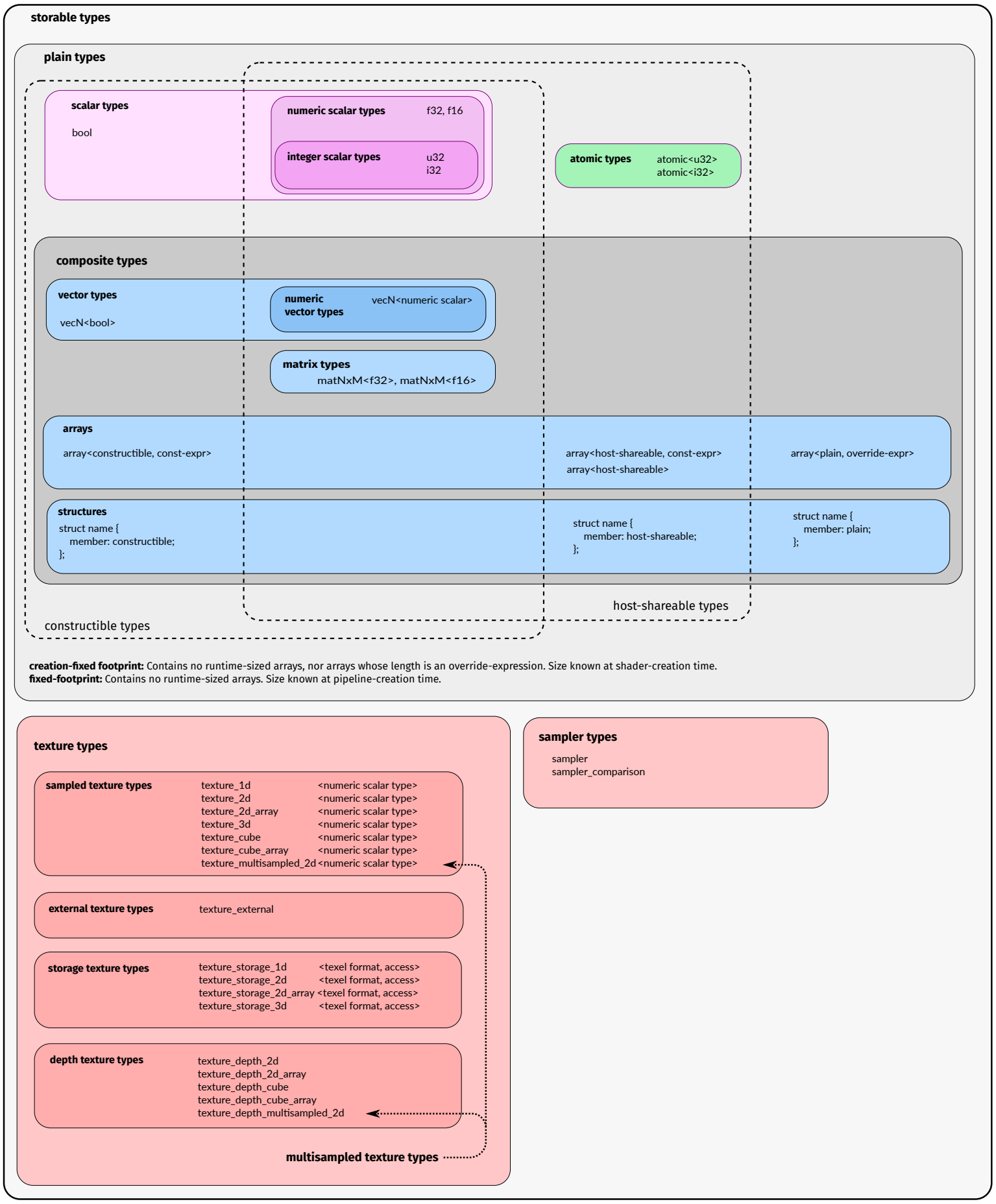
storable types
plain types
scalar types
bool
numeric scalar types
f32, f16
integer scalar types
u32
i32
atomic types
atomic<u32>
atomic<i32>
composite types
vector types
vecN<bool>
numeric vector types
vecN<numeric scalar>
matrix types
matNxM<f32>, matNxM<f16>
arrays
array<constructible, const-expr>
array<host-shareable, const-expr>
array<host-shareable>
array<plain, override-expr>
structures
struct name {
member: constructible;
};
struct name {
member: host-shareable;
};
struct name {
member: plain;
};
host-shareable types
constructible types
creation-fixed footprint: Contains no runtime-sized arrays, nor arrays whose length is an override-expression. Size known at shader-creation time.
fixed-footprint: Contains no runtime-sized arrays. Size known at pipeline-creation time.
texture types
sampled texture types
texture_1d <numeric scalar type>
texture_2d <numeric scalar type>
texture_2d_array <numeric scalar type>
texture_3d <numeric scalar type>
texture_cube <numeric scalar type>
texture_cube_array <numeric scalar type>
texture_multisampled_2d <numeric scalar type>
external texture types
texture_external
storage texture types
texture_storage_1d <texel format, access>
texture_storage_2d <texel format, access>
texture_storage_2d_array <texel format, access>
texture_storage_3d <texel format, access>
depth texture types
texture_depth_2d
texture_depth_2d_array
texture_depth_cube
texture_depth_cube_array
texture_depth_multisampled_2d
multisampled texture types
sampler types
sampler
sampler_comparison
memory view types
pointer types
ptr<storage class, storable type, access mode>
storage class = function, private, workgroup, uniform, storage
access mode = read, write, read_write
reference types
ref<storage class, storable type, access mode>
(N, M = 2, 3, 4)
github.com/jimblandy/webgpu-diagrams/blob/main/WGSL-types.svg