GreenExhibit Checklist

OMSI GREEN EXHIBIT CHECKLIST

A Model for Evaluating Exhibit Sustainability

The **Oregon Museum of Science and Industry (OMSI)** in Portland, a national leader in science exhibit design and production, has created a tool that can help museums evaluate the sustainability of exhibits.

Inspired by the Leadership in Energy and Environmental Design (LEED) rating system, which is the "gold standard" used in building design and construction, OMSI's Green Exhibit Checklist rates an exhibit in terms of its environmental impact.

The Green Exhibit Checklist awards 0–4 points when evaluating each of eight elements common in exhibit design:

1. **Rapidly Renewable Materials.** Does the exhibit use resources that renew themselves quickly in nature, such as bamboo, cork, sunflower seed composite, and wheatboard?
2. **Resource Reuse.** Is the exhibit designed with materials that can be reused in other exhibits when this one is retired? And/or does this exhibit reuse materials from other sources?
3. **Recycled Content.** Does the exhibit use recycled materials rather than plastic laminates and acrylics, which are not yet made of recycled materials?
4. **End-life Assessment.** What portion of the exhibit can be reused or recycled at the end of the exhibit's life? For example, does the exhibit use a modular construction that can be updated or modified with new content?
5. **Low-Emitting Materials.** Does the exhibit use low- or zero-Volatile Organic Compound (VOC) paints, adhesives, and sealants?
6. **Certified Wood.** Does the exhibit use wood harvested from forests that have been managed in environmentally responsible ways?
7. **Conservation.** Is the exhibit designed for energy efficiency, including types of lighting, motion sensors which turn off electrical elements when not in use, etc.?
8. **Regional Materials.** Does it use regional materials that support the economy and reduce environmental impacts from transportation of materials?

An exhibit's total number of points determines its level of rating. For example, an exhibit that scores 6–10 points receives a "green" rating while one that scores 19–26 points receives a "gold" rating.

OMSI's goal is to have all OMSI-built exhibits qualify for green rating or higher by 2012. Our hope is that the OMSI Green Exhibit Checklist programs may help other museums worldwide plan exhibits with environmental considerations in mind and that it can also be a resource in the renting and buying of exhibits.

OMSI GREEN EXHIBIT RATING	
0 - 5	No Rating
6 - 10	Green Rating
11 - 18	Silver Rating
19 - 26	Gold Rating
27 - 32	Platinum Rating

NEW PROJECT - EXAMPLE

Example of Green Exhibit Checklist process for new projects

Step 1. As the timeline, budget, and deliverables are being established, the design and production teams decide on the rating goal.

Step 2. The designer specifies materials, mindful of the goal.

Step 3. The production lead oversees implementation of specifications.

Step 4. Once the exhibit opens, a rating assessment is done using the checklist. The design manager, lead designer, production manager, and production lead each assess the exhibit.

Step 5. Scores are reviewed and a final assessment is given.

Step 6. Rating is awarded.

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RAPIDLY RENEWING MATERIALS

Intent: To reduce the use and depletion of finite raw materials and long-cycle renewable materials by seeking rapidly renewable alternatives. Examples: bamboo, cork, sunflower seed composite, and wheatboard.

Does the exhibit use rapidly renewable materials for:

- ☐ 0 None of the construction materials
- ☐ 1 A few of the construction materials
- ☐ 2 Some of the construction materials
- ☐ 3 Most of the construction materials
- ☐ 4 All of the construction materials

List the rapidly renewable materials used:

RESOURCE REUSE

Intent: To reduce demand for virgin materials and to reduce waste, thereby reducing impacts associated with the extraction and processing of virgin resources. Examples: furniture (benches, stools), aluminum extrusion, metal legs, speakers, buttons.

Does the exhibit reuse resources in:

- ☐ 0 None of the components
- ☐ 1 A few of the components
- ☐ 2 Some of the components
- ☐ 3 Most of the components
- ☐ 4 All of the components

List materials that are reused:

RECYCLED CONTENT

Intent: To increase the demand for construction materials that have incorporated recycled content, thereby reducing the impacts associated with the extraction and processing of virgin materials. Examples: regrind HDPE, recycled rubber flooring, steel, aluminum.

Does the exhibit use material with recycled content for:

- ☐ 0 None of the construction materials
- ☐ 1 A few of the construction materials
- ☐ 2 Some of the construction materials
- ☐ 3 Most of the construction materials
- ☐ 4 All of the construction materials

List recycled materials and their approximate percentage of recycled content:

END LIFE ASSESSMENT

Intent: To reduce the amount of waste that ends up in the landfill. Examples: using 80/20 for structures; not adhering graphics to acrylic so acrylic can be recycled; modular construction so exhibit could be modified with new content,

What portion of the exhibit materials can be reused or recycled at the exhibit's end life?

- ☐ 0 None of the materials
- ☐ 1 A few of the materials
- ☐ 2 Some of the materials
- ☐ 3 Most of the materials
- ☐ 4 All of the materials

List strategies for reusing or recycling materials:

LOW-EMITTING MATERIALS

Intent: To reduce the quantity of materials that emit Volatile Organic Compounds (VOCs), either in processing or after installation, because of their threat to the environment and indoor air quality. Strategies include using low- or zero-VOC paints, adhesives, and sealants and choosing formaldyhyde-free medium-density fiberboard (MDF). Materials to avoid include polyvinyl chloride (PVC), rated by Greenpeace as the most toxic plastic, as well as styrene and sintra. Polyethylene and polypropylene are less harmful alternatives.

Did the exhibit choose low-emitting materials for:

- ☐ 0 None of the materials
- ☐ 1 A few of the materials
- ☐ 2 Some of the materials
- ☐ 3 Most of the materials
- ☐ 4 All of the relevant materials

List low-emitting materials used:

CERTIFIED WOOD

Intent: To encourage environmentally responsible forest management.

Does the exhibit use wood certified by the Forest Stewardship Council (FSC) as an alternative to standard wood products in:

- ☐ 0 None of the components
- ☐ 1 A few of the components
- ☐ 2 Some of the components
- ☐ 3 Most of the components
- ☐ 4 All of the components

List applications of certified wood and approximate percentage of total lumber used:

CHECKLIST Draft Version 1.0

CONSERVATION

Intent: To design exhibits that conserve energy, water, and materials. Examples: Exhibits that turn off when not in use, using motion sensors to activate components, choosing durable consumables with longer life-expectancy, using large banners to create environments instead of structures, using LEDs over fluorescents.

Does the exhibit use electricity, water, and materials responsibly by limiting unnecessary waste in:

- ☐ 0 None of the components
- ☐ 1 A few of the components
- ☐ 2 Some of the components
- ☐ 3 Most of the components
- ☐ 4 All of the components

List strategies for limiting wasteful use of power, water, and materials:

REGIONAL MATERIALS

Intent: To increase demand for building materials and products that are extracted and/or manufactured within the region (500 mile radius), thereby supporting the regional economy and reducing the environmental impacts resulting from transportation.

Does the exhibit make use of locally available materials for:

- ☐ 0 None of the construction materials
- ☐ 1 A few of the construction materials
- ☐ 2 Some of the construction materials
- ☐ 3 Most of the construction materials
- ☐ 4 All of the construction materials

List materials that were extracted or manufactured locally:

Total Score:

Insert total score from all sections.
Refer to chart at right for rating level.

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