The Shape Of Space

1. Euclidean space:
   - Describe an example of a surface in this space. Draw an example.
   - Describe triangles in this space. How many degrees do triangles have in this space?
     1. Draw 2 triangles that have the same angle sum. Are all these triangles congruent?
   - Draw a line in your space. Set a point not on this line. How many lines go through this point parallel to your original line? Draw an example of this.

2. Spherical space:
   - Describe an example of a surface in this space. Draw an example.
   - Describe triangles in this space. How many degrees do triangles have in this space?
     1. Draw a triangle with three 90° angles.
     2. Draw a second triangle with three 90° angles.
     3. Describe the relationships between these two triangles.
   - Draw a line in your space. Set a point not on this line. How many lines go through this point parallel to your original line? Draw an example of this.
   - Are the latitude lines on a globe parallel lines?

3. Hyperbolic space:
   - Describe an example of a surface in this space. Draw an example.
   - Describe triangles in this space. How many degrees do triangles have in this space?
     1. Draw a triangle with three 10° angles
     2. Draw a second triangle with 10° angles
     3. Describe the relationships between these 2 triangles.
   - Draw a line in your space. Set a point not on this line. How many lines go through this point parallel to your original line? Draw an example of this.