

```
run_model % top level routine
    check_inputs % checking everything has been provided correctly
    initialise_variables % set up the simulation
        bin_forcings % get the forcings on model layers and time steps
    for i=1 to number of time steps % time-stepping loop
        homogenise_unstable_layers % resolve any density inversions
        compute_fluxes % calculate all the required layer fluxes
            get_plume_fluxes % between layers and plume
            get_shelf_fluxes % between layers and shelf
            get_mixing_fluxes % vertical mixing between layers
            get_iceberg_fluxes % icebergs
            get_vertical_fluxes % vertical advection between layers
        step_solution_forwards % make the time step
        check_solution % check error tolerance
    end % end time-stepping loop
    get_final_output % finalise model output to be saved
```