Green Exhibit Checklist

The Green Exhibit Checklist (GEC) is a tool to evaluate the environmental sustainability of exhibits. The goal of the Checklist is to inspire exhibit teams to reduce the environmental impacts of exhibit production.

The Green Exhibit Checklist can be a useful tool in early planning to help set project goals. Then, once the exhibit is on the floor, the Checklist is used to assess the final outcome.

The GEC awards points in 5 KEY STRATEGIES:

- **Reduce new material consumption**
- **Use local resources**
- **Reduce waste**
- **Reduce energy consumption**
- **Reduce products with toxic emissions**

A sixth category awards points for Innovation in the design and construction of the exhibit. This encourages exhibit teams to strive for new and creative solutions to reduce environmental impacts.

Step 1 Team sets goal for the exhibit: Platinum, Gold, Silver, and Bronze.

Step 2 Designer and fabricator review checklist to find the best strategies for meeting goal.

Step 3 After production, the fabricator fills out the GEC with the relevant material information.

Step 4 Exhibit team conducts walk-through, using the material information to award points.

We encourage teams to post their Checklist results online for the benefit of the entire museum industry. For more information or to post your Checklist evaluation see *www.exhibitseed.org*.

Exhibition Title: ElecTroSketch

Date: 4/10/13

Producing Facility: Terry Lee Wells Nevada Discovery Museum

Host Site: Same as above

Your Name: Will Durham

Role/Title: Exhibits Manager

Ratings are awarded for the total score:

- PLATINUM (20–24 points)
- GOLD (15–19)
- SILVER (11–14)
- BRONZE (8–10)

Reduce new material consumption.

INTENT: Reduce demand for virgin materials thereby reducing industrial practices that pollute the environment and exploit natural resources.

STRATEGIES:

- Use recycled materials (regrind HDPE, aluminum, etc.).
- Reuse building materials (from previous exhibits or deconstruction of houses, etc.).
- Use wood from responsibly-managed forests.
- Use rapidly renewable materials (bamboo, wheat board, etc.).
- Construct exhibits using fewer materials.the environment and exploit natural resources.

List all materials that were recycled, reused, FSC-certified wood, or rapidly renewable:	Estimated % of total exhibit (by volume):
- Aluminum laminate	1
- MDF	12
- Paint	1
- Framing Material	7
- Wiring 1	Total %: 0 21
List any virgin materials (no recycled content, newly purchased, not renewable):	**Estimated % of total exhibit (by volume):**
Aluminum	10
Cabinet Grade plywood	50
Red laminate	1
Glass	6
steel	2
Electronics 3	Total %: 0 79

SCORING:

SCORE:

- ☐ 4 points if **AT LEAST 90%** of the materials meet any one of these criteria.
- ☐ 3 points for **AT LEAST 75%**
- ☐ 2 points for **AT LEAST 50%**
- ☒ 1 point for **AT LEAST 10%**
- ☐ 0 points if **LESS THAN 10%** of the materials meet these criteria.

WAYS TO IMPROVE SCORE:

Go to Material recycling centers to browse their selections. The likelihood of finding the needed materials is small. We save all usable materials.

Use regional resources.

INTENT: Reduce negative effects on environment from the transportation of goods while contributing positively to the local economy.

STRATEGIES:
- Specify local raw materials, within 500 miles (ex: lumber in Pac NW).
- Source products manufactured locally, within 500 miles.
- Hire local contractors for labor, within 250 miles (ex: local welder).
- Batch orders of goods to reduce packaging material.

local volunteer electrical engineer 5

List all materials that were sourced locally:	Source:	Estimated % of total exhibit (by volume):
plywood	Pac NW	50
sign painter	local	.5
painter	local	.5
Constructed in our own shop	Our Museum	19
local metal worker	LEVCO 17%	Total %: 0 92
List all materials that were not sourced locally:	**Source:**	**Applied to est. % of total:**
veneer	Rugby	2
glass	Brie Glass	6
		Total %: 0 8

SCORING:

SCORE: 92

- [x] 4 points if **AT LEAST 90%** of the materials were sourced locally.
- [ ] 3 points for **AT LEAST 75%**
- [ ] 2 points for **AT LEAST 50%**
- [ ] 1 point for **AT LEAST 10%**
- [ ] 0 points if **LESS THAN 10%** of the materials meet these criteria.

WAYS TO IMPROVE SCORE: Find sources for local glass work. Don't design with laminates.

Reduce waste.

INTENT: Reduce amount of waste and consider end-life of exhibit.

STRATEGIES:

- Design components to be re-purposed after exhibit retires (ex: standard table top)
- Choose materials that can be recycled at end of exhibit (glass, cardboard are best).
- Choose construction methods that allow components to be taken apart (no glue).
- Eliminate need for consumables that end up in trash.
- Design for durability and low-maintenance.
- Use water responsibly in exhibit.

List all materials that can be re-purposed or recycled:	Reuse or recycling plan:	Estimated % of total exhibit (by volume):
All elements could be reused or re configured. There would be work to reuse but all elements can be repurposed		100
		Total %: 100

List any materials that cannot be recycled or repurposed:	Destination:	Applied to est. % of total:
		Total %: 0

SCORING:

SCORE: 4

- [x] 4 points if **AT LEAST 90%** of the materials can be repurposed or recycled.
- [ ] 3 points for **AT LEAST 75%**
- [ ] 2 points for **AT LEAST 50%**
- [ ] 1 point for **AT LEAST 10%**
- [ ] 0 points if **LESS THAN 10%** of the materials meet these criteria.
- [ ] -1 Deduct point for wasteful use of consumables or water.

WAYS TO IMPROVE SCORE: _____

Reduce energy consumption.

INTENT: Reduce energy consumption by exhibit components.

STRATEGIES:
- Choose energy-efficient electronics and parts.
- Reduce number of energy-consuming interfaces.
- Use alternative energy sources (human-powered, solar, wind).
- Use auto-shut off on electronic components.

List all electronic components:	Auto shut-off? Yes or No:	Energy efficient model? Yes or No:
- Arduino boards	NO	
- LEDs	NO	Yes

SCORING:

SCORE: 2

- ☐ 4 points if the exhibit is **NET-ZERO energy consumption.**
- ☐ 3 points if **SIGNIFICANT** energy-conserving efforts are in place
- ☒ 2 points if **SOME** energy-conserving efforts are in place
- ☐ 1 point if exhibit **USES** energy-efficient electronics
- ☐ 0 points if **NO ATTEMPT to conserve energy**
- ☐ -1 Deduct one point if more than 75% of the exhibit components are electronic

WAYS TO IMPROVE SCORE: - We could make sleep mode start sooner. Now we have the exhibit show examples as an attraction

Reduce toxic emissions.

INTENT: Reduce quantity of materials that emit VOC's, either in processing or after installation, because of their threat to the environment and indoor air quality.

STRATEGIES:
- Choose zero/low VOC paints & finishes.
- Avoid PVC, styrene.
- Use soy inks on graphic panels.
- Use products that are formaldehyde-free.
- Avoid carpet with toxic materials.

List all materials, sealants, adhesives, paints, and finishes that are zero or low-VOC:	Applied to estimated % of total exhibit:
Low VOC plywood	50
	Total %: 0

List any materials that do emit volatile organic compounds:	Applied to est. % of total:
- Paint	8
- Spray adhesive	2
- Varnish	40
	Total %: 0

SCORING:

SCORE: 50

- ☐ 4 points **if ALL** materials are low-VOC.
- ☐ 3 points for **AT LEAST 75%**
- ☒ 2 points for **AT LEAST 50%**
- ☐ 1 point for **AT LEAST 10%**
- ☐ 0 points if **LESS THAN 10%** of the materials meet these criteria.

WAYS TO IMPROVE SCORE: Choose Low VOC paints & finishes

Innovation.

INTENT: To encourage exhibit teams to strive for new and creative solutions.

STRATEGIES:
- Post checklist assessment on ExhibitSEED website for peer review.
- Incorporate a new design or production strategy that reduces environmental impact.
- Plan ahead for the exhibit's end-life.

SCORING: **SCORE:**

☐ 1 Bonus point for posting assessment on ExhibitSEED website

1 Bonus point for creating big visual impact with minimal materials: 1

1 Bonus point for innovative end-of-life plan for once the exhibit is retired: 1

1 Bonus point for any new design approach or construction method that increases environmental sustainability: 1

WAYS TO IMPROVE SCORE:

POINTS AWARDED:

0 **Reduce new material consumption** 1
0 **Use local resources** 4
0 **Reduce waste** 4
0 **Reduce energy consumption** 2
0 **Reduce toxic emissions** 2
0 **Innovation** 3
0 **TOTAL points**

CERTIFICATION:

- **PLATINUM** (20+ points)
- **GOLD** (15–19 points)
- **SILVER** (11–14 points)
- **BRONZE** (8–10 points)