cut out the flower, and display the class flowers together in a collaborative mandala, garden, or other large-scale exhibit of their choice.

**Smithsonian In Your Classroom**
Cross-Pollination example: A flower from a cucumber plant cross-pollinated with a flower from a squash plant.
**Peter Eglinton Biography**

Born on April 5th, 1952, (The Chinese Year Of The Water Dragon), in New South Wales, Australia, Peter Eglinton grew up in a ramshackle house, hand-built by his father, who was quite proud that he had used no man-made instrument of measure. “My birth was very unusual. My mother was given a cocktail of scopolamine and hyoscyamine to ease violent contractions. Mum always felt my lifelong fascination with the plant world came from this first intoxicating experience.”

Peter’s first memories are of “lying in my mother’s arms staring up at the ceiling full of holes and large cracks and seeing wondrous worlds.” The eldest of three children, Peter was raised close to nature and enjoyed a charmed childhood growing up in in the shadow of Mount Warning (named by the legendary Captain Cook), the largest caldera of the Southern Hemisphere.

Peter’s home is located in the tiny, Australian country-town of Murwillumbah, in New South Wales. In the local aboriginal dialect, Murwillumbah means “place of many possums.” Peter enjoyed a storied and charmed childhood growing up in the Tweed Valley, in the shadow of Mount Warning (named by the legendary Captain Cook), the largest caldera of the Southern Hemisphere.

Peter adored Enid Blyton’s Famous Five adventure books, and his mother gave him a Lopsang Rampa book, featuring an introduction to *The Third Eye*. “Soon, I was off astral traveling high above the village pines.”

By 1970, Peter became swept up in the counter-culture movement. He landed work as ABC (Australian Broadcasting Company) network’s youngest photographer. This job lasted three years, until Peter decided to travel like a nomad, for ten years — hiking, climbing and surfing throughout Asia, Bali, Sri Lanka, and Afghanistan. While in Sri Lanka in 1983, Peter met a New Zealander, who became the mother of his three children. “We spent the next 10 years in New Zealand, where I created woodblock prints of local scenes for the tourist market. She then took off, leaving me to raise our 10, 4, and 2 year-olds, alone.” Between changing nappies, Peter says, “I’d draw with colored pencils, as we could not afford paint.”

A lifelong student of the Great Mystery, Peter is an avid meditator, respecter of the world’s mystical traditions and practices, and an accomplished Vedic astrologer. The American Visionary Art Museum is especially proud to have hosted in 2017-18, the first museum exhibition of Peter Eglinton’s multi-decade, beautiful life’s work.
Activating Activism

Grades 7-12
Inspired by the artwork of Julia ‘Butterfly’ Hill

In AVAM’s exhibition, The Secret Life of Earth, artists reflect on the natural environment and changes in our environment due to human behavior over time. Included in the exhibition are pages from the journal kept by environmental activist, Julia Butterfly Hill during her 738 day protest in Northern California. Between 1997-1999, Hill occupied a giant Redwood tree to prevent the Pacific Lumber Company from clearcutting a huge swath of old growth trees. In this lesson, students will consider the role of protest in American history, and choose to take a stand on one contemporary issue.

Objectives:

● Students will define and explore examples of protest in US history.
● Students will regularly document their thoughts and beliefs in a sketchbook.
● Students will synthesize ideas from their sketchbook to create one culminating work.

MD Content Standards:

9th-12th Grade Visual Art Indicators

● E:9-12:1: Visualize and hypothesize to generate plans for ideas and directions for creating art or design that can elevate the community and influence social change. Apply knowledge of histories and traditions.
● E:9-12:3: Apply visual organizational strategies to create works of art and design that clearly communicate main/central idea. Manage projects within sketchbook/journal.

6th-8th Grade Visual Art Indicators

● E:6-8:1: Demonstrate persistence and intellectual risk taking through experimentation and innovation in order to develop a variety of skills and approaches to creating art.
● E:6-8:2: Identify and communicate reasons to create art outside of school.

Critical Questions

What does it mean to protest?
What are some examples of protests in US history?
What did Julia Butterfly Hill protest and was she successful?
How can we, as students, effectively and safely take a stand on an issue?

Materials

Sketchbooks with at least 30 pages
Magazines for collage
Pens, pencils, colored pencils, markers
Audio speaker
Scissors

Activity

1. To warm up, ask students to write one example of ‘protest’ that they can think of. Call on students to share their answers.
2. Based on these examples, what commonalities do we hear? How can we use these characteristics to build a definition? Write these essential parts of a protest on the board / overhead as students name them, or lead students to these labels:
   a. **Situation** - motivating demonstrator to make a stand
   b. **Demonstrator(s)** - the person/people challenging existing situation, FOR / AGAINST
   c. **Demonstration** - the action the demonstrator takes to show their opinion, for example marching, hunger striking, singing, kneeling, sitting in a tree, not shopping at a certain store, etc.
   d. **Status quo-ers** - accept the current situation, sometimes oppose demonstrators
   e. **Outcome** - was the protest successful? Were the demonstrators’ demands met?

3. Read the attached biography of Julia Butterfly Hill from TheSpruce.com, either together as a class or to themselves. Identify the situation, demonstrator, demonstration, and status quo-er of the story:
   a. Situation - Pacific Logging Co is clear cutting some of the oldest trees in the country
   b. Demonstrator - Julia Hill
   c. Demonstration - sitting in a tree until her requests were met
   d. Status Quo-er - Pacific Logging Co employees, bystanders
   e. Outcome - After 738 days, Pacific Logging Co agrees to let ‘Luna’ and all trees within a 200 mile radius live and Hill comes down from the tree

4. Break students up into groups of 3 or 4 to play a matching game (found in packet). Squares will need to be cut up and put in an envelope before being distributed. Give students 3-5 minutes per envelope to match each noun to a situation, demonstrator, demonstration, or status quo-er card. Optional: reconvene to discuss one or two of the situations.

5. The next portion of the lesson occurs daily for 10-30 days. Choose a short news podcast to start class with, for example 'The Daily' (skews left) or 'Up First' (fairly neutral). During and after listening, students should complete one page in their sketchbook with words and images in response to what they heard.

6. After consistent documentation of their response to current events, students should reflect on their body of work as a whole, and jot down themes. Consider the following questions:
   a. Which news stories interested you the most? Why do you think that is?
   b. What stories made you feel extreme emotions (sad, mad) and why?
   c. Which stories elicited the most passionate artwork / written response?
   d. Are there any themes or patterns in the drawings you made?

7. For their final assignment, students will synthesize their feelings and beliefs around a news item that moved them, and create a visual artwork AS protest, or to be distributed / used AT a protest, for example, a flyer, a poster, a button, a logo, a zine. The artwork should:
   a. Communicate the student’s stance and
   b. Raise awareness around a particular issue.
Julia 'Butterfly' Hill Biography

Julia Hill, after spending 738 days in a redwood tree, has earned a degree of environmental credibility few people alive today can match. What motivates this activist, and what has she done since coming down to earth?

Julia Hill: Early Years

Julia Lorraine Hill was born on February 18, 1974, in Mount Vernon, Missouri. Her father was a traveling evangelical minister, and Julia Hill and her two brothers and her mother toured the country in a 32-foot camper. She spent many days of her early childhood playing outside in the woodlands and rivers near towns where her father was preaching.

When she was a young girl of six, Julia Hill and her family were hiking when a butterfly landed on her finger and stayed there for the entire hike. This event was the origin of her nickname, Butterfly.

After her family settled in Arkansas, Julia Hill attended Arkansas State University, but she left to work in various bars and restaurants in and around Fayetteville. In 1996, when she was 22 years old, tragedy struck: Hill was driving a car that was smashed by a drunk driver, and the steering wheel of the vehicle penetrated her skull.

It took almost a year of intense physical and cognitive therapy before Hill could walk and talk normally again, but she credits this horrific accident with helping her find her way in life: "The steering wheel in my head, both figuratively and literally, steered me in a new direction in my life...As I recovered, I realized that my whole life had been out of balance...I had been obsessed by my career, success, and material things. The crash woke me up to the importance of the moment, and doing whatever I could to make a positive impact on the future."

Some observers have noted that the accident and its effect on Hill's life bears an uncanny resemblance to an industrial accident that nearly blinded environmentalist John Muir, who changed his way of living after the incident and thereafter began to fight for wilderness preservation.

Hill and Luna

After her recuperation, Hill embarked on a road trip to California that was to change her life forever. In 1997, awed by the "wisdom, energy and spirituality" of the towering redwood forests, she connected with a group of "tree siters" in northern California who were protesting the clear-cut logging of redwoods by the Pacific Lumber Company by occupying the trees.

Hill agreed to join in the protest, and within a matter of days, she was 180 feet above the ground, living on a pair of six-by-six-foot platforms in a 1500-year-old redwood tree nicknamed Luna. Her first stint in Luna lasted only six days, but in December of 1997, she began a tree-sit that lasted more than two years.

During her time in Luna, Hill battled illness, harassment from helicopters, freezing temperatures, a siege by security guards hired by Pacific Lumber, torrential rains and fierce winds from an El Niño winter, and other privations. She heated meals on a tiny propane stove and kept warm by staying in a sleeping bag day and night.
Her courage and tenacity attracted the attention of international media, and Hill became something of an eco-celebrity. She communicated with reporters and others with a solar-powered cell phone and appeared on cable television shows as an "in-tree" correspondent.

Weary of the negative publicity that Hill was attracting, in 1999 Pacific Lumber agreed to a resolution that preserved a 200-foot buffer zone around Luna and other old-growth redwood trees. Additionally, a $50,000 settlement was given to Pacific Lumber that was then donated to California's Humboldt State University for sustainable forestry research. Only then, in December of 1999, did Hill come down from Luna.

Despite this victory, Luna's fate was not intact; the year after Hill came down from the redwood, Luna was vandalized with a chainsaw, which left a 32-inch-deep gash across half of the mighty tree's trunk. Only the dedicated efforts of arborists, who stabilized the tree with steel cables, saved the tree's life.

**Hill's Life After Luna**

Her tree-sitting with Luna was only the beginning of Julia Hill's activism. In addition to writing a best-selling book, "The Legacy of Luna," Hill also penned an environmental handbook, "One Makes the Difference." Hill also co-founded the Circle of Life Foundation, which has morphed into the Engage Network, a non-profit social activism group.

In 2002, Hill was arrested in Ecuador while protesting an oil pipeline that threatened the forests of the Andes. She and other protesters were eventually deported. Hill continues to work on behalf of environmental and social causes, while also pondering her next commitment: "The tree-sit and action since created this very particular role that Julia Butterfly Hill fulfills...at the same time, I'm looking for what's next for me, and it's so easy to stay in that role that myself and this world co-created together. But I just know that there are aspects of it that need to shed."
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<thead>
<tr>
<th>Situation</th>
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<tbody>
<tr>
<td>Vietnam War (Nov 1, 1955 – Apr 30, 1975)</td>
<td>Racial inequality and police brutality towards people of color in the United States</td>
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<td>Demonstration</td>
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<td>Wearing black armbands to school (December 16, 1965).</td>
<td>Sitting during the pre-game National Anthem August 26, 2016</td>
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<td>Demonstrator(s)</td>
<td>Demonstrator(s)</td>
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<td>13-year old Mary Beth Tinker and Friends</td>
<td>49’ers quarterback Colin Kaepernick</td>
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<td>Status-Quo-er</td>
<td>Status-Quo-er</td>
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<tr>
<td>Those who supported war efforts, including politicians and average citizens</td>
<td>Those who condone to racial inequality or law enforcement officers who engage in unnecessary and unlawful violence against civilians</td>
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<td>Outcome</td>
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<tr>
<td><em>Tinker v. Des Moines</em> on 2/24/1969 the Supreme Court declares, 7-2, that students “do not shed their constitutional rights to freedom of speech or expression at the schoolhouse gate.” Unless it disrupted the educational process, schools could not censor student speech.</td>
<td>A massive debate: some Americans and other players side with Kaepernick opting to kneel/sit during the Nat’l Anthem. Some Americans argue that the protest is disrespectful to the American flag and to US veterans. Kaepernick leaves the 49ers in 2017.</td>
<td></td>
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<td>Situation</td>
<td>In 1773 America consisted of 13 British colonies, the tax on imported goods like paper, tea and paint was extremely high</td>
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<td>Demonstration</td>
<td>In Boston, MA, a group of colonists, sneak onto a British ship at night and dump 340 crates of tea into the Boston Harbor (aka The Boston Tea Party)</td>
<td>Demonstration</td>
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<td>Demonstrator(s)</td>
<td>“The Sons of Liberty” a secret organization created to advance the rights of the European colonists and to fight taxation by the British government</td>
<td>Demonstrator(s)</td>
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<tr>
<td>Status-Quo-er</td>
<td>The British Government</td>
<td>Status-Quo-er</td>
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<tr>
<td>Outcome</td>
<td>One of many causes leading to The American Revolution, which ultimately ended in America’s freedom from British rule</td>
<td>Outcome</td>
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<tr>
<td>Situation</td>
<td>Women were not allowed to vote</td>
<td>Situation</td>
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<tr>
<td>Demonstration</td>
<td>In 1913, 8,000 marchers, accompanied by nine bands, 20 floats, and four mounted brigades, gathered in Washington D.C. the day before Woodrow Wilson's inauguration</td>
<td>Demonstration</td>
</tr>
<tr>
<td>Demonstrator(s)</td>
<td>American, mostly white, women and men who supported women's right to vote</td>
<td>Demonstrator(s)</td>
</tr>
<tr>
<td>Status-Quo-er</td>
<td>Those who believed only white men should be allowed to vote</td>
<td>Status-Quo-er</td>
</tr>
<tr>
<td>Outcome</td>
<td>After 7 more years of consistent activism, the 19th Amendment was passed in 1920, which gave women the right to vote</td>
<td>Outcome</td>
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The Power of Invention

Grades 6-8
Inspired by the work of Temple Grandin

Author, activist, and professor Temple Grandin has developed inventions designed to improve livestock handling on farms. Diagnosed with autism at an early age, Temple invented a squeeze machine aimed to calm her anxiety. She applied her own experiences with the squeeze machine to cattle handling machines used on farms, suggesting improvements that would allow animals to feel less stress and fear before being slaughtered. Temple has written numerous books on animal behavior and humane slaughter practices.

Objectives:
- Students will research Temple Grandin and her invention the “squeeze machine” or “hug box.”
- Students will brainstorm inventions that they find useful in their everyday life, then research the history of one invention of their choosing.
- Students will identify a problem or issue that needs solving.
- Students will design an invention.

MD Content Standards:

Visual Art Anchor Standard 10: E:6-8:2: Identify and communicate reasons to create art outside of school.
Visual Art Anchor Standard 2: E:6-8:3: Apply visual organizational strategies to create works of art and design that clearly communicate main/central idea.
Visual Art Anchor Standard 4: I:6-8:1: Access, evaluate and manage information to identify and compare reasons why people create and utilize art.

Critical Questions
Why do we invent things?
What is one problem that could be solved with an invention?
Are there any inventions that could be improved upon?

Activity
1. Introduce students to Temple Grandin by showing them her detailed drawings included in “The Secret Life of Earth” exhibition. Students can also watch videos of Temple talking about her cattle squeeze chutes on YouTube.
2. Have students brainstorm a list of inventions that they use to make their lives easier either at home, or in school. Have students choose one invention to research and answer the following questions about the invention:
   a. Who created this invention?
   b. Why did they create this invention?
   c. What problem(s) is this invention solving?
3. Have students brainstorm in a group and generate a list of common problems that need to be solved. Remind them of some brainstorming tips: try not to criticize, any ideas are welcome.
4. Using the list generated by the group, have students choose one problem to solve. Students will then come up with an invention to aid in solving the problem.
5. Have students create a detailed illustration of their invention or prototype and write a description of how the invention works.
   a. Students can also choose an invention that could be improved, and create an illustration of that altered invention

Resources
Dr. Temple Grandin’s Livestock website: http://www.grandin.com/
Animals Make Us Human by Temple Grandin
Temple Grandin discussing Cattle Chutes: https://www.youtube.com/watch?v=b5cUk9RH6IQ&t=210s

Biography
Dr. Temple Grandin
1947–
Dr. Temple Grandin is an author, activist, and professor who has developed profound insights into the welfare and needs of animals through her own autistic condition. Born in Boston on August 29, 1947, Grandin was diagnosed with brain damage and autism at an early age, preventing her from communicating through words until she was three-years-old. She credits the early mentoring and attention of her private school teachers with the development of her visual thought process. She explains, “Visual thinking has enabled me to build entire systems in my imagination.” Grandin obtained a Bachelor’s degree in Psychology in 1970 and later completed a PhD in Animal Science, intensifying her focus toward one of her principal inspirations, livestock.

An early involvement in her aunt’s livestock business in Arizona led Grandin to design a machine known as the Hug Box. Observing how cattle responded calmly to being branded after being placed in a squeeze chute, Grandin recognized her own impulse to envelop herself in blankets or burrow in spaces with deep pressure. In college she designed and built a Hug Box for human use, in which two padded boards exert an even amount of pressure along the sides of the body, alleviating stress and hyper-stimulated nerves. Today, the invention’s role in autism therapy has been nationally recognized; several centers employing Grandin’s invention have reported its calming effects, especially in children.

Grandin later dedicated herself to the reformation of animal slaughter plants and livestock farms by designing alternative facilities. Currently an associate professor at Colorado State University, Grandin continues her work in humane animal handling methods both in practice and theory, outlined in the 2002 essay, “Animals are Not Things: A View on Animal Welfare Based on Neurological Complexity.” Grandin was also the subject of an award-winning biographical film, Temple Grandin, and in 2010, she was listed in Time Magazine’s list of the 100 most influential people in the world in the “Heroes” category.
Trash to Treasure

Grades 3-8
Inspired by Richard Lang and Judith Selby Lang and their project *One Plastic Beach*

Richard Lang and Judith Selby Lang collect and “curate” plastic bits of detritus collected from Kehoe Beach, located in the Point Reyes National Seashore in California.

In this activity, students will create an assemblage using found plastic from their neighborhood, school and / or surrounding areas.

Objectives:
- Students will define the words “decompose” and “biodegrade.”
- Students will recognize the importance of recycling and repurposing items we throw away.
- Students will create a collaborative artwork.

MD Content Standards:
Science: Natural Resources and Human Needs, Environmental Issues
MD State Science Curriculum: **Standard 6.0**

Visual Arts: Creative Expression and Production, Aesthetics and Criticism

Critical Questions
What do you consider trash and why?
What happens to trash after it’s thrown away?
What type of trash will decompose / biodegrade quickly?
What type of trash will hang around longer?

Vocabulary
*Decompose* - to cause something organic (such as dead plants and the bodies of dead animals) to be broken down by natural processes, chemicals, etc. To cause something (such as a chemical) to be separated into smaller or simpler parts.
*Biodegrade* - to be broken down into safe, harmless products by the action of living things (such as microorganisms)

Activity
1. Have students collect “colorful trash” from their neighborhood (soda bottle caps, plastic bags, bottles, toys) for several weeks, or even months. Be sure to use caution when picking up trash and don’t forget to clean all collected items!
2. Discuss the idea of trash using the critical questions above and define the words “decompose” or “biodegrade.” Have a more thorough discussion on plastic and its inability to decompose over time - share with students “How Long ’Til It’s Gone” visual, or another similar timeline.
4. Have students sort the trash by color and size (small, medium, large).
5. Using the “trash” collected, have students create assemblages on large letters to spell the word “TRASH or TREASURE.” Offer students tips on collaging the items on the letters in one color family, in a gradient, or just random.

**Materials**
Collected plastics and trash (soda bottle caps, plastic bags, bottles, toys, combs, zip ties, miscellaneous plastics), sturdy board to be used as backing (upcycled mat board or cardboard) pre-cut to the shape of letters to spell the word “TRASH” or “TREASURE,” hot glue or silicone.

**Above and Beyond**
Students can also work together on a larger, collaborative trash mosaic to be displayed in the school or outside. A large design can be drawn out, similar to a paint-by-number, and students can fill in the sections with the appropriate colored pieces.

**Resources**
One Plastic Beach project [http://beachplastic.com/About-One-Beach-Plastic](http://beachplastic.com/About-One-Beach-Plastic)
“Trashures: The Beauty of Useless Stuff” by Tineke Meirink and Anja Brunt