Flowchart

1) Obtain crystallographic primitive cell (Table 3), "reduced" cell for triclinic, Sec.4.2.4.

2) Derive "extended Bravais" symbol: Bravais symbol (check space group number range) + "type" (depends on either space group range or axial ratio) + inversion (Y or N, check space group number range!)

3) Force inversion in extended Bravais symbol if time-reversal symmetry is enforced.

4) Look up relevant table of definition of labels, coordinates, band path (Table 69-92, kpx, kpy, kpz); don't forget to include "inverted wedge" if there is no inversion! Except for triclinic: One band path per one extended Bravais symbol. Two extended Bravais symbols for one table only if the type specifies whether then extra path is included or not. Triclinic: determine acute or obtuse by looking at a reciprocal interaxial angle, and use labels, coordinates, and band path in the relevant table.

5) Optional: give kpoint coordinates along the band path along with identifiers for labelled points. My preference for kpoint intervals is 0.025/2pi (2pi/angstrom), but it depends on how much resources you can afford.

Extended Bravais definition

Extended Bravais symbol: Bravais lattice + type (1-3) + inversion (Y/N)
Bravais lattice, type, definition
cP1: #195-206 (extra path)
cP2: #207-230 (no extra path)
cF1: #195-206 (extra path)
cF2: #207-230 (no extra path)
cI1
tP1
tI1:c<a
tI2:c>a
oP1
oF1:a^-2>b^-2+c^-2

oF2:c^-2>a^-2+b^-2

oF3:a^-2, b^-2, c^-2 edges of triangle

oI1:c largest

oI2:a largest

oI3:b largest

oC1:a<b

oC2:a>b

oA1:b<c

oA2:b>c

hP1:#143-149, 151, 153, 157, 159-163 (extra path)

hP2:Other (no extra path)

hR1:sqrt(3)a<sqrt(2)c

hR2:sqrt(3)a>sqrt(2)c

mP1

mC1:b<asin(beta)

mC2:b>asin(beta) BZ 12-face

mC3:b>asin(beta) BZ 14-face

aP1

Example of an extended Bravais symbol is oP1Y or mP1N.