OMSI
OREGON MUSEUM OF SCIENCE AND INDUSTRY

A history of sustainable practices

Greenest building is a reused building

Reclaiming contaminated inner city sites

Rainwater filtration

Efficient HVAC system

Sustainable transport

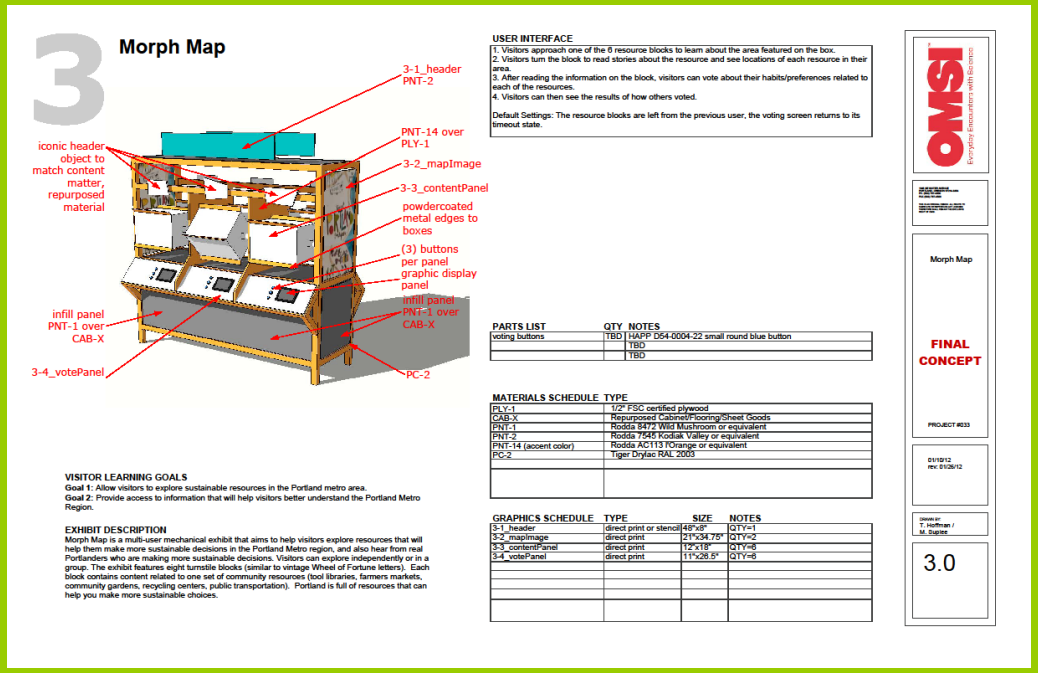
Natural Lighting and for energy efficiency

Recycling and composting programs

Scholarship programs

Sustainability education in programs and exhibits

Morphing Map



3 Morph Map

USER INTERFACE

1. Visitors approach one of the 6 resource blocks to learn about the area featured on the box.
2. Visitors turn the block to read stories about the resource and see locations of each resource in their area.
3. After reading the information on the block, visitors can vote about their habits/preferences related to each of the resources.
4. Visitors can then see the results of how others voted.

Default Settings: The resource blocks are left from the previous user, the voting screen returns to its timeout state.

PARTS LIST	QTY	NOTES
voting buttons	TBD	HAPP D54-0004-22 small round blue button
		TBD
		TBD

MATERIALS SCHEDULE	TYPE
PLY-1	1/2" FSC certified plywood
CAB-X	Repurposed Cabinet/Flooring/Sheet Goods
PNT-1	Rodda 9472 Wild Mushroom or equivalent
PNT-2	Rodda 7545 Kodiak Valley or equivalent
PNT-14 (accent color)	Rodda AC113 Orange or equivalent
PC-2	Tiger Drylac RAL 2003

GRAPHICS SCHEDULE	TYPE	SIZE	NOTES
3-1_header	direct print or stencil	48"x8"	QTY=1
3-2_mapImage	direct print	21"x34.75"	QTY=2
3-3_contentPanel	direct print	12"x18"	QTY=6
3-4_votePanel	direct print	11"x26.5"	QTY=6

VISITOR LEARNING GOALS

Goal 1: Allow visitors to explore sustainable resources in the Portland metro area.
Goal 2: Provide access to information that will help visitors better understand the Portland Metro Region.

EXHIBIT DESCRIPTION

Morph Map is a multi-user mechanical exhibit that aims to help visitors explore resources that will help them make more sustainable decisions in the Portland Metro region, and also hear from real Portlanders who are making more sustainable decisions. Visitors can explore independently or in a group. The exhibit features eight turnstile blocks (similar to vintage Wheel of Fortune letters). Each block contains content related to one set of community resources (tool libraries, farmers markets, community gardens, recycling centers, public transportation). Portland is full of resources that can help you make more sustainable choices.

OMSI
Everyday Encounters with Extraordinary

Morph Map

FINAL CONCEPT

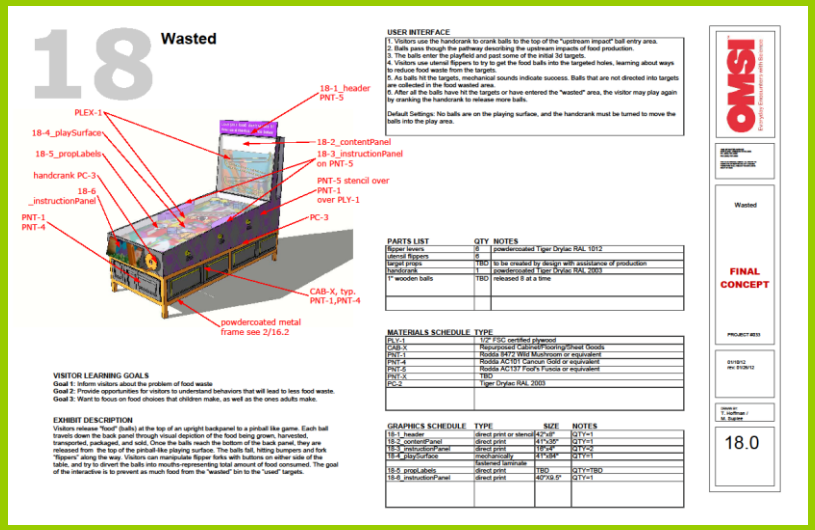
PROJECT #633

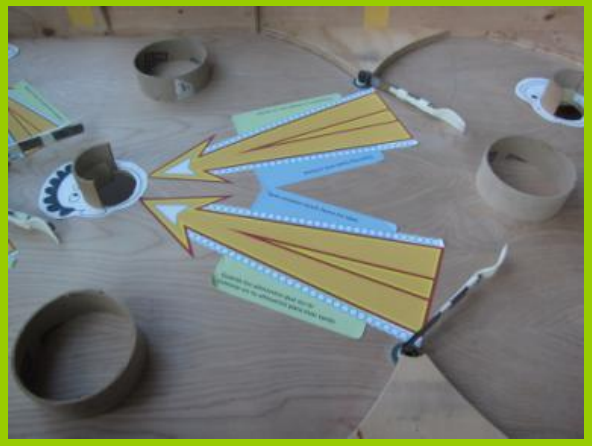
01/12/12
rev. 01/26/12

Drawn by:
T. Hoffman /
M. Dupree

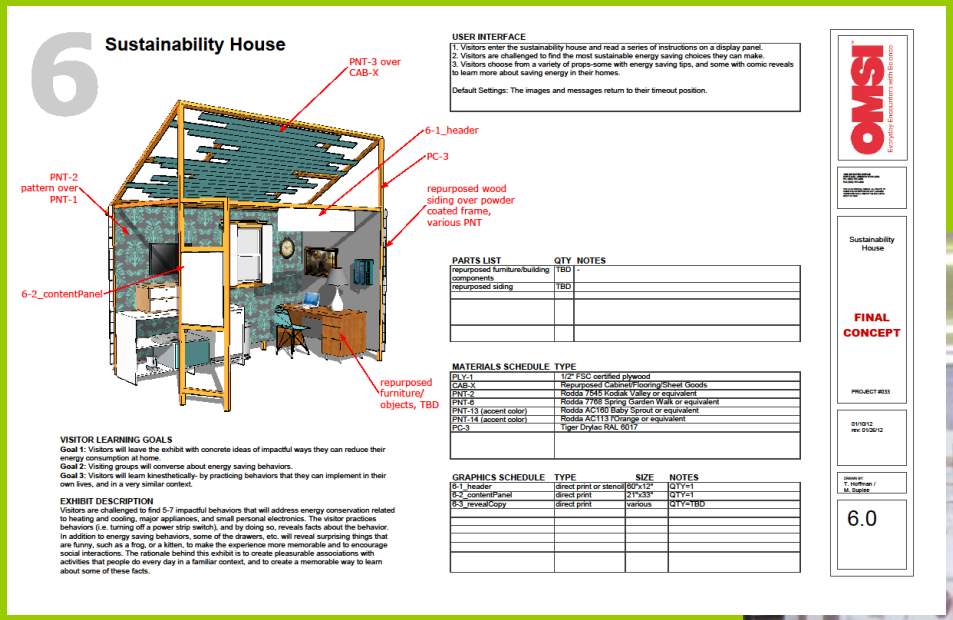
3.0

Wasted


18
Wasted
PLEX-1
18-4_playSurface
18-5_propLabels
handcrank PC-3
18-6 _instructionPanel
PNT-1 PNT-4
18-1_header PNT-5
18-2_contentPanel
18-3 _instructionPanel on PNT-5
PNT-5 stencil over PNT-1 over PLY-1
PC-3
CAB-X, typ. PNT-1,PNT-4
powdercoated metal frame see 2/16.2
USER INTERFACE
1. Visitors use the handcrank to crank balls to the top of the "upstream impact" ball entry area.
2. Balls pass though the pathway describing the upstream impacts of food production.
3. The balls enter the playfield and past some of the initial 3d targets.
4. Visitors use utensil flippers to try to get the food balls into the targeted holes, learning about ways to reduce food waste from the targets.
5. As balls hit the targets, mechanical sounds indicate success. Balls that are not directed into targets are collected in the food wasted area.
6. After all the balls have hit the targets or have entered the "wasted" area, the visitor may play again by cranking the handcrank to release more balls.
Default Settings: No balls are on the playing surface, and the handcrank must be turned to move the balls into the play area.
PARTS LIST
QTY NOTES
flipper levers 6 powdercoated Tiger Drylac RAL 1012
utensil flippers 4
target props TBD to be created by design with assistance of production
handcrank 1 powdercoated Tiger Drylac RAL 2003
1" wooden balls TBD released 6 at a time
MATERIALS SCHEDULE TYPE
PLY-1 1/2" FSC certified plywood
CAB-X Repurposed Cabinet/Flooring/Sheet Goods
PNT-1 Rodda 8472 Wild Mushroom or equivalent
PNT-4 Rodda AC101 Canoun Gold or equivalent
PNT-5 Rodda AC137 Fool's Fuscia or equivalent
PNT-X TBD
PC-2 Tiger Drylac RAL 2003
GRAPHICS SCHEDULE TYPE SIZE NOTES
18-1_header direct print or stencil 42"x9" QTY=1
18-2_contentPanel direct print 41"x35" QTY=1
18-3 _instructionPanel direct print 18"x9" QTY=2
18-4_playSurface mechanically fastened laminate 41"x84" QTY=1
18-5_propLabels direct print TBD QTY=TBD
18-6_instructionPanel direct print 40"X9.5" QTY=1
VISITOR LEARNING GOALS
Goal 1: Inform visitors about the problem of food waste
Goal 2: Provide opportunities for visitors to understand behaviors that will lead to less food waste.
Goal 3: Want to focus on food choices that children make, as well as the ones adults make.
EXHIBIT DESCRIPTION
Visitors release "food" (balls) at the top of an upright backpanel to a pinball like game. Each ball travels down the back panel through visual depiction of the food being grown, harvested, transported, packaged, and sold. Once the balls reach the bottom of the back panel, they are released from the top of the pinball-like playing surface. The balls fall, hitting bumpers and fork "flippers" along the way. Visitors can manipulate flipper forks with buttons on either side of the table, and try to dirvert the balls into mouths-representing total amount of food consumed. The goal of the interactive is to prevent as much food from the "wasted" bin to the "used" targets.
OMSI
Wasted
FINAL CONCEPT
18.0



Sustainability House



6 Sustainability House

USER INTERFACE

1. Visitors enter the sustainability house and read a series of instructions on a display panel.
2. Visitors are challenged to find the most sustainable energy saving choices they can make.
3. Visitors choose from a variety of props-some with energy saving tips, and some with comic reveals to learn more about saving energy in their homes.

Default Settings: The images and messages return to their timeout position.

PARTS LIST	QTY	NOTES
repurposed furniture/building components	TBD	-
repurposed siding	TBD	

MATERIALS SCHEDULE	TYPE
PLY-1	1/2" FSC certified plywood
CAB-X	Repurposed Cabinet/Flooring/Sheet Goods
PNT-2	Rodda 7545 Kodiak Valley or equivalent
PNT-6	Rodda 7768 Spring Garden Walk or equivalent
PNT-13 (accent color)	Rodda AC160 Baby Sprout or equivalent
PNT-14 (accent color)	Rodda AC113 ?Orange or equivalent
PC-3	Tiger Drylac RAL 6017

GRAPHICS SCHEDULE	TYPE	SIZE	NOTES
6-1_header	direct print or stencil	60"x12"	QTY=1
6-2_contentPanel	direct print	21"x33"	QTY=1
6-3_revealCopy	direct print	various	QTY=TBD

VISITOR LEARNING GOALS

Goal 1: Visitors will leave the exhibit with concrete ideas of impactful ways they can reduce their energy consumption at home.
Goal 2: Visiting groups will converse about energy saving behaviors.
Goal 3: Visitors will learn kinesthetically- by practicing behaviors that they can implement in their own lives, and in a very similar context.

EXHIBIT DESCRIPTION

Visitors are challenged to find 5-7 impactful behaviors that will address energy conservation related to heating and cooling, major appliances, and small personal electronics. The visitor practices behaviors (i.e. turning off a power strip switch), and by doing so, reveals facts about the behavior. In addition to energy saving behaviors, some of the drawers, etc. will reveal surprising things that are funny, such as a frog, or a kitten, to make the experience more memorable and to encourage social interactions. The rationale behind this exhibit is to create pleasurable associations with activities that people do every day in a familiar context, and to create a memorable way to learn about some of these facts.

OMSI

Sustainability House

FINAL CONCEPT

PROJECT #033

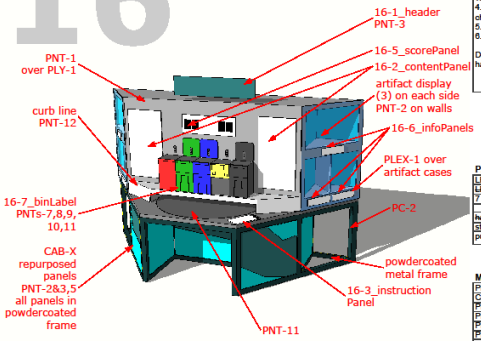
01/10/12
rev: 01/26/12

Drawn by:
T. Hoffman /
M. Dupree

6.0

Stuff Sorter

16 **Stuff Sorter**



USER INTERFACE

1. Visitors walk up to the exhibit and are instructed to turn the hand crank to power up the exhibit.
2. After the power indicator shows full power, visitors press a button to start the activity.
3. The turntable activates and visitors are presented with pucks that have images/text describing various recyclable materials. The visitors must correctly sort the pucks into the appropriate bins.
4. Visitors are given instant feedback through LED indicators above the bins whether their sorting choice was correct or incorrect.
5. The visitor's score is tallied above the bins.
6. The activity ends after a certain period of time when the turntable stops.

Default Settings: pucks are in the back of the exhibit in the bins waiting to be released. Release happens once visitors power up the exhibit through the handcrank and pressing the start button.

PARTS LIST	QTY	NOTES
LED indicator lights	10	5 green, 5 red
~~LED indicator light array~~	TBD	~~array to display how much power has been generated~~
7 segment display	6	(3) green and (3) red4" 7 segment display for score keeping and time
~~handcrank~~	1	~~powdercoated - color TBD~~
start button	1	HAPP 054-0004-23 small green round button
pucks	20	4" circles with RFID tags

MATERIALS SCHEDULE	TYPE
PLY-1	1/2" FSC certified plywood
CAB-X	Repurposed Cabinet/Flooring/Sheet Goods
PNT-1	Rodda 8472 Wild Mushroom or equivalent
PNT-2	Rodda 7545 Kodiak Valley or equivalent
PNT-3	Rodda 7430 Puerto Mio or equivalent
PNT-7	Rodda AC120 Red Red or equivalent
PNT-8	Rodda 7653 Jolly Holly or equivalent
PNT-9	Rodda AC146 Wavy Navy or equivalent
PNT-10	Rodda AC104 Sporty Yellow or equivalent
PNT-11	Rodda 8230 Zuli or equivalent
PNT-12	Rodda 8474 Grey Ghost or equivalent
PNT-5	Rodda AC137 Fool's Fuscia or equivalent
PC-1	Tiger Drylac RAL 5020
PLEX-1	

GRAPHICS SCHEDULE	TYPE	SIZE	NOTES
16-1_header	direct print or stencil	16"x30"	QTY=1
16-2_contentPanel	direct print	36"x8"	QTY=2
16-3_instructionPanel	direct print	12"x8"	QTY=1
16-4_puckLabels	TBD	2" RAD	QTY=TBD
16-5_scorePanel	direct print	24"x8"	QTY=1
16-6_infoPanel	direct print	12"x3"	QTY=6
16-7_binLabel	direct print	TBD	QTY=5

VISITOR LEARNING GOALS

Goal 1: Visitors will practice real life skills (identifying compost, recycle, trash, toxics) and sorting into bins - that they can take home and implement immediately.
Goal 2: Visitors learn about common misconceptions about what is or is not recyclable.
Goal 3: Entry-level visitors will get a pat on the back for one sustainable behavior that they are probably already doing.

EXHIBIT DESCRIPTION

Visitors sort objects in this simulated curbside-recycling scenario. Before starting, visitors must wind up a mechnaical crank, which stores energy to power the conveyor belt. As pucks with trash items travel by them on a conveyor belt, visitros must correctly sort the items into bins. They get immediate feedback on sorting accuracy, and can learn tips and information regarding why some items are recyclable and others are not. There are several real objects on display that have panels describing a factoid about them.

OMSI
Everyday Encounters with Science

Stuff Sorter

FINAL CONCEPT

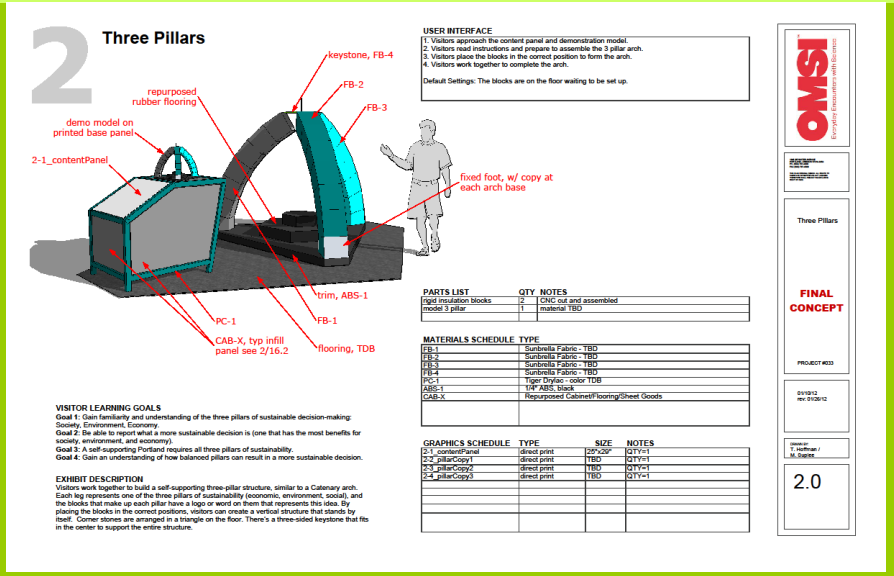
PROJECT #033

01/10/12
rev: 01/26/12

Drawn by:
T. Hoffman /
M. Suplee

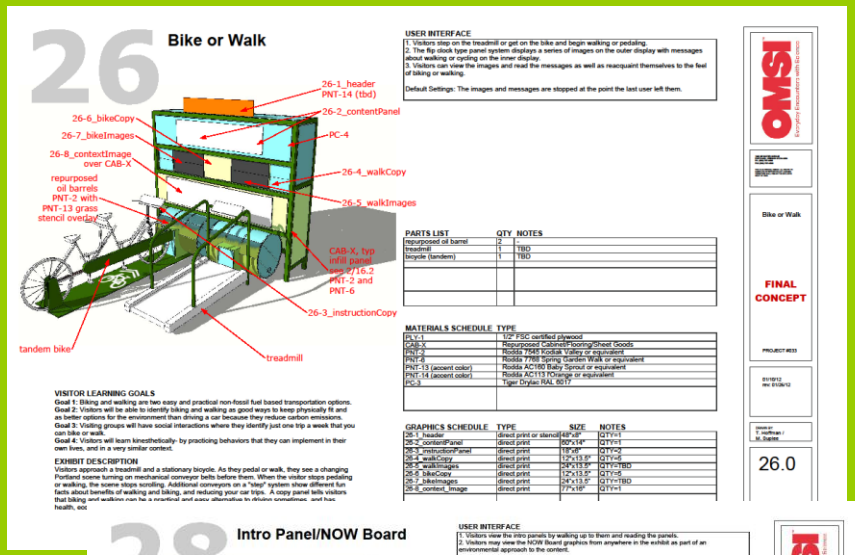
16.0

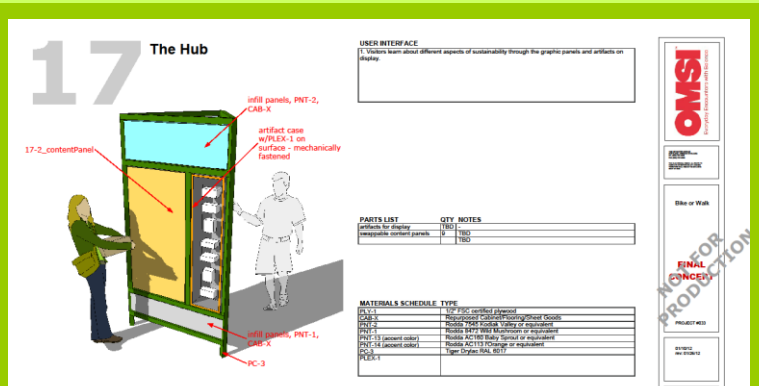
Three Pillars

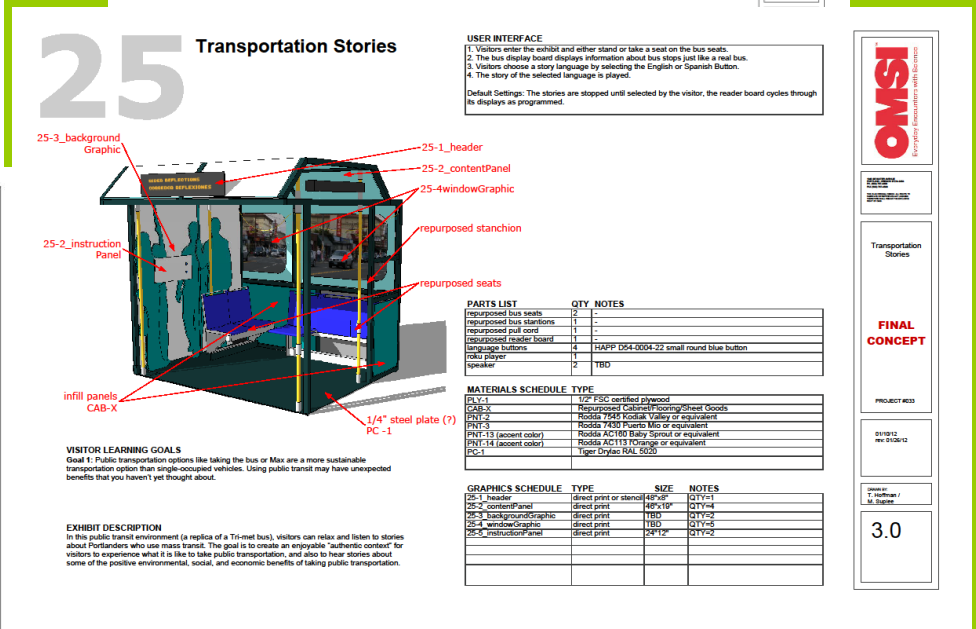


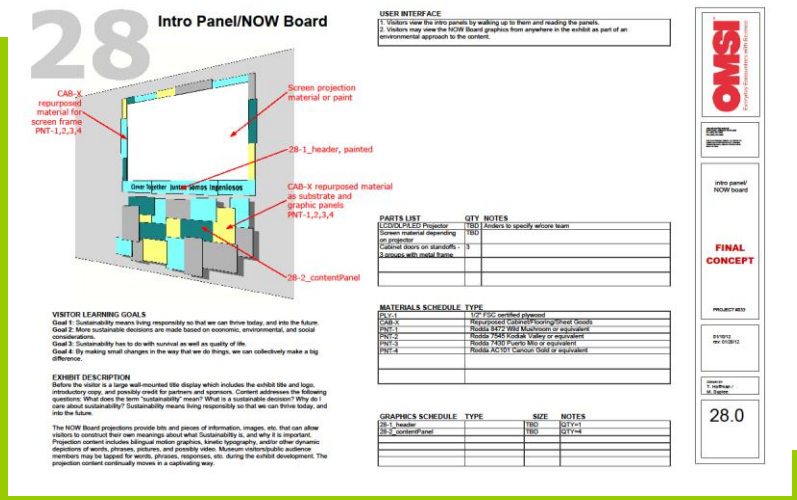
Life Cycle of a Product

And more…


26
Bike or Walk
26-1_header PNT-14 (tbd)
26-2_contentPanel
PC-4
26-4_walkCopy
26-5_walkImages
26-3_instructionCopy
26-6_bikeCopy
26-7_bikeImages
26-8_contextImage over CAB-X
repurposed oil barrels PNT-2 with PNT-13 grass stencil overlay
CAB-X, typ infill panel exc. 716.2 PNT-2 and PNT-6
tandem bike
treadmill
USER INTERFACE
1. Visitors step on the treadmill or get on the bike and begin walking or pedaling.
2. The flip clock type panel system displays a series of images on the outer display with messages about walking or cycling on the inner display.
3. Visitors can view the images and read the messages as well as reacquaint themselves to the feel of biking or walking.
Default Settings: The images and messages are stopped at the point the last user left them.
PARTS LIST
MATERIALS SCHEDULE
GRAPHICS SCHEDULE
VISITOR LEARNING GOALS
EXHIBIT DESCRIPTION
OMSI
Bike or Walk
FINAL CONCEPT
26.0


17
The Hub
infill panels, PNT-2, CAB-X
artifact case w/FLEX-1 on surface - mechanically fastened
17-2_contentPanel
infill panels, PNT-1, CAB-X
PC-3
USER INTERFACE
1. Visitors learn about different aspects of sustainability through the graphic panels and artifacts on display.
PARTS LIST
MATERIALS SCHEDULE
OMSI
Bike or Walk
FINAL CONCEPT
NOT FOR PRODUCTION


25
Transportation Stories
25-3_background Graphic
25-1_header
25-2_contentPanel
25-4windowGraphic
repurposed stanchion
25-2_instruction Panel
repurposed seats
infill panels CAB-X
1/4" steel plate (?) PC -1
USER INTERFACE
1. Visitors enter the exhibit and either stand or take a seat on the bus seats.
2. The bus display board displays information about bus stops just like a real bus.
3. Visitors choose a story language by selecting the English or Spanish Button.
4. The story of the selected language is played.
Default Settings: The stories are stopped until selected by the visitor, the reader board cycles through its displays as programmed.
PARTS LIST
MATERIALS SCHEDULE
GRAPHICS SCHEDULE
VISITOR LEARNING GOALS
Goal 1: Public transportation options like taking the bus or Max are a more sustainable transportation option than single-occupied vehicles. Using public transit may have unexpected benefits that you haven't yet thought about.
EXHIBIT DESCRIPTION
In this public transit environment (a replica of a Tri-met bus), visitors can relax and listen to stories about Portlanders who use mass transit. The goal is to create an enjoyable "authentic context" for visitors to experience what it is like to take public transportation, and also to hear stories about some of the positive environmental, social, and economic benefits of taking public transportation.
OMSI
Transportation Stories
FINAL CONCEPT
3.0


28
Intro Panel/NOW Board
CAB-X repurposed material for screen frame PNT-1,2,3,4
Screen projection material or paint
28-1_header, painted
CAB-X repurposed material as substrate and graphic panels PNT-1,2,3,4
28-2_contentPanel
USER INTERFACE
1. Visitors view the intro panels by walking up to them and reading the panels.
2. Visitors may view the NOW Board graphics from anywhere in the exhibit as part of an environmental approach to the content.
PARTS LIST
MATERIALS SCHEDULE
GRAPHICS SCHEDULE
VISITOR LEARNING GOALS
Goal 1: Sustainability means living responsibly so that we can thrive today, and into the future.
Goal 2: More sustainable decisions are made based on economic, environmental, and social considerations.
Goal 3: Sustainability has to do with survival as well as quality of life.
Goal 4: By making small changes in the way that we do things, we can collectively make a big difference.
EXHIBIT DESCRIPTION
OMSI
intro panel/ NOW board
FINAL CONCEPT
28.0

Sustainability

Promoting sustainable decision making in informal education

OMSI
OREGON MUSEUM OF SCIENCE AND INDUSTRY

NSF

Sustainability

Social

Financial

Environmental

To thrive now and in the future

Public feedback

Sustainability

- Green
- Eco
- Environmental

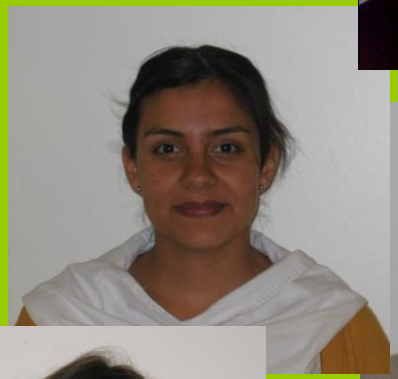
Sostenibilidad

- Family
- Neighborhood
- Community
- Jobs

Sustentabilidad












IRCO

CES Verde Advisors

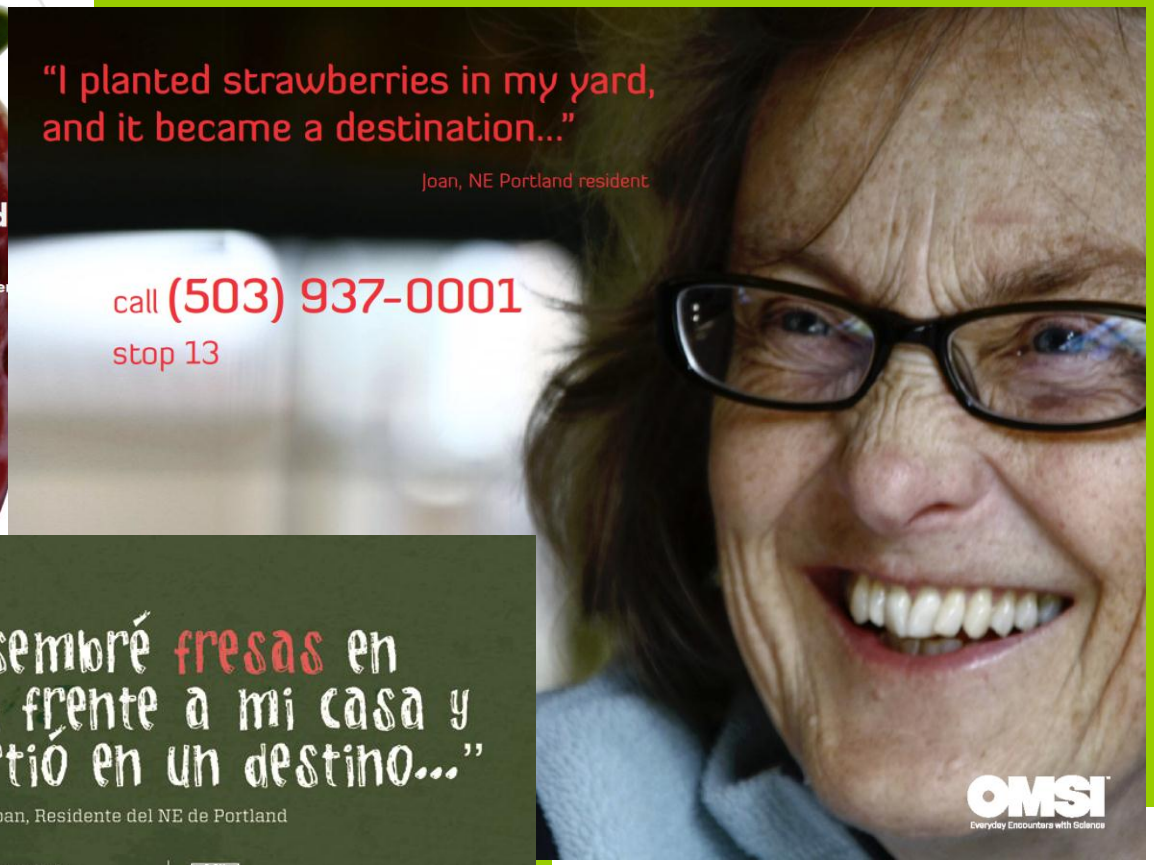
Describing the benefits of the behaviors

Three Pillars


DESIGN A WIND TURBINE
DISEÑA UNA TURBINA EÓLICA


GIANT
GIANT
GIANT


"I planted strawberries in my yard
and it became a destination..."
Joan, NE Portland resid
(503) 937-0001
stop 13


"I planted strawberries in my yard,
and it became a destination..."
Joan, NE Portland resident
call (503) 937-0001
stop 13
OMSI
Everyday Encounters with Science


"Yo sembré fresas en
el jardín frente a mi casa y
se convirtió en un destino..."
- Joan, Residente del NE de Portland
Llama y escucha la
historia de Joan:
503.937.0066 (Historia #24)
Para ver la presentación
audiovisual escanea el código
OMSI
Mobile Exhibits

Sustainable Exhibit Design

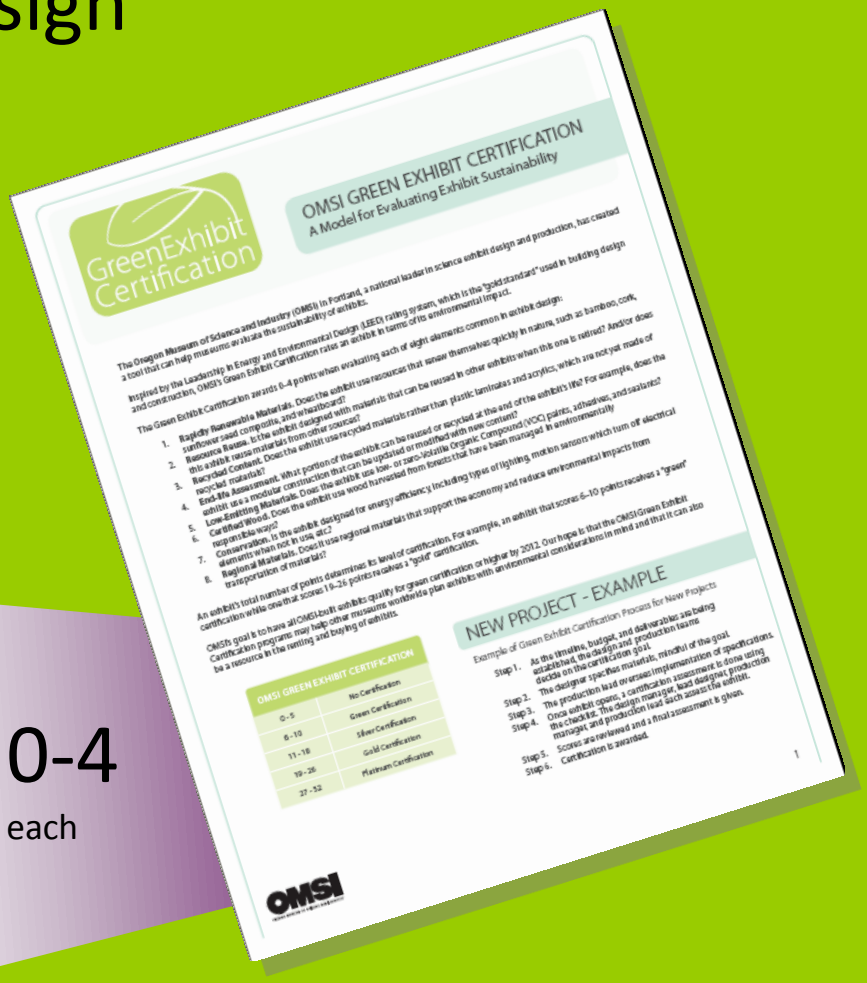
OMSI Green Exhibits Certification levels:

0 - 4	No Certification
5-10	OMSI Green
11-18	OMSI Silver
19-26	OMSI Gold
27-32	OMSI Platinum

1. Rapidly Renewable Materials
2. Resource Reuse
3. Recycled Content
4. End-life Assessment
5. Low-Emitting Materials
7. Conservation
8. Regional Materials

0-4

each



OMSI
OREGON MUSEUM OF SCIENCE AND INDUSTRY

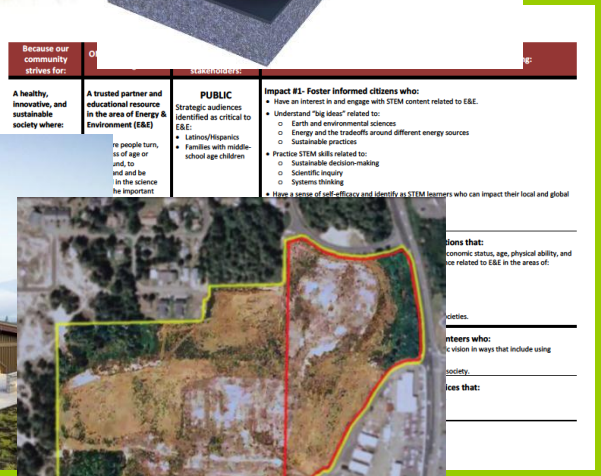
A future of sustainable practices

Plaza rain garden

Green roof

OMSI public transportation hub

Ecohouse



Net zero building

Topic area framework and community voices

Environmental learning center

Scholarship programs

Renovated earth hall