

#### ARCHITECTS IN SCHOOLS CURRICULUM

### GREEN/SUSTAINABLE GLOSSARY



Please look for the following words included throughout the vocabulary list.

В

Bio-Region

**Built Environment** 

**Building Reuse/Adaptation** 

C

Composting

D

Daylighting

**Deciduous** 

Design Charrette

Ε

Earth Sheltered Design

Eco-Roof

**Embodied Energy** 

**Environmentally Preferable** 

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Fossil Fuel

Fuel Cell

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**Grey Water** 

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Indoor Air Quality

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**LEED** 

Life Cycle Assessment

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Natural Ventilation

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Sick Building Syndrome

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U

**Urban Growth Boundary** 

V

Volatile Organic Compounds (VOCs)

W

Wind Power

X

Xeriscape



A

**Abutment:** A structure built to support lateral pressure from an arch or

span, such as at the end of bridges.

**ADA:** American with Disabilities Act. A law requiring equal access

to people with disabilities. Examples include ramps, wide enough doors and bathrooms that accommodate wheelchairs, communication services for people with hearing disabilities and large-print materials available

for people with vision disabilities.

**Aesthetic:** Having a sense of what is beautiful.

**Arch:** A structural method to span an opening, usually rounded-often

made of brick or stone.

**Arcade:** A series of arches joined in a row.

**Architect:** A person who designs buildings and spaces. Architects go to

a college or university that offers a degree in architecture and pass an important test to be allowed to plan the buildings and

spaces that people use.

**Architecture:** The design of any structure can be called architecture. A fa-

mous American architect, Frank Lloyd Wright, has given us a special definition of architecture as architects see it: "Man first created space in which to live for protection from the elements and protection from fellow man, as well. But that was not enough—he meant to make these spaces beautiful. That was

when architecture was born."

**Asymmetrical:** Not equally balanced—off center—not the same on both sides.

**Awareness:** Watchful, conscious, being informed.

В

**Baluster:** Upright supports of a handrail-balusters in a row are called

a balustrade.



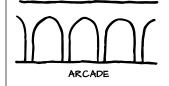
ARCH



GOTHIC ARCH



TUDOR ARCH









#### ARCHITECTURAL VOCABULARY



**Bargeboard:** A board, often decorative, covering the edge of a roof gable.

**Bay Window:** Windows that project out from the wall of a building.

**Beam:** A long, slender piece of concrete, wood or steel lying in a

horizontal position, which is supported at each end.

**Belvedere:** A small, slender tower (turret) with a lookout space.

**Bio-Region:** A large land area that has particular geographic, political, or

cultural characteristics that distinguish it from others.

**Bracket:** A small piece of wood, brick, stone or decorative iron project-

ing from a wall to support a roof, bay or other projection.

**Built** Refers to human-built structures such as houses, commercial

**Environment:** buildings and parks.

**Building Reuse/** Buildings are kept and reused usually for a different purpose and as an alternative to demolishing the building and starting

and as an alternative to demolishing the building and starting over.

. . .

**Buttress:** A structural form built against a wall to give it additional

strength.

 $\mathbf{C}$ 

**Capital:** The top or crowning feature of a column.

Casement Window:

A window that opens outward on side hinges.

**Civil Engineer:** An engineer concerned with the planning, design and construc-

tion of things such as roads, bridges, and dams.

















#### ARCHITECTS IN SCHOOLS CURRICULUM

#### ARCHITECTURAL VOCABULARY



Classic Order of Architecture:

"Classical" relates to the architecture of the ancient Romans and Greeks. "Order" is used to describe the different styles of

classical architecture.

Collective Value:

Acknowledging that everybody is important and everyone has the right to be safe and happy. We need to design spaces with

everyone's needs in mind.

**Colonnade:** A series of columns, usually set at regular intervals.

**Column:** A post consisting of a base, shaft and capital, which usually

supports a beam or an arch.

**Compression:** Applying a load to a structural member causing the member to

bend/compress under the weight of the load. See opposite:

tension.

**Composting:** A process whereby organic wastes, including food wastes,

paper and yard wastes, decompose naturally, resulting in a product rich in minerals and ideal for gardening and farming.

**Concrete:** Cement mixed with pebbles, crushed stone or brick, sand and

water in specific proportions, which hardens into the shape of

a mold and is poured when wet.

**Construction:** Building by putting parts together.

**Contractor:** A person or company who furnishes building materials and

builds a structure for an agreed upon price.

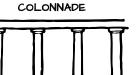
**Cornice:** A projecting ornamental molding along the top of a building,

wall, arch, etc.-finishing or crowning it.

**Corinthian** A column with a bell shaped capital of acanthus leaves – one

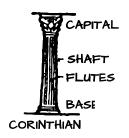
**Column:** of the Classic Orders of Architecture.

**Cresting:** A decorative ridge or railing on a roof.











#### ARCHITECTURAL VOCABULARY



Cupola: A circular or polygon projection with openings, usually on top

of a dome or building.

**Curtain Wall:** Exterior building wall that is supported by the frame of the

building and protects the building from wind and rain.

D

**Daylighting:** A method of lighting the inside of buildings with natural light

(like with sunlight through windows) so that less artificial light-

ing (such as lightbulbs) is needed in the day time.

**Deciduous:** Trees and plants that shed their leaves at the end of the grow-

> ing season (usually in the autumn). Deciduous trees provide shade to spaces in the summer and let light and warmth into

spaces in the winter.

**Deconstructivism:** Architecture that contradicts people's ideas of how architecture

should be (example: The Contemporary Jewish Museum

designed by Daniel Libeskind, San Francisco, CA).

**Dentils:** A series of small rectangular blocks that look like teeth orna-

menting a cornice or molding.

Design: Sketches, plans and drawings done creatively and artistically.

**Design Charrette:** The charrette process includes focused brainstorming sessions

or workshops, which take place in the early phase of the de-

sign process to generate integrated design solutions.

**Design Process:** The steps involved in designing something, which includes

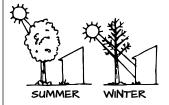
> finding out what is to be designed and for what purpose, and then proposing a number of solutions, deciding on the final

form, and developing the solution.

**Details:** The specific features of a building.



DAYLIGHTING



**DECIDUOUS** 





**Development:** The process of an area of land being "developed." The city the

> land is located in determines its use. For instance, the city decides if the land will be used for residential purposes (houses or apartments), commercial uses (businesses), agricultural uses (like a farm), etc. After that, a building or buildings are designed

and constructed on the land.

A shape that resembles one half of a ball, or some variation of Dome:

that shape.

**Doric Column:** A column with a simple capital—the simplest of the Classic

Orders of Architecture.

**Dormer Window:** A window that projects from the slope of a roof.

Double-hung Window:

A window of two parts that go up and down past each other.

Ε

**Earth Sheltered** 

Design:

A home design to be below ground or in a hillside that uses the temperature of the soil to improve energy efficiency.

Eave: The edge and under part of a roof that projects over the out-

side wall.

**Eco-Roof:** An eco-roof is a term used to describe a light-weight, green

living roof of plants and soil that doesn't need a watering

system, fertilizer or pesticides.

**Electrical** An engineer who designs electrical systems including power, **Engineer:** 

lighting, alarm systems, and communications (TV, telephone,

Internet, etc.).

**Elevation:** A drawing that shows each of the walls separately of the sides

of the exterior of a building or of a room inside a building.

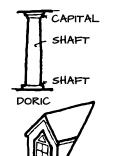
**Embodied** 

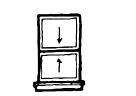
**Energy:** 

Embodied energy accounts for all energy used for production

and transportation of a product.







DORMER WINDOW

DOUBLE-HUNG WINDOW



EARTH SHELTERED DESIGN



#### ARCHITECTURAL VOCABULARY



Energy **Efficiency:**  The ability to do something without wasting energy. An example of being energy efficient is to turn out the lights

when you leave a room.

**Engineer:** See civil engineer, electrical engineer, mechanical engineer,

and structural engineer.

**Environment:** The natural and built world—within which people, animals, and

plants live.

**Environmentally** Preferable:

Products or services that don't effect human health and the environment as much as other products or services that serve

the same purpose.

**Equity:** To make sure that everyone has access to the resources.

> opportunities and responsibility they need to reach their full, healthy potential. This includes making changes so that unfair differences may be understood and addressed, as well as acknowledging all of the elements that make people unique from

one another.

**Expressionist** 

Buildings that are characterized by unusual angular or organic **Architecture:** forms and volumes (example: Experience Music Project de-

signed by Frank Gehry, Seattle, WA).

F

Facade: The face or front of a building.

**Fanlight:** A window, usually semi-circular, over a door, with wood

divisions that look similar to a fan.

Fascia Board: A flat horizontal board on a molding or edge of some part of

a building.

Finial: An ornament at the top of a post, roof gable or tower.

Floor Plan: A drawing of a room looking straight down on it—like a map of

the room or building.







Fluting: Shallow curved grooves that run vertically on the shaft of a

column or other surface.

**Fossil Fuel:** Fuel, such as coal, oil and natural gas, produced by the break-

down of ancient (fossilized) plants and animals. It is a source of

non-renewable energy.

**Fuel Cell:** A clean technology similar to a battery that turns energy into

electrical power.

G

Gable: The vertical triangular end of a building.

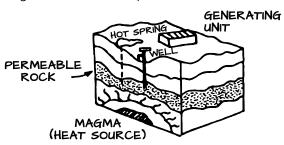
Gazebo: A small look-out tower or summer shelter, usually in a garden

or park.

Geothermal

Energy (usually in the form of hot water or steam) pulled from Power: below the earth's surface which can be used to heat buildings

or generate electrical power.



GEOTHERMAL POWER

**Green Building:** A building that is more sustainable than typical buildings and

results in structures that are environmentally responsible and

healthy places to live, work, learn and play.

**Grey Water:** Waste water (like from sinks) that does not contain sewage

and can be used for irrigation such as in rainwater harvesting.

Н

**High-Tech:** Buildings that display their structural elements visibly inside and

out (example: Centre Pompidou designed by Richard

Rogers Partnership, Paris, France).





#### ARCHITECTS IN SCHOOLS CURRICULUM

#### ARCHITECTURAL VOCABULARY



**Hip:** As in "hip roof" - the external angle formed by two sloping

sides of a roof.

HIPPED

•

**Inclusive:** To have a goal to include as many types of people as possible.

**Indoor Air Quality:** The quality of air in an indoor space used by people.

**Integrated Design:** A building that requires people to work together in order to

construct the most efficient building. Efficiency relies on day-

lighting, heating & cooling, plumbing, electrical, etc.

**Interior Designer:** A person who is qualified by education and experience to

design interior spaces to improve the quality of life, increase productivity, and protect the safety and welfare of people.

International

Style:

Principles of Classical architecture in their purest form without ornamentation of any kind. Originated with the Bauhaus move-

ment started in Germany in 1919.

**lonic Column:** Another of the Classic Orders of Architecture, distinguished by

curved motifs resembling scrolls or ram's horns.

K

**Key/Legend:** Symbols, colors, numbers, etc., noted on a map or drawing for

the purpose of identifying important elements.

**Keystone:** The wedge-shaped stone at the top of an arch.

ı

Laminated Beam: A load-bearing structural member made up of pieces glued or

nailed together.

Landscape

**Architect:** A person who has a degree in Landscape Architecture and is

licensed to plan, arrange or change any part of a yard, park or public outdoor space for practical and aesthetic reasons.

IONIC









#### ARCHITECTURAL VOCABULARY



Leaded Glass: Glass artwork in which lead is used to solder together separate

pieces of stained glass to make a larger whole.

LEED: LEED stands for "Leadership in Energy and Environmental

> Design." It is a federal program that was created to define what a "green building" is by establishing common measure ments, to promote integrated design practices, to stimulate green competition, and to raise awareness of green

building benefits.

Life Cycle Examining the lifetime environmental and economic impacts of **Assessment:** 

a product by looking at the raw material removal, transporta-

tion, manufacturing, use and disposal of the product.

Light: One section of a window–a pane of glass in a window.

Lines: Lines contribute to the look of a building by combining,

accenting and decorating the parts of the building.

Lintel: The horizontal beam that forms the upper part of a door or

window.

Load: The weight supported by a structure, wall or beam.

М

Aesthetic:

Machine Modern materials that were the same materials machines

were made of. Buildings were using glass, steel and concrete

with no ornamentation.

**Mansard Roof:** A roof form that slopes up on four sides and has no gable.

Masonry: Construction using brick, stone, concrete block or tile, and held

together with cement mortar.

Mechanical An engineer that deals with the design, production, and use of **Engineer:** 

machinery and tools, as well as the generation and transmis-

sion of heat and mechanical power.







#### ARCHITECTS IN SCHOOLS CURRICULUM

#### ARCHITECTURAL VOCABULARY



**Minimalism:** Architecture that reduces components, volume or spatial

systems to their essence (example: Architect Tadao Ando in

Japan is a minimalist).

**Model:** A three dimensional representation in a small scale to show the

construction, volume, mass, shape or relationships of a

building form(s).

**Modernist:** Buildings that are simple in design and lack any applied

ornamentation.

**Molding:** A type of stripping, projecting from the wall, for

decorative purposes.

**Mullion:** A vertical post or upright dividing a window into two or

more lights.

**Muntin:** A small wood or metal strip that separates the panes of glass

in a window.

Ν

**Natural** Wind or breeze used to supply and flush out air inside a

**Ventilation:** building, which can be helped or increased by the

building's design.

**Net Zero Energy:** A building that does not use more energy than it produces.

**Newel:** The wooden posts situated at the top or bottom of a

stair railing.

**Non-Renewable** Energy that has limited supply and can not be sustained (fossil

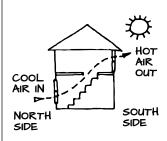
**Energy:** fuels). See opposite: renewable energy.

O

Oculus: A round window.







NATURAL VENTILATION

#### ARCHITECTURAL VOCABULARY



Offgas: The emitting of fumes into the air. There are numerous building

> materials that have chemicals in them which offgas, when exposed to air, high temperatures, moisture and/or ozone levels.

**Organic:** Things that occur or develop gradually and naturally without

being forced or contrived. Examples: organic food uses no

pesticides, organic cotton for clothing.

**Orientation:** Usually refers to a building and it's placement to north, south,

> east, west directions. Depending on the placement of the building, it can take advantage of the sun's path and wind patterns.

**Ornament:** Any detail that is carved, painted or added to a building

for decoration.

**Palladian** A window with three openings—the central one arched and

Window: wider than the others.

Paneled: Covered with wood or other materials in sections to decorate

a wall.

**Passive Design:** A building designed to allow the use of the sun and wind

to support comfort levels, minimizing the need for

mechanical systems.

Pattern: A decorative design developed by creativity, or the design

observed in natural or man-made elements.

**Pediment:** A triangular space forming a roof gable or similar treatment

over a door or window.

**Picture Window:** A large, fixed window framed so that it is usually, but not

always, longer horizontally than vertically to provide a view.

Pitch: The slope of a roof.



PALLADIAN WINDOW



#### ARCHITECTS IN SCHOOLS CURRICULUM

#### ARCHITECTURAL VOCABULARY



**Pilaster:** A flat, rectangular projection coming from a wall and designed

to look like a column.

**Planning:** Designing the arrangement of a building, group of buildings, a

neighborhood, town or city.

**Porch:** A covered entrance to a building.

**Portico:** A porch that has columns and a pediment.

**Post Modernism:** Architecture designed as a response to the modernism of the

mid-20th century. It reintroduces elements from historical building styles but without detail such as columns, pyramids, arches, and obelisks (example: Portland Building designed by Michael

Graves, 1120 SW 5th Ave, Portland, OR).

**Preservation:** Maintaining or preventing the destruction of a building or area

that is considered of historic or aesthetic value.

**Process:** A series of progressive steps for developing a project,

considering alternatives, and producing solutions.

**Proportions:** The comparative relation between things as to size, width,

length and volume.

**Pyramid:** A shape with four triangular sides and a square base.

R

**Rainwater**The rain that falls on a roof or other surface and is directed by qutters to a storage tank. That water is then used for irrigation,

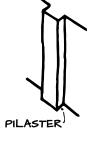
toilet flushing and other grey water uses; it is not used for

drinking, cooking or bathing.

**Rectangle:** A shape with pairs of unequal sides and all right angles.

**Recycling:** Products or other materials are recovered for use in the

creation of new products.







**Reinforce:** To make a building structurally stronger by providing

additional support.

Renewable

**Energy:** 

Energy resources such as wind, solar or geothermal power that can keep producing indefinitely without being used up like

fossil fuels.

**Repetition:** Repeating a design motif or architectural feature to create an

overall design.

Restorative Justice:

The commitment to building a loving community that is sustainable and growing. It's the idea that we have to help people when something happens to them, even if it was by

accident.

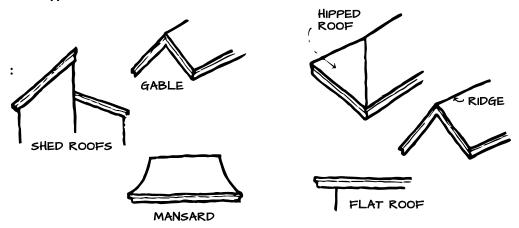
**Rhythm:** Repeating a building element in a regular, irregular. alternating

or progressive manner to create a certain effect.

**Ridge:** The horizontal line formed by the intersection of two sloping

roof surfaces.

#### **Roof-types:**



S

**Scale:** The proportion of a drawing or model in relation to the actual

size of an object.



#### ARCHITECTURAL VOCABULARY



Sensory **Awareness:**  To be aware of the sight, sound, smell, touch or taste of an

object or place.

**Sick Building** Syndrome:

The term "sick building syndrome" (SBS) is used when people become ill in a building (headache, dizziness, allergies to mold) and the source of their sickness is caused by contaminants in the building. (When a building is not "sick" it is a "healthy" building).

Siding: Materials such as boards or shingles made out of wood, vinyl

or aluminum are used to surface the outside of a building.

Site Plan: A drawing that shows the built environment in relationship to

the natural environment.

Sketch: To make a drawing simply and quickly.

**Solar Power:** Heat from the sun is used to heat and power things in a

building like a house, office or school.

Span: The space between two supports.

**Spatial** 

**Relationships:** 

Relation of spaces to one another or people to spaces.

Stained Glass: Stained glass is colored by mixing or fusing color into glass,

or by painting and baking colors onto the surface and can be

used for leaded glass.

**Structural** 

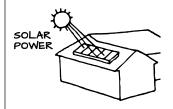
An engineer who determines how a building or bridge will stand up under its own weight and other forces of nature **Engineer:** 

(snow, earthquakes, rain, wind).

Structure: Something that is built or constructed.

Stucco: Plaster that is used on outside walls.

Suburban: The area beyond the edge of a town or city.





### ARCHITECTURAL VOCABULARY



**Support:** Part of a structure that holds up a load without giving way.

**Symmetrical:** Referring to parts that are the same on both sides.

T

**Tension:** The stretching or straining of a structural member caused by

applying a load. See opposite: compression.

**Terra Cotta:** Fired but unglazed clay used mainly for wall covering

and ornamentation.

**Texture:** The way a surface looks or feels.

**Transom:** A window over a door or window that opens for ventilation.

**Turret:** A small slender tower.

**Truss:** A combination of beams and other supports arranged in a

triangle or series of triangles to form a rigid framework to bear

a heavy load and/or span a long distance.

**Tuscan column:** One of the four columns in the Classic Order of Architecture.

U

**Universal Design:** The design of buildings, products or environments that incor-

porate diversity, ability, age and other factors, allowing them to be accessible and enjoyed by all people. Accessibility means equal access for people with differing abilities to any environ-

ment, movement, information or communication.

**Urban:** The area of a town or city.

Urban Growth Boundary:

Each of Oregon's cities is surrounded by an "urban growth boundary" or "UGB." The UGB is a line drawn on planning and zoning maps to show where a city expects to grow. Land outside the UGB will remain rural and will continue to be used for farming, forestry, or low-density residential development.







#### ARCHITECTS IN SCHOOLS CURRICULUM

#### ARCHITECTURAL VOCABULARY



**Urban Planner:** 

A person who develops plans and designs for the use of space within cities, towns and developments. It is their job to work with the community and make sure that land is being developed in a way that will most benefit all members of the community.

#### V

Volatile Organic Compounds:

VOCs are chemicals that evaporate into indoor air at room temperatures (referred to as offgassing). Examples of building materials that may contain VOCs can include: paints, glues, and carpeting. VOCs include Chlorofluorocarbons, Hydrochlorofluorocarbon, and Methane.

#### W

Water Efficiency: The ability to do something without wasting water. An

example of water efficiency is rainwater harvesting.

**Wind Power:** Wind power systems convert the energy of the wind

into electricity.

# WIND

X

**Xeriscape:** Creative landscaping for water and energy efficiency and

lower maintenance.