Aspects of this disclosure are directed to a method of processing data with a graphics processing unit (GPU). According to some aspects of the disclosure the method comprises receiving input defining execution orders for a shader processor wherein the execution orders comprise plurality of kernel designations and a plurality of workgroup designations. The method may also include assigning workgroups of kernels identified in the plurality of workgroup designations and the plurality of kernel designations to the shader processor. The method may also include executing by the shader processor the workgroups of kernels identified in the plurality of workgroup designations and the plurality of kernel designations to process input data wherein executing the stream of execution orders comprises sharing input data between two or more workgroups identified in the plurality of workgroup designations.