















 <p>Whole Building</p> <p>© GBES</p>	 <p>Includes all areas within the project boundary. Some features indicate that projects can achieve a feature by providing a tenant budget. To use this pathway, project teams need to submit as part of the documentation review, design assumptions and sample cut-sheets (as applicable) that justify the budget and can be used by the tenant during their design and construction process.</p> <p>© GBES</p>
 <p>Extend of Developer Buildout</p> <p>© GBES</p>	 <p>Includes all non-leased space and all construction within the leased space for which the project team is responsible.</p> <p>© GBES</p>
 <p>Leased Spaces</p> <p>© GBES</p>	 <p>All areas within the project boundary that are leased to or owned by tenants, including areas for lease or for sale that are not currently occupied.</p> <p>© GBES</p>
 <p>Non-Leased Spaces</p> <p>© GBES</p>	 <p>All areas within the project boundary that are not considered leased space.</p> <p>© GBES</p>

 <p>Building Management Staff</p> <p>© GBES</p>	 <p>Individuals responsible for maintaining and operating the building, including contractors and sub-contractors. Workers who spend less than 30 hours per month in the building (i.e., who are not regular occupants) are not considered building management staff.</p> <p>© GBES</p>
 <p>Direct Staff</p> <p>© GBES</p>	 <p>Building staff under direct employment by the project owner. Note: If a project has no direct staff onsite (i.e., the building is entirely operated by contracted building management staff), the project is allowed to earn points by meeting feature require for all or a defined subset of building management staff.</p> <p>© GBES</p>
 <p>WELL Core projects (testing space requirement)</p> <p>© GBES</p>	 <p>What type of projects need to have at least 2.5% of the total building floor area available for performance testing?</p> <p>© GBES</p>
 <p>WELL Core</p> <p>© GBES</p>	 <p>What is a distinct pathway for core and shell buildings (also known as base buildings) seeking to implement fundamental features to benefit tenants? Any build type can register for WELL Core, provided that at least 75% of the project area is occupied by one or more tenants and/or serves as common space in the building accessible to all tenants.</p> <p>© GBES</p>

 <p>Owner-Occupied Projects</p> <p>© GBES</p>	 <p>What type of projects are owned or leased by the project owner, and regular occupants (e.g., employees) are affiliated with the project owner. Interiors represent a particular case of owner-occupied projects, where the project owner rents/leases space within a larger building (the "base building") that is less than half the size of the base building.</p> <p>© GBES</p>
 <p>Owner-Occupied & WELL Core</p> <p>© GBES</p>	 <p>What are the two WELL Projects types?</p> <p>© GBES</p>
 <p>Performance Verification</p> <p>© GBES</p>	 <p>The process for on-site assessments and testing.</p> <p>© GBES</p>
 <p>WELL Performance Testing Agent</p> <p>© GBES</p>	 <p>An authorized _____ completes the Performance Verification.</p> <p>© GBES</p>

 <p>Dynamic Scorecard</p> <p>© GBES</p>	 <p>This guides project teams through the development.</p> <p>© GBES</p>
 <p>10 Concepts</p> <p>© GBES</p>	 <p>The number of concepts in WELL v2.</p> <p>© GBES</p>
 <p>Evidence-Based, Verifiable, Implementable & Presented For Outside Input</p> <p>© GBES</p>	 <p>The four tenets of each WELL Feature.</p> <p>© GBES</p>
 <p>Equitable, Global, Evidence-Based, Technically Robust, Customer-Focused & Resilient</p> <p>© GBES</p>	 <p>The principles which WELL v2 is founded on.</p> <p>© GBES</p>

 <p>IWBI</p> <p>© GBES</p>	 <p>International Well Building Institute</p> <p>© GBES</p>
 <p>WELL v2</p> <p>© GBES</p>	 <p>A vehicle for buildings and organizations to deliver more thoughtful and intentional spaces that enhance human health and well-being.</p> <p>© GBES</p>
 <p>IWBI Governance Council</p> <p>© GBES</p>	 <p>This IWBI body that is tasked with a dual purpose to uphold the integrity of the WELL Building Standard development process and accelerate market transformation at a global scale.</p> <p>© GBES</p>
 <p>5 Dwelling Units</p> <p>© GBES</p>	 <p>The number of dwelling units in a multi-family residential project contained in a single building with common structural elements needed to utilize the WELL Certification Pathway.</p> <p>© GBES</p>

 <p>12 Points, 100 Points</p> <p>© GBES</p>	 <p>Projects may pursue no more than _____ points per concept and no more than _____ points total across the ten concepts.</p> <p>© GBES</p>
 <p>Regularly Occupied Spaces</p> <p>© GBES</p>	 <p>Areas inside the project where a particular individual normally spends at least one continuous hour or, cumulatively, at least two hours per day, such as offices, conference rooms, bedrooms and classrooms.</p> <p>© GBES</p>
 <p>Occupiable Spaces</p> <p>© GBES</p>	 <p>Spaces that can be occupied for any task or activity, including transition areas or balconies, but excluding spaces that are rarely accessed, such as storage spaces or equipment rooms.</p> <p>© GBES</p>
 <p>Occupant</p> <p>© GBES</p>	 <p>Any individual within the project boundary.</p> <p>© GBES</p>

 <p>Regular Occupant</p> <p>© GBES</p>	 <p>An individual who spends at least 30 hours per month across at least five days within the project boundary (e.g., employee, resident, student).</p> <p>© GBES</p>
 <p>Visitor</p> <p>© GBES</p>	 <p>Any occupant who is not a regular occupant (e.g., shopper, museum-goer, hotel guest).</p> <p>© GBES</p>
 <p>Employee</p> <p>© GBES</p>	 <p>An individual who works for the project owner within the project boundary.</p> <p>© GBES</p>
 <p>Eligible Employee</p> <p>© GBES</p>	 <p>An employee identified as qualifying for benefits. At a minimum, this includes all full-time employees but may also include part-time employees, interns, contracted workers and other non-full-time employees as appropriate.</p> <p>© GBES</p>



False - Do Not Apply Rounding To Calculations

© GBES



True or False- You need to apply rounding to calculations.

© GBES



Minimum Scope

© GBES



The minimum level of achievement necessary to achieve a feature related to people, spaces, and/or products.

© GBES



What is the INTENT of the Materials Concept?

© GBES



To reduce human exposure, whether direct or through environmental contamination, to chemicals that may impact health during the construction, remodeling, furnishing, and operation of buildings.

© GBES



Name the five (5) "legacy" chemicals that are now largely restricted in manufacture and use.

© GBES



Lead, Asbestos, Mercury, Chromated Copper Arsenate (CCA), and Polychlorinated Biphenyls (PCBs)

© GBES



In 2017, this chemical was responsible for an estimated one million deaths?

© GBES



Lead

© GBES



In 2017, lead was responsible for how many estimated deaths?

© GBES



One Million

© GBES



What biocide, formerly used in outdoor wood structures can leach arsenic and preservative components into the soil?

© GBES



Chromated Copper Arsenate (CCA)

© GBES



Which WELL Concept requires projects to assess the presence of chemicals and compounds and take measures to prevent human exposure along with restricting them in new products?

© GBES



Materials Concept

© GBES



Explain why the Materials Concept allows these 3 harmful chemicals to be used: Perfluorinated Alkyl Compounds (PFCs), Orthophthalates, and Halogenated Flame Retardants (HFRs).

© GBES



Because of superior performance, the Materials Concept promotes a precautionary approach to these chemicals, favoring substitutions of certain materials where replacements are available and do not pose sources of exposure for other chemicals of unknown or increased toxicity.

© GBES



In what commonly used materials can you find Volatile Organic Chemicals (VOCs)?

© GBES



Insulation, Paints, Coatings, Adhesives, Furniture and Furnishings, Composite Wood Products, and Flooring Materials

© GBES



How do VOCs affect human health?

© GBES



Increase respiratory health distress and can increase cancer risks.

© GBES



Which WELL Concept encourages the use of products tested for low VOC emissions?

© GBES



Materials Concept

© GBES



What distinguishing feature about VOCs can negatively affect Indoor Air Quality (IAQ) over long periods of time?

© GBES



VOC's can be emitted (called off-gassing) from materials, sometimes for very long periods of time.

© GBES



What two strategies does the WELL Materials concept advance for selecting building materials and products?

© GBES



One is to increase literacy on materials by promoting ingredient disclosure, whereas the second is to promote the assessment and optimization of product composition in order to minimize impacts to human and environmental health.

© GBES



Because potentially hazardous products are introduced into buildings during their day-to-day operations, the WELL Materials concept promotes?

© GBES



The use of low-hazard cleaning products and cleaning practices reduce impacts on indoor air quality and on the health of those performing these duties.

© GBES



Which WELL Concept promotes the use of low-hazard cleaning products and cleaning practices that reduce impacts in indoor air quality and the health of those performing these duties?

© GBES



Materials Concept

© GBES



What three ways does the Materials Concept promote the mitigation of environmental contamination and protection of public health?

© GBES



The Materials Concept includes guidelines for the safe management of some types of waste, the application of Integrated Pest Management (IPM) principles, the use of low-hazard pesticides, along with signage, and notice of application.

© GBES



What are some of the hazardous ingredients used in building materials?

© GBES



Asbestos, Mercury, and Lead

© GBES



What is asbestosis?

© GBES



A chronic lung disease caused by inflammation and scarring of lung tissue due to asbestos exposure. The disease leads to calcification and thickening of or fluid build-up in the lung lining.

© GBES



What hazardous building ingredient is removed by eliminating the use of compact fluorescent light bulbs (CFLs)?

© GBES



Exposure to Mercury

© GBES



What are CFLs?

© GBES



Compact Fluorescent Light Bulbs

© GBES



What are PCBs?

© GBES



Polychlorinated Biphenyls

© GBES



What building materials were PCBs used in?

© GBES



Caulk and Electrical Equipment

© GBES



Why are PCBs particularly dangerous to human health?

© GBES



They persist in the environment, bioaccumulate in foods, and are carcinogenic.

© GBES



What is an ACM?

© GBES



Asbestos-Containing Materials

© GBES



What is a CCA and where is it found?

© GBES



Chromated Copper Arsenate is found in existing wood structures. In the 2000s, CCA was applied to pressure treat wood.

© GBES



What is a brownfield?

© GBES



A site that is complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

© GBES



What chemical compounds are suspected or proven to pose health concerns?

© GBES



Orthophthalates (common plasticizers), Halogenated Flame Retardants (HFR), Perfluorinated Compounds (PFCs), and Heavy Metals, Formaldehyde

© GBES



What are the common pathways to exposure to chemical compounds?

© GBES



Inhalation, Skin Contact, or Swallowing of Dust, Soil, or Larger Particles

© GBES



SCAQMD

© GBES



South Coast Air Quality Management District. SCAQMD Rule 1168 limits VOCs from adhesives and sealants.

© GBES



What third-party organizations promote material ingredient disclosure for permanently installed products?

© GBES



Declare label, Health Product Declaration, Cradle-to-Cradle Certification.

© GBES




Exposure to asbestos-containing dust is the main cause of mesothelioma and is responsible for over _____ deaths annually?








© GBES



200,000

© GBES

 <p>What is the intent of the WELL Community Concept?</p> <p style="text-align: right;">© GBES</p>	 <p>To support access to essential healthcare, build a culture of health that accommodates diverse population needs, and establish an inclusive, engaged occupant community.</p> <p style="text-align: right;">© GBES</p>
 <p>A physical or digital WELL feature guide is prominently displayed and/or made widely available to all occupants, meeting the following requirements:</p> <p style="text-align: right;">© GBES</p>	 <ol style="list-style-type: none"> a. Describes the WELL features achieved by the project. b. Explains how the WELL features achieved by the project impact occupant health, well-being and comfort and support the project's health-oriented mission in Part 2: Provide Health-Oriented Mission in Feature C02: Integrative Design. <p style="text-align: right;">© GBES</p>
 <p>What is the intent of Integrative Design?</p> <p style="text-align: right;">© GBES</p>	 <p>Facilitate a collaborative development process and ensure adherence to collective wellness goals.</p> <p style="text-align: right;">© GBES</p>
 <p>Projects engage stakeholders upon the point of registration in project design and development and conduct the following activities</p> <p style="text-align: right;">© GBES</p>	 <ol style="list-style-type: none"> a. Identify project stakeholder b. Perform a values assessment and alignment exercise c. Engage new stakeholders who join the process after the initial meeting d. Set future meetings to stay focused on the project goals, develop a plan of response to stakeholder feedback and maintain a record of the response. <p style="text-align: right;">© GBES</p>

 <p>What is the minimum number of responses or percentage of occupants that is required to respond to a survey?</p> <p>© GBES</p>	 <p>There is no minimum number or percentage of occupants that must respond to the survey as long as all occupants are invited to take the survey</p> <p>© GBES</p>
 <p>A health benefits plan is available to all eligible employees and their designated dependents (e.g., spouse, domestic partner, child, parent, parent-in-law, grandparent, grandchild, sibling) at no cost or subsidized that includes the following services:</p>	 <p>1. Medical care 2. Dental care 3. Vision care 4. Mental health and substance use services 5. Sexual and reproductive health services 6. Medication/prescription coverage. 7. Essential immunizations based on region. 8. Preventive screenings and biometric assessments. 9. Tobacco cessation programs. 10. Infectious disease testing</p> <p>© GBES</p>
 <p>What is the main issue facing Workplaces that implement healthy behavior programs?</p> <p>© GBES</p>	 <p>Workplaces have the potential to promote and encourage healthy behaviors; however, if employees are unaware of the health promotion opportunities available, they are unlikely to participate. 1,2 Moreover, studies of organizations with successful workplace wellness programs demonstrate that isolated incentives or programs, or even just health-promoting physical environments alone, will not be effective in promoting employee health or engaging employees in healthy behaviors unless they are part of an overarching culture of health integrated into everyday operations.</p> <p>© GBES</p>
 <p>How frequently should paid breaks be provided for pumping for new mothers?</p> <p>© GBES</p>	 <p>At least 15-20 minutes every 2-3 hours (or 2-3 pumping sessions per eight-hour workday), with adjustments as necessary to meet the needs of individuals.</p> <p>© GBES</p>

 <p>What is the intent of the Family Support Concept?</p> <p>© GBES</p>	 <p>Support working parents and caregivers so that they can properly care for members of their families</p> <p>© GBES</p>
 <p>How many weeks of paid leave are to be provided for the care of a spouse, domestic partner, child, dependent, parent, parent-in-law, grandparent, grandchild, sibling or other designated relation with a chronic or long-term serious health condition, inclu</p> <p>© GBES</p>	 <p>12</p> <p>© GBES</p>
 <p>Which concept in Community supports working parents and caregivers so that they can properly care for members of their family?</p> <p>© GBES</p>	 <p>Civic Engagement</p> <p>© GBES</p>
 <p>A C11 Civic Engagement project must provide community space that has designated outdoor or indoor space made available to the public at no cost that meets the following requirements:</p> <p>© GBES</p>	 <ul style="list-style-type: none"> a. Is at least 2,000 ft b. Open at all times unless closed for security purposes (e.g., during nighttime hours) or special events. c. Signage or other communication clearly indicates hours the space is open and the space's designation for public use. d. Provides quality seating areas and is easily navigable for individuals of all abilities. <p>© GBES</p>

 <p>This WELL feature requires projects to offer resources like first aid kits, automated external defibrillators (AEDs) and opioid response kits, coordinate with emergency response teams and provide emergency preparedness and response trainings</p> <p>© GBES</p>	 <p>C14 Emergency Resources</p> <p>© GBES</p>
 <p>An emergency management plan is in place outlining response in the case of emergencies within the building or surrounding community, addressing at minimum the following hazards:</p> <p>© GBES</p>	 <ol style="list-style-type: none"> 1. Natural (e.g., flood, tsunami, wildfire, earthquake, heatwave). 2. Fire. 3. Health (e.g., acute medical emergency, infectious disease pandemic). 4. Technological (e.g., power loss, chemical spill, explosion). 5. Human-caused (e.g., civil unrest, active shooter, terrorism). <p>© GBES</p>
 <p>What process facilitates an inclusive and collaborative planning and orientation process and establishes a health-oriented project mission?</p> <p>© GBES</p>	 <p>Charrette</p> <p>© GBES</p>
 <p>This WELL feature requires projects to collect feedback from building users through third-party or custom surveys on their health, well-being and satisfaction with their environment, particularly on topics related to WELL strategies.</p> <p>© GBES</p>	 <p>C04 Occupant Survey</p> <p>© GBES</p>

 <p>Annually, the project submits the following through the WELL digital platform:</p> <p style="text-align: right;">© GBES</p>	 <p>Project and survey data, including:</p> <ul style="list-style-type: none"> The total number of employees invited to complete the survey and the number of employees who completed the survey. Date survey started and finished. Project location. Project type. Level of WELL Certification. Sociodemographic information (age and gender at minimum). Aggregated, anonymized survey results. <p style="text-align: right;">© GBES</p>
 <p>This WELL feature requires projects to build on minimum occupant survey requirements by collecting and responding to more in-depth and customized information from building users on their health, well-being and satisfaction with their environment including topics related to WELL strategies, both before and during occupancy.</p> <p style="text-align: right;">© GBES</p>	 <p>C05 Enhanced Occupant Survey</p> <p style="text-align: right;">© GBES</p>
 <p>Health services are provided for all eligible employees at no cost or subsidized, on-site, in-person within 0.25 miles of the project boundary or through a telemedicine provider or digital health platform, and meet what requirements?</p> <p style="text-align: right;">© GBES</p>	 <p>Experienced and qualified healthcare providers (e.g., physician, nurse practitioner, physician assistant) are available to provide confidential medical treatment for episodic, recurrent, urgent or other illnesses before, during and/or after regular business hours. A scheduling system allows for drop-ins and/or appointment booking. If services are only available during regular business hours, then eligible employees are allowed to use services during the workday.</p> <p style="text-align: right;">© GBES</p>
 <p>Employers provide a short-term sick leave policy for all eligible employees, distinct from paid time off and family leave, that includes at least what?</p> <p style="text-align: right;">© GBES</p>	 <p>At least 10 days of sick leave are paid at 50% or higher of the employee's full salary or wages, offered through a flat rate or annual accrual, during any 12-month period for an acute, chronic or serious health condition.</p> <p style="text-align: right;">© GBES</p>

 <p>What are the health promotion strategies for WELL feature C07 Enhanced Health and Wellness Promotion?</p> <p>© GBES</p>	 <p>Monthly digital communications to employees and/or regular occupants (as applicable) and quarterly education sessions (e.g., workshops, lectures, seminars) that offer instruction on topics within the ten WELL concepts, covering at least two different concepts per year.</p> <p>© GBES</p>
 <p>Who is the dedicated executive-level employee whose primary responsibility is to plan and oversee strategies that promote the physical, mental and emotional health and well-being of all employees (e.g., Chief Wellness Officer)? The individual must be employed at the executive (C-Suite) level or report directly to a member of the executive (C-Suite) team.</p> <p>© GBES</p>	 <p>Health Promotion Leader</p> <p>© GBES</p>
 <p>A project must offer at least two of these services to help employees utilize and return from leave?</p> <p>© GBES</p>	 <p>Part-time options (e.g., ramp back programs). Work from home flexibility. Flexible schedules.</p> <p>© GBES</p>
 <p>This WELL feature requires projects to go above and beyond accessibility laws and/or codes by integrating universal design principles to accommodate diverse needs and create a fully inclusive environment.</p> <p>© GBES</p>	 <p>Accessibility and Universal Design</p> <p>© GBES</p>

 <p>What refers to the taste of and access to water in the project boundary?</p> <p>© GBES</p>	 <p>Indoor environmental quality of water</p> <p>© GBES</p>
 <p>WELL feature C11 Civic Engagement must provide access to one or more indoor or outdoor spaces within the project boundary that is provided to the public, such as local community groups, student clubs, or non-profit organizations, at no cost in what type of spaces?</p> <p>© GBES</p>	 <p>Meeting space</p> <p>© GBES</p>
 <p>For spaces to be approved for accessibility and universal design they must require the following with regard to physical access:</p> <p>© GBES</p>	 <p>Physical access: entry, exit, and key interaction points that enable inclusive entrance to the project and strategies that enable flexible usability of the space to accommodate change as needed (e.g., stair-free entrances, step-free egress, operable windows, automatic doors).</p> <p>© GBES</p>
 <p>Are project owners required to make tenants participate in practice drills for emergency preparedness and response?</p> <p>© GBES</p>	 <p>No. Project owners must provide opportunities for all tenants to participate in drills and emergency, but do not have to mandate tenant participation</p> <p>© GBES</p>



This WELL feature requires paid parental leave for primary and non-primary caregivers and supportive resources for parents returning to work.

© GBES



C08 New Parent Support

© GBES



How much of the human body is composed of water?

© GBES



Two-Thirds

© GBES



How much water should an adult consume daily?

© GBES



Between 49-125 oz

© GBES



What can reduce turbidity and may also trap bacteria and other contaminants?

© GBES



Water Filtration System

© GBES



Water delivered to the project for drinking, cooking, dishwashing, and handwashing must meet what turbidity levels for water quality indicators?

© GBES



Turbidity is less than or equal to 1.0 NTU, FTU, or FNU.

© GBES



Water streams can pick up contaminants from what sources?

© GBES



Agricultural runoffs and direct industrial discharges

© GBES



For drinking water quality, the project must provide at least one drinking water dispenser plus how many drinking water dispensers per dwelling unit?

© GBES



One

© GBES



All drinking water dispensers provide water that meets thresholds for how many pesticides and organic contaminants are listed under 'Drinking Water Quality Report'?

© GBES



At least two pesticides and three organic contaminants.

© GBES



What bacteria is naturally present in water that if colonized can cause lung disease and even death if contaminated water aerosols are inhaled?

© GBES



Legionella

© GBES



How often are chemical and biological water quality test results submitted through the WELL digital platform?

© GBES



Annually

© GBES



High levels of chloride in water can cause what?

© GBES



Drinking water to taste salty

© GBES



Filtration with carbon media and reverse osmosis can assist with what feature?

© GBES



Enhanced Water Quality, W04

© GBES



To maintain drinking water quality, where must the samples be taken?

© GBES



The water dispenser is closest to the pipe that delivers water into the project.

© GBES



For a project of 12 or more floors, how many additional dispensers should be tested?

© GBES



One additional for every 10 floors.

© GBES



How often should water be tested to meet the water quality monitoring requirement?

© GBES



Water is tested quarterly in drinking water dispensers.

© GBES



What must be displayed near drinking water sources?

© GBES



Water quality results and filter or other treatment information

© GBES



What distance should drinking water dispensers be located from all regularly occupied floor space and dining areas?

© GBES



100 ft Walking Distance

© GBES



How often should mouthpieces/outlets, protective guards, aerators (if present), basins, and touch points be cleaned?

© GBES



Daily

© GBES



What percent of building in Europe, Canada and the U.S are affected by excess moisture and dampness?

© GBES



20%

© GBES



Excessive moisture creates conditions conducive to what?

© GBES



Mold Growth and Biological Pests

© GBES



One-fifth of asthma cases in the U.S. are caused by?

© GBES



Excess Moisture and Dampness in Buildings

© GBES



Free-draining spaces and non-porous materials can assist with what?

© GBES



Designing the Building Envelope of Moisture Protection

© GBES



Condensation and liquid water management and water leak control in fixtures assist in achieving what?

© GBES



Designing Interiors for Moisture Management

© GBES



How often are the results of mold and leaks inspections sent to the WELL Digital platform?

© GBES



Annually

© GBES



What is key to reducing gastrointestinal and respiratory diseases after bathroom use?

© GBES



Proper Hand Hygiene

© GBES



What 3 parts are required to earn all 4 points?

© GBES



Bathroom and Handwashing Accommodations
Enhances Bathroom Accommodations Support
Effect Handwashing

© GBES



Any structure or device that is purposed to serve water for human consumption and is served by a piped network or designed for refilling. Includes drinking water fountains, water serving stations, and faucets in kitchens and breakout rooms. However, it does not include bathroom faucets or water bottles designed for single use.

© GBES



Drinking-Water Dispenser

© GBES



The stream of water exiting a faucet, measured starting from the spout of the faucet and ending where the water touches the basin.

© GBES



Water Column

© GBES



16. Lead, arsenic, antimony, mercury, nickel, copper, cadmium, and Chromium are all examples of what?

© GBES



Dissolved metals

© GBES



Access to good quality water not only helps with sanitation and hygiene, it can also reduce the risk of acquiring what kind of diseases?

© GBES



Respiratory

© GBES



What is the intent of the Air Concept?

© GBES



To achieve high levels of indoor air quality across a building's lifetime through diverse strategies that include source elimination or reduction, active and passive building design and operation strategies, and human behavior interventions.

© GBES



How much time do people spend indoors?

© GBES



90%

© GBES



What are the most common indoor air contaminants?

© GBES



Combustion sources, such as candles, tobacco products, stoves and furnaces and fireplaces.

© GBES



What diverse strategies ensure high levels of indoor air quality across a building's lifetime?

© GBES



Source elimination or reduction, active and passive building design and operation strategies and human behavior interventions.

© GBES



Inhalation exposure to indoor air pollutants can lead to:

© GBES



A variety of short- and long-term health and well-being outcomes that can vary in severity.

© GBES



What are the avoidable costs of indoor air pollution annually, according to the US EPA?

© GBES



\$100 billion annually.

© GBES



What are VOCs and SVOCs?

© GBES



Volatile Organic Compounds and Semi-Volatile Organic Compounds

© GBES



In 2012, how many premature deaths of children were associated with air pollution according to the World Health Organization?

© GBES



600,000

© GBES



What is PM 2.5?

© GBES



Particulate Matter 2.5 is tiny particles that are 2.5 microns in size and smaller.

© GBES



What is PM 10?

© GBES



Particulate Matter 10 is tiny particles that are 10 microns in size and smaller.

© GBES



What are some examples of VOCs?

© GBES



Benzene, Formaldehyde, and Toluene.

© GBES



What is radon?

© GBES



A naturally occurring, invisible radioactive gas that can cause lung cancer.

© GBES



What is one of the most effective strategies for bringing radon below acceptable thresholds?

© GBES



Mechanical Ventilation

© GBES



What is SBS?

© GBES



Sick Building Syndrome

© GBES



What is Sick Building Syndrome?

© GBES



SBS occurs when poorly ventilated spaces contribute to symptoms such as headaches, fatigue, dizziness, nausea, etc.

© GBES



What is ASHRAE?

© GBES



American Society of Heating, Refrigerating and Air-Conditioning Engineers

© GBES



What is the average percentage of productivity loss that can be attributable to health issues related to poor indoor air quality in office buildings?

© GBES



10%

© GBES



What are inorganic gases that impact air quality?

© GBES



Carbon Monoxide and Nitrogen Dioxide

© GBES



Examples of organic gasses that impact air quality.

© GBES



Acetaldehyde, Acrylonitrile, Benzene, Formaldehyde, and Toluene

© GBES



What is an airflow rate?

© GBES



The amount of air per unit of time that flows through a particular device.

© GBES



The risk of SBS drops significantly when carbon dioxide concentrations are less than:

© GBES



800 ppm

© GBES



How can you achieve natural ventilation?

© GBES



By opening windows when the outdoor air quality is favorable.

© GBES



What is relative humidity?

© GBES



Relative humidity tells us how much water vapor is in the air, compared to how much it could hold at that temperature.

© GBES



True or False: Cooking at home can lead to a rapid spike in indoor air pollution.

© GBES



TRUE

© GBES



What is UVGI?

© GBES



Ultraviolet Germicidal Irradiation. UVGI Systems are used to reduce or eliminate the growth of microbes and mold.

© GBES



What can HEPA or near-HEPA filters remove from indoor air?

© GBES



Virus particles, because viruses often travel as part of a larger particle.

© GBES



What are the components of enhancing supply air?

© GBES



Carbon filters, HEPA filters, UVGI systems, and in-room air purifiers.

© GBES



When are media filters used?

© GBES



For mechanically ventilated spaces.

© GBES



What is Source Separation?

© GBES



The most effective way to improve indoor air quality is to eliminate individual sources or capture emissions at the source.

© GBES



Why are combustion-related emissions so dangerous to indoor air quality?

© GBES



Because we find elevated levels of carbon monoxide, which is linked to headaches, visual impairment, reduced cognitive functioning and the ability to perform complex tasks.

© GBES



What is the internal clock in humans and animals that synchronize physiological functions on a 24-hour cycle?

© GBES



Circadian Rhythm

© GBES



The circadian rhythm is an internal clock in humans and animals that synchronize physiological functions on a cycle of what duration?

© GBES



24 hours

© GBES



Light exposure in the late afternoon/early night will shift circadian rhythms in what way?

© GBES



Phase delay

© GBES



How does light enter the body?

© GBES



Through the eye

© GBES



What has flicker been associated with?

© GBES



Eye strain, headaches, migraines, and epileptic seizures.

© GBES



What is flicker?

© GBES



A variance of luminance in time, measured by hertz.

© GBES



What are Color Rendering Index (CRI) and IES TM-30-15 commonly used to determine?

© GBES



Color Properties

© GBES



A new employee has requested more lighting at their work station. How quickly must the request be fulfilled under WELL guidelines?

© GBES



Within 8 weeks

© GBES



What term is used to reference excessive brightness of the light-source, excessive brightness-contrasts, and excessive quantity of light?

© GBES



Glare

© GBES



What is the main driver of the visual and circadian systems?

© GBES



Light

© GBES



Where can you find a retina?

© GBES



In the eye

© GBES



What does the WELL Light concept aim to provide?

© GBES



A lighting environment that reduces circadian phase disruption.

© GBES



Name the 2 Preconditions of Light.

© GBES



Visual Lighting Design and Light Exposure

© GBES



What type of fixtures would have a UGR?

© GBES



Lighting

© GBES



Which feature lists acceptable lighting reference guidelines?

© GBES



L02 Visual Lighting Design

© GBES



What does Equivalent Melanopic Lux measure?

© GBES



The impact of light on the circadian system

© GBES



What is fenestration?

© GBES



The arrangement windows and/or glazing in the outdoor envelope of a building.

© GBES



DALY is an acronym for what?

© GBES



Disability Adjusted Life Years

© GBES



What is an AAP?

© GBES



Alternative Adherence Pathway

© GBES



Are vision glazing/windows considered 'surfaces'?

© GBES



Windows and other glazed surfaces are not considered 'surfaces' for the L07 Visual Balance WELL feature.

© GBES



What effect does age have on the eyes?

© GBES



As humans age, the transmission of light through their lenses is reduced. This is due to age-related changes, including increased light absorption by the lenses, smaller pupil size, increased scattering of light due to thicker lenses, and yellowing of the lenses. This aging of the eye indicates that an increase in light levels is required to ensure visual acuity.

© GBES



What WELL feature requires projects to design spaces to integrate daylight into indoor environments, so that daylight may be used for visual tasks along with electric lighting? It also provides individuals with a connection to outdoor spaces through windows.

© GBES



L05 Daylight Design Strategies

© GBES



What is the intent of the WELL Light concept?

© GBES



To promote exposure to light and to create lighting environments that promote visual, mental, and biological health.

© GBES



What is the most ideal source of light?

© GBES



The sun

© GBES



At what point during the build process should daylight access be considered?

© GBES



At all stages of building/planning from architectural and façade design to interior design and layout.

© GBES



What effects does color rendering have on visual perception?

© GBES



Using electric light with high color rendering can improve people's perception of space, and low color rendering can impact the ability to differentiate between objects and perceive the surroundings accurately.

© GBES



What is CCT?

© GBES



Correlated Color Temperature (CCT) is the description of the color characteristics of light. CCT generally ranges from 2700 Kelvin to 6500 Kelvin. Lower color temperature is perceived as warmer or more yellow, while higher color temperatures can be perceived as colder or more blue. The ranges are based on the temperature at which a blackbody would be able to produce a spectral distribution similar to that produced by a given source.

© GBES



How do you calculate Equivalent Melanopic Lux?

© GBES



Multiply the photopic lux (L) designed for or measured in a building by this constant (R): $EML = L \times R$.

© GBES



What is ambient lighting?

© GBES



The primary source of lighting that provides overall illumination for a space to support vision and reduce glare. Supplemental lighting and light fixtures connected to plug loads do not count as ambient lighting. Ambient lighting is also known as general lighting.

© GBES



Define supplemental lighting.

© GBES



All light fixtures, including task lights that are considered plug loads and/or are not part of the ambient lighting system in a space. They also do not include special-purpose lights, such as those used for signage and decorative purposes. Supplemental lighting fixtures must be controllable by each occupant. Supplemental lighting.

© GBES



What are the common allergens that must be labeled on packaged food?

© GBES



Peanut, Fish, Shellfish, Soy, Milk, Wheat, Egg, Tree Nuts, and Gluten.

© GBES



What poses a greater risk to morbidity and mortality than drug, alcohol, and tobacco use combined?

© GBES



Unhealthy Diets

© GBES



What concept promotes increased access to fruits and vegetables, limiting the availability of highly processed foods, and designs environments that nudge individuals toward healthier choices?

© GBES



WELL Nourishment Concept

© GBES



What is the WELL Feature that reduces dietary exposure to pesticides, hormones, and antibiotics, limits environmental degradation, and promotes humane livestock practices?

© GBES



Feature N11 Responsible Food Sourcing

© GBES



According to the N02 WELL Feature, for label sugar content, what is the maximum amount of sugar per serving in a standard menu item?

© GBES



25g

© GBES



What WELL feature promotes increased access to fresh, local, and seasonal fruits and vegetables by reducing environmental barriers?

© GBES



Feature N13 Local Food Environment

© GBES



What WELL feature requires the provision and promotion of fruits and vegetables?

© GBES



Feature N01 Fruits And Vegetables

© GBES



What WELL feature requires adequately limiting sugar and refined grains in all foods and beverages?

© GBES



Feature N03 Refined Ingredients

© GBES



When limiting total sugar, what could be made available at no cost?

© GBES



Drinking Water

© GBES



At the point of decision, what information must be displayed?

© GBES



Food Allergy Signage

© GBES



What food option cannot cost more than its refined counterpart?

© GBES



Whole Grain

© GBES



What tactic has been shown to increase the selection of healthier items and may have a stronger impact than anti-obesity advertising on shaping eating behaviors?

© GBES



Healthy Food Advertising

© GBES



What type of signage promotes either the consumption of drinking water or consuming fruits & vegetables?

© GBES



Nutritional Messaging

© GBES



Acesulfame-potassium (acesulfame-k), advantame, aspartame, calcium saccharin, saccharin, sucralose, cyclamate, neotame, polydextrose, and olestra are all types of what?

© GBES



Artificial Sweeteners

© GBES



What is the maximum size of a circular plate in a primary school setting?

© GBES



8 in (20 cm)

© GBES



What WELL feature intends to promote healthy portion sizes and reduce unintended overconsumption and food waste?

© GBES



Feature N06 Portion Sizes

© GBES



What comprehension provides an individual the ability to not only understand nutrition information but also to implement this knowledge into their diet through preparation and cooking of food and healthy meals?

© GBES



Food Literacy

© GBES



What WELL feature intends to encourage mindful eating behaviors and communal dining opportunities?

© GBES



Feature N08 Mindful Eating

© GBES



What is the allotted time an eligible employee or student has for a meal?

© GBES



30 Minutes

© GBES



What WELL feature intends to provide alternative food choices to individuals with dietary restrictions, food allergies, or intolerances, and label common food allergens?

© GBES



Feature N09 Special Diets

© GBES



What WELL feature intends to provide space and supportive amenities for the preparation of meals on-site?

© GBES



Feature N10 Food Preparation

© GBES



What are global threats to public health and the ability to treat infectious diseases?

© GBES



Antibiotics and hormones on animals and pesticides on produce

© GBES



In what ways can a project promote sustainable, ethical and socially responsible food purchases and promote animal welfare?

© GBES



Through responsible sourcing practices and policies.

© GBES



What WELL feature requires the provision of space, infrastructure, and tools for on-site food production?

© GBES



Feature N12 Food Production

© GBES



What needs to be located within a 0.25 mi(400 m) walking distance of the project boundary?

© GBES



A permanent and accessible space for food production?

© GBES



What WELL feature requires projects to take into consideration the local food environment during site selection or programming?

© GBES



Feature N13 Local Food Environment

© GBES



What option has a requirement that transportation is provided at no cost between the project and a supermarket, store with a fresh fruit and vegetable section, and/or farmers' market?

© GBES



Supportive Transportation

© GBES



What WELL feature's goal is to increase the availability of plant-based food options and reposition red and processed meat products to decrease their prominence at point-of-decision?

© GBES



Feature N14 B Red and Processed Meats

© GBES



The World Health Organization classified _____ as carcinogenic (cancer-causing) and _____ as probably carcinogenic.

© GBES



Processed Meats and Red Meats

© GBES



What is the intent of Feature N13 Local Food Environment?

© GBES



To increase access to fresh, local and seasonal fruits and vegetables by reducing environmental barriers.

© GBES



Nutritional Transparency is a critical feature for the WELL Nourishment Concept. In commercial dining spaces, what staff positions are required to have annual food allergen training?

© GBES



Managers, Servers, and Kitchen Staff

© GBES



How much of the adult population is estimated to be physically inactive?

© GBES



Approximately 25%

© GBES



An existing five-story building recently underwent a major renovation to convert its layout from eight separate suites into one large headquarters for a corporate tenant. The new tenant is interested in open staircases to visually connect all floors and promote walkability. Where should at least one of the staircases be located?

© GBES



Before the elevator or escalator

© GBES



If physical inactivity was reduced by 25%, approximately how many deaths could be averted?

© GBES



1000000

© GBES



Proximity, connectivity, density, safety, and aesthetics are core design themes central to what?

© GBES



Walkable Communities

© GBES



According to a 2016 study, it is estimated that what percentage of people use a wearable or app to track their health and fitness?

© GBES



33%

© GBES



Studies have shown that an ergonomics program can reduce claims by up to 45% and provide an ROI of

© GBES



10:01

© GBES



Name contributing factors to growing physical inactivity rates around the world.

© GBES



Modern Transportation Labor Saving Devices
Sedentary Jobs

© GBES



The average adult is reported to be sedentary about how many hours every day?

© GBES



3-9 Hours Per Day

© GBES



What are the types of active furnishing according to Feature V07?

© GBES



Adjustable Height Standing Desk Treadmill Desk
Portable Desk Pedal

© GBES



What is the estimated price of physical inactivity on the healthcare system globally?

© GBES



\$54 Billion

© GBES



Name 3 reasons typically given for not choosing to bike to work.

© GBES



Safety, no bike parking, and no changing facilities.

© GBES



A new construction project will have three floors with stairwells servicing all floors. Name the best spots to place signage to encourage stair use.

© GBES



Near the elevator, the front door, and the base of each stairwell

© GBES



How close must the shower and changing facilities be to the project boundary under V04 Part 2?

© GBES



650 ft Walking Distance

© GBES



What is gamification?

© GBES



Strategies that incorporate game elements in what is otherwise considered a non-game context or scenario (e.g., musical staircase). These strategies intend to encourage individuals to engage in the desired behavior.

© GBES



What are some good ways to calculate the number of peak visitors?

© GBES



Actual Figures, Institutional Knowledge, and/or Using Default Occupancy Assumptions

© GBES



What was one of the top drivers of global disability in 2016?

© GBES



Musculoskeletal Disorders

© GBES



What is the intent of the WELL Movement concept?

© GBES



To promote physical activity in everyday life through environmental design, policies, and programs to ensure that movement opportunities are integrated into the fabric of our culture, buildings, and communities.

© GBES



What are the 2 preconditions of movement?

© GBES



V01- Active Buildings and Communities & V02- Ergonomic Workstation Design

© GBES



What is a specific type of physical activity that is planned, repetitive, structured and targeted towards one or more domains of physical fitness, and is typically discussed regarding intensity?

© GBES



Exercise

© GBES



Name some of the core design themes of walkable neighborhoods.

© GBES



They vary but centralize around several core design themes: proximity, connectivity, density, safety, and aesthetics.

© GBES



What are the types of active workstations?

© GBES



Manual or electric height adjustable desks provide users the ability to customize workstation height at both seated and standing positions. Supplemental solutions that allow all or part of the work surface and all input devices (monitor or screen, keyboard, mouse) to be raised or lowered to seated or standing heights.

Treadmill Desk, Bicycle Desk, Stepper Machine

© GBES



What is a functional entrance?

© GBES



A building entry/exit designed to be used by pedestrians and is open (unlocked) during regular business hours. It does not include any entry/exit exclusively designated as an emergency exit. May include a garage door, if it is designed as a pedestrian entrance.

© GBES



What is the difference between long-term and short-term bicycle parking as it relates to the Movement concept?

© GBES



Short-term bike parking (e.g., public bike rack) is located within a 100 ft walk distance of the main building entrance and includes at least two short-term bike storage spaces per 5000 ft² of floor area (minimum of two spaces per building). Long-term bike parking (e.g., bike room) is available within the project boundary and can accommodate at least 5% of regular occupants (minimum of two spaces per building).

© GBES



What is the Circulation Area on a project?

© GBES



Corridors, stairs, and other occupiable areas within the project boundary are dedicated to occupant movement.

© GBES



What is the difference between physical inactivity and sedentary behavior?

© GBES



Sedentary behavior is distinct from physical inactivity and is characterized as very low-intensity, low-effort activities, such as sitting.

© GBES



According to estimates, how many deaths could be prevented if physical inactivity were reduced by just 10%?

© GBES



More than half a million deaths could be averted, while over one million deaths could be averted if physical inactivity were reduced by 25%.

© GBES



What is Walk Distance on a project?

© GBES



The distance between two points is measured along a path taken by a person to travel from one point to another (i.e., not the radial distance). In outdoor environments, the route used should be along a pedestrian-friendly path, such as a sidewalk or all-weather path.

© GBES

 <p>What is a qualified physical activity professional?</p> <p>© GBES</p>	 <p>A person who has the knowledge and skills to execute a specific role through education, training, and/or experience and has demonstrated their ability to apply this knowledge, as required.</p> <p>© GBES</p>
 <p>Provided exercise equipment must be provided within what distance of the WELL project boundary</p> <p>© GBES</p>	 <p>200m</p> <p>© GBES</p>
 <p>When is a smart phone app considered a self monitoring device according to Feature V10 Self Monitoring?</p> <p>© GBES</p>	 <p>When both the app and the monitoring device are subsidized by the company.</p> <p>© GBES</p>
 <p>What is the intent of the Innovation Concept?</p> <p>© GBES</p>	 <p>The Innovation Concept paves the way for projects to develop unique strategies for creating healthier environments.</p> <p>© GBES</p>



Do Innovation features begin as an already included strategy in WELL features?

© GBES



No, Innovation features should address a novel concept or strategy not already included in WELL features.

© GBES



How many points may a project receive in Innovation?

© GBES



Up to 10 points.

© GBES



Can you receive an Innovation point for having a WELL AP assist with the WELL Certification process?

© GBES



Yes

© GBES









What Green Building Certifications are preapproved by IWBI?

© GBES



LEED, BREEAM, Green Star (GBCA), etc.

© GBES

 <p>What do the WELL Innovation features embrace?</p> <p>© GBES</p>	 <p>Novel approaches to promoting the creation of healthier spaces that go above and beyond feature in WELL v2.</p> <p>© GBES</p>
 <p>What WELL feature aims to promote the continuous evolution of WELL, by encouraging projects to propose a new intervention that addresses health and well-being in a novel way?</p> <p>© GBES</p>	 <p>I01 Innovate WELL</p> <p>© GBES</p>
 <p>When a project proposes innovation, part 1 includes a proposal being submitted that meets the following requirements:</p> <p>© GBES</p>	 <p>"Positively impacts project occupants by supporting health and well-being in a novel way that is not covered in WELL v2. Substantiated by existing scientific, medical, and/or industry research. Consistent with applicable laws and regulations and leading practices in building design and operations."</p> <p>© GBES</p>
 <p>What WELL feature's goal is to recognize projects that engage a WELL AP to support the WELL certification process?</p> <p>© GBES</p>	 <p>I02 WELL Accredited Professional (WELL AP)</p> <p>© GBES</p>



What does the WELL Accredited Professional (WELL AP) credential denote?

© GBES



Expertise in WELL and a commitment to advancing human health and well-being in buildings and communities.

© GBES



What can the presence of a WELL AP on a project team do for a project?

© GBES



It can benefit the project planning and achievement efforts by streamlining the WELL application and certification process.

© GBES



To achieve a WELL AP point, at least one member of the project team:

© GBES



Has achieved the WELL Accredited Professional credential and/or maintains accreditation until the project's initial certification is achieved.

© GBES



What WELL feature promotes ongoing education about WELL, by encouraging projects to offer building tours and educational components highlighting WELL features pursued certification?

© GBES



I03 Experience WELL Certification

© GBES



Increasing awareness about health and well-being solutions in buildings is a central part of what?

© GBES



WELL's mission

© GBES



How is education on WELL best showcased?

© GBES



By inviting individuals into the physical project space and highlighting the WELL features pursued.

© GBES



What must projects do to receive credit for I03 Experience WELL Certification?

© GBES



They must provide tours of the space, as well as implement education strategies that enable building occupants and visitors to learn more about the impact of built spaces on their health and well-being.

© GBES



When providing WELL educational tours, how much can projects charge for them?

© GBES



They must be free.

© GBES



How are WELL educational tours offered?

© GBES



Tours are offered on a predetermined schedule or upon request.

© GBES



How many times a year do WELL educational tours need to offer?

© GBES



At least six times per year.

© GBES



How many people need to attend WELL educational tours?

© GBES



At least 50 people per year.

© GBES



Where do WELL educational tours need to be listed?

© GBES



In the public directory of tours for WELL Certified spaces.

© GBES

 <p>What needs to be included in a WELL educational tour?</p> <p>© GBES</p>	 <p>At least one destination per WELL concept.</p> <p>© GBES</p>
 <p>Where does a WELL educational tour need to be advertised?</p> <p>© GBES</p>	 <p>Through at least one publicly accessible channel (e.g., project website, signage, social media).</p> <p>© GBES</p>
 <p>What WELL feature recognizes projects that have taken meaningful steps toward deeper commitments to health and well-being?</p> <p>© GBES</p>	 <p>104 Gateways to Wellness</p> <p>© GBES</p>
 <p>Gateways to Wellness organizations build a culture of _____ in different ways</p> <p>© GBES</p>	 <p>Health</p> <p>© GBES</p>



IWBI awards _____ to projects that participate in wellness programs that act as gateways to deeper commitments.

© GBES



An Innovation point

© GBES



For complete health and wellness programs, what do projects need to have completed within the last three years?

© GBES



An independent health and wellness program, or an initiative approved by IWBI and listed on IWBI's website.

© GBES



What WELL feature recognizes projects that have achieved certification under leading green building rating systems?

© GBES



I05 Green Building Rating Systems

© GBES



By balancing _____ and _____ considerations, both people and planet can thrive.

© GBES



Sustainability and Human Health

© GBES

 <p>To achieve a Green Building Certification, what requirement needs to be met?</p> <p>© GBES</p>	 <p>The project is certified in a green building rating system approved by IWBI and listed on IWBI's website</p> <p>© GBES</p>
 <p>This concept aims to promote human productivity and provide a maximum level of thermal comfort among all building users through improved HVAC system design and control and by meeting individual thermal preferences.</p> <p>© GBES</p>	 <p>Thermal Comfort</p> <p>© GBES</p>
 <p>The condition of mind expresses satisfaction with the thermal environment and is assessed by subjective evaluation.</p> <p>© GBES</p>	 <p>Thermal Comfort</p> <p>© GBES</p>
 <p>The WELL feature that requires projects to create indoor thermal environments that provide comfortable thermal conditions to the majority of people in support of their health, well-being and productivity.</p> <p>© GBES</p>	 <p>Feature T01 Thermal Performance</p> <p>© GBES</p>



This environment substantially impacts a building's energy footprint, since in many countries heating and cooling account for approximately half of a building's energy consumption.

© GBES



The Thermal Environment

© GBES



A building's _____ must satisfy a minimum of 80% of occupants to be considered acceptable.

© GBES



Thermal Comfort

© GBES



What must be administered at least twice a year, including once in June, July, or August and once in December, January, or February, at least six months after occupancy?

© GBES



A Post-Occupancy Anonymous Survey on Thermal Comfort

© GBES



What can be influenced by several factors, including the building physics and orientation, building location and structure, occupant density, ventilation strategy, and mode of operation?

© GBES



Indoor Air Temperature

© GBES



What WELL feature requires projects to improve the thermal comfort of people in the space through the provision of personal thermal comfort devices and flexible dress codes that support individual thermal preferences?

© GBES



Feature T04 Individual Thermal Comfort

© GBES



One of the ways an occupant can warm their individual environment.

© GBES



Electric Parabolic Space Heater

© GBES



One of the six core thermal comfort parameters.

© GBES



Mean Radiant Temperature

© GBES



Designed to affect mean radiant temperature, and thus the heat exchange with the people in the space, by supplying heat directly to the surrounding surfaces of the floors, walls, and ceilings.

© GBES



Radiant Heating Systems

© GBES



Heating and cooling system that reduces the number of allergens circulating in the air, since this type of system does not use forced air to distribute heating or cooling.

© GBES



Radiant Heating And Cooling System

© GBES



This feature intends to monitor and effectively address unacceptable thermal comfort conditions and inform building managers and users of the thermal comfort parameters of their indoor environment.

© GBES



Feature T06 Thermal Comfort Monitoring

© GBES



What should be designed to monitor and control for variations in indoor air temperature, mean radiant temperature, relative humidity, and air movement?

© GBES



Building HVAC Systems

© GBES



Can influence the degradation of building materials, the ability of the human body to release heat through evaporation, and the level of discomfort from excess moisture on the skin.

© GBES



Humidity

© GBES



This WELL feature intends to limit the growth of pathogens, reduce off-gassing and maintain thermal comfort by providing the appropriate level of humidity.

© GBES



Feature T07 Humidity Control

© GBES



The number of points received if 90% of occupants are satisfied with their thermal comfort.

© GBES



3 points

© GBES



What WELL feature requires projects to increase thermal control of the space, by allowing control of either the conditions of a thermal zone or movement between thermal zones?

© GBES



Feature T03 Thermal Zoning

© GBES



This greatly influences our experiences in the places where we live and work and is one of the highest contributing factors influencing overall human satisfaction in buildings impacting individual levels of motivation, alertness, focus, and mood.

© GBES



Thermal Comfort

© GBES



An overly _____ indoor space is linked to increases in sick building syndrome symptoms, irregular heart rate, respiratory issues, fatigue, and negative mood.

© GBES



Warm

© GBES



_____ work environments have been linked to increased effort and work towards maintaining proper posture and increased risk for chronic issues related to musculoskeletal health.

© GBES



Cold

© GBES



What WELL feature requires projects to provide high levels of thermal comfort, by determining occupant satisfaction through a survey?

© GBES



Feature T02 Verified Thermal Comfort

© GBES



A policy that allows regular occupants to dress for individual thermal preferences.

© GBES



A Flexible Dress Code Policy

© GBES



Studies show occupants have a 50% probability of indoor temperature satisfaction in spaces with radiant systems, compared to _____ systems.

© GBES



Conventional "All Air" Systems

© GBES



In addition to having calibrated sensors, the _____ of the sensors plays an important role in the accurate assessment of the thermal environment.

© GBES



Positioning

© GBES



In _____ weather, large openings in windows near occupants can lead to an unpleasant draft.

© GBES



Cold

© GBES



What are benefits of radiant temperature systems?

© GBES



. Higher relative humidity in winter B. Lower dust transportation Saved floor space

© GBES

 <p>What is homeothermy?</p> <p>© GBES</p>	 <p>The balancing of heat gains and losses to maintain the body's core temperature within its narrow range, 36-38 degrees C [97-100 degrees F], and regulated by the hypothalamus</p> <p>© GBES</p>
 <p>For T01 compliance, if a project's measurements are undertaken by a WELL Performance Testing Agent in compliance with the Performance Verification Guidebook, where are the results submitted for recertification purposes?</p> <p>© GBES</p>	 <p>GBCI - Green Business Certification Inc.</p> <p>© GBES</p>
 <p>What is the human response to mechanical vibrations through a medium?</p> <p>© GBES</p>	 <p>Sound</p> <p>© GBES</p>
 <p>What is a design element intended to reduce interior and exterior noise intrusion, reduce reverberant and reflected sound energy, and increase the acoustical separation between enclosed spaces or workspaces?</p> <p>© GBES</p>	 <p>Acoustical Treatment</p> <p>© GBES</p>



What can aid in the reduction of sound transmission between a private office and open space?

© GBES



Non-Hollow Core

© GBES



What area of a room typically provides the greatest area of coverage where extremely absorptive materials can offer the best outcome to reducing reverberation?

© GBES



Ceiling

© GBES



What is quantified by the overall level of satisfaction of an occupant in a given environment?

© GBES



Acoustical Comfort

© GBES



What can impede speech intelligibility and cause strain for occupants who may possess hearing impairments?

© GBES



Inappropriate reverberation times and background noise levels

© GBES



Includes areas intended for concentration, wellness, rest, study, and/or privacy (e.g., restorative spaces, lactation rooms, nap rooms)

© GBES



Quiet Zones

© GBES



Includes occupiable areas not intended for regular occupancy (e.g., hallways, egress, atria, stairs, lobbies)

© GBES



Circulation Zones

© GBES



Includes areas intended for loud equipment or activities (e.g., mechanical rooms, kitchens, fitness rooms, social spaces, recreational rooms, music rooms)

© GBES



Loud Zones

© GBES



Includes areas intended for learning, collaboration, and/or presentation (e.g., auditoriums, classrooms, breakout spaces)

© GBES



Mixed Zones

© GBES



Can lead to increased risk of cardiovascular system issues, diabetes, hypertension, stroke, depression, and high blood pressure

© GBES



Exposure to Traffic Noise

© GBES



What must be measured over a period of five minutes?

© GBES



Background Noise Levels

© GBES



Sound transmits through walls directly and around the construction by what is known as

© GBES



Flanking

© GBES



What is STC?

© GBES



Sound Transmission Class

© GBES



What is Rw?

© GBES



Weighted Sound Reduction Value

© GBES



What is NIC?

© GBES



Noise Isolation Class

© GBES



What is Dw?

© GBES



Weighted Difference Level

© GBES



The length of time taken for a sound to decay by 60 dB from an initial impulse level

© GBES



Reverberation Time

© GBES



What can be controlled by adding absorptive surface finishes at ceilings, walls, and furniture?

© GBES



Reverberation Time

© GBES



Sound pressure levels are not to exceed 48 dBA in what zones?

© GBES



Open areas with Quiet Zone and/or Circulation Zones

© GBES



What is IIC?

© GBES



Impact Insulation Class Rating

© GBES



What is NISR?

© GBES



Normalized Impact Sound Rating

© GBES



What is LnTw?

© GBES



Weighted Standardized Impact Sound Pressure Level

© GBES



Sound transmitted between rooms within a building is known as what?

© GBES



Structure-borne impact noise

© GBES



What utilizes speech enhancement technology (e.g., active digital signal processing, noise cancellation) and should be provided in all rooms used for conferencing, distance-learning, or similar remote communications and commissioned by a professional in audio engineering?

© GBES



Telecommunication and AV Systems

© GBES



What kind of sound can be delivered to a space using an adjustable array of loudspeakers located such that sound is uniformly distributed?

© GBES



Consistent Background Sound

© GBES



For spaces that are designed with hard reflective ceilings and walls, the perception of noise increases with an increase in ambient reflected noise that decays in level at a _____ .

© GBES



Longer Rate

© GBES



Spaces with longer reverberation times may be _____ in volume with hard surfaces that reflect sound.

© GBES



Larger

© GBES



Spaces with shorter reverberation may be _____ with softer surfaces that absorb sound.

© GBES



Smaller

© GBES



Measurement for Interior Walls

© GBES



STC or Rw (Sound Transmission Class or Weighted Sound Reduction)

© GBES



What is the intent of the Mind Concept?

© GBES



To promote mental health through policy, program and design strategies that seek to address the diverse factors that influence cognitive, and emotional well-being.

© GBES



What is the cost to the global economy due to lost productivity from depression and anxiety?

© GBES



\$1 Trillion

© GBES



How many deaths are attributed to suicide annually?

© GBES



800,000+

© GBES



What adverse health consequences are associated with chronic stress?

© GBES



Depression, cardiovascular disease, diabetes, and upper respiratory infections.

© GBES



What is biophilia?

© GBES



An idea that humans have an affinity towards the natural world and are an emerging field that aims to address our psychological need to be around life and life-like processes.

© GBES



What percentage of adults will experience a common mental health condition over their lifetime?

© GBES



30%

© GBES



What are common mental health conditions?

© GBES



Anxiety, depression, and substance abuse.

© GBES



What is an EAP?

© GBES



Employee Assistance Plan

© GBES



What is the global annual spending on mental health per person?

© GBES



\$2 per person

© GBES



What pathways give you access to nature in a building?

© GBES



Direct (indoor plants), indirect (window views), and representational (photographs).

© GBES



Stress is directly linked to _____ of the ten leading causes of death in the world.

© GBES



7

© GBES



What is meditation?

© GBES



Training in awareness to learn to observe your thoughts or feelings without judgment.

© GBES



What is mindfulness?

© GBES



A mental state is achieved by focusing one's awareness on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and surrounding environment, through a gentle, nurturing lens.

© GBES



What are some verification methods used in the WELL Building Standard?

© GBES



Professional Narrative, Technical Document, Letter of Assurances, Policy and/or Operations Schedule

© GBES



Tobacco is responsible for an estimated _____ deaths per year globally among direct users.

© GBES



6,000,000 (six million)

© GBES



How many deaths are reported annually from second-hand smoke?

© GBES



890000

© GBES



How many countries have services to support tobacco cessation?

© GBES



24

© GBES



True or False: Alcohol abuse is a global risk factor and is responsible for 3.3 million deaths per year.

© GBES



TRUE

© GBES



What are the benefits of adequate sleep?

© GBES



Adequate sleep improves mental health and is necessary for maintaining sustained mental and physical performance throughout the day. It can also help prevent unhealthy weight gain.

© GBES



What two conditions are considered widespread global health concerns?

© GBES



Mental health and substance abuse.

© GBES



Mental health conditions attribute to what percentage of annual deaths globally?

© GBES



14.30%

© GBES



How can you mitigate adverse mental health outcomes?

© GBES



Through policies, programs, and design

© GBES



Failure to address mental health in the workplace can contribute to what?

© GBES



High turnover, presenteeism, and absenteeism, repetitive recruitment and training costs, etc.

© GBES



What is presenteeism?

© GBES



Lost productivity occurs when an employee is not fully functioning in the workplace.

© GBES



What is absenteeism?

© GBES



The practice of regularly staying away from work or school without good reason. Oftentimes, this is due to healthcare concerns.

© GBES



How can a project provide a connection to nature?

© GBES



y using natural materials, patterns, shapes, or colors and using plants, water, or nature views in a space.

© GBES



How can a project provide a connection to a place?

© GBES



Celebration of culture or place, and/or integration of art and human delight.

© GBES



Which features are preconditions of the Mind Concept?

© GBES



M01 Mental Health and M02 Nature and Place.

© GBES



True or False: Increased accidents and injuries are an outcome of failure to address mental health in the workplace?

© GBES



TRUE

© GBES



What is a restorative space?

© GBES



A dedicated space designed with the incorporation of nature and other restorative elements for individuals to step away from the stress of the office environment and recharge.

© GBES



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