

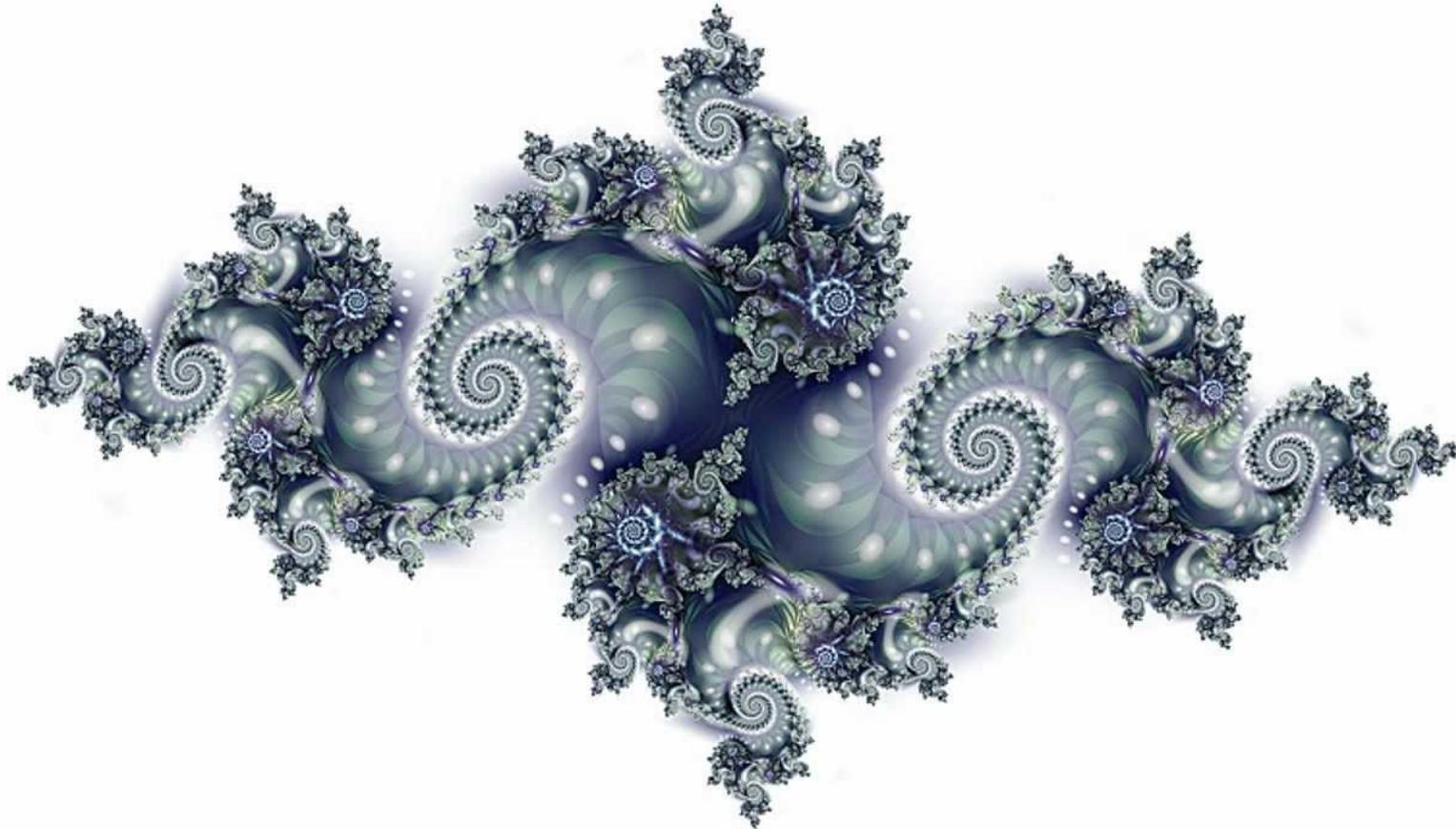
Bending Students' Intuition

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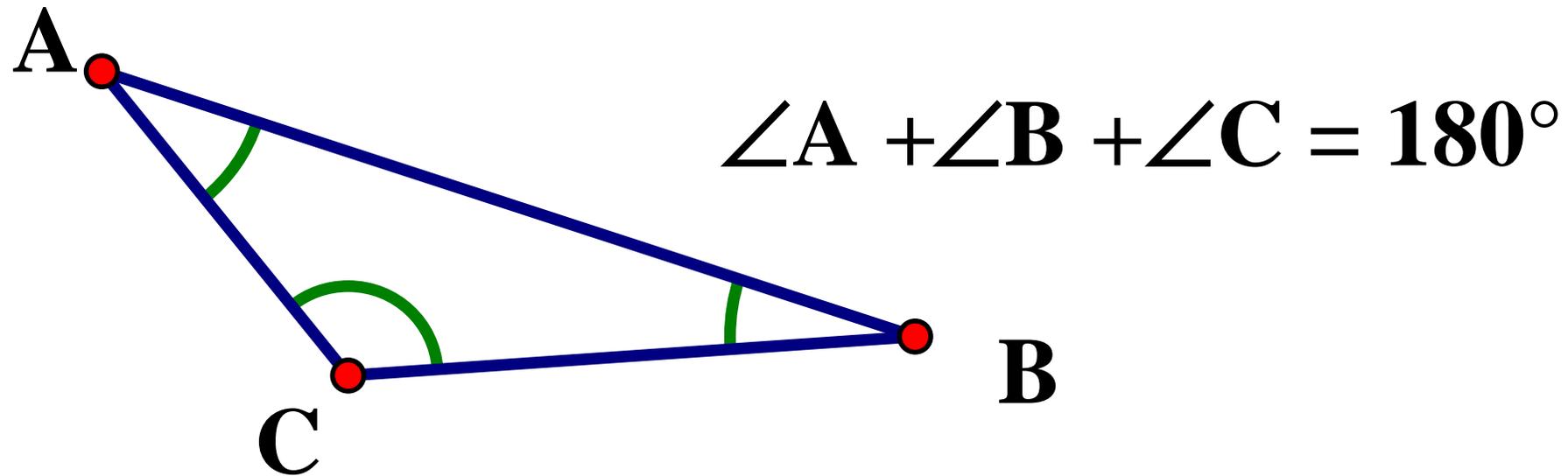
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“Intuition is not something that is given. I’ve trained my intuition ... and I find everyone can do the same... [I]ntuition can be changed, refined and modified...” – Benoit Mandelbrot

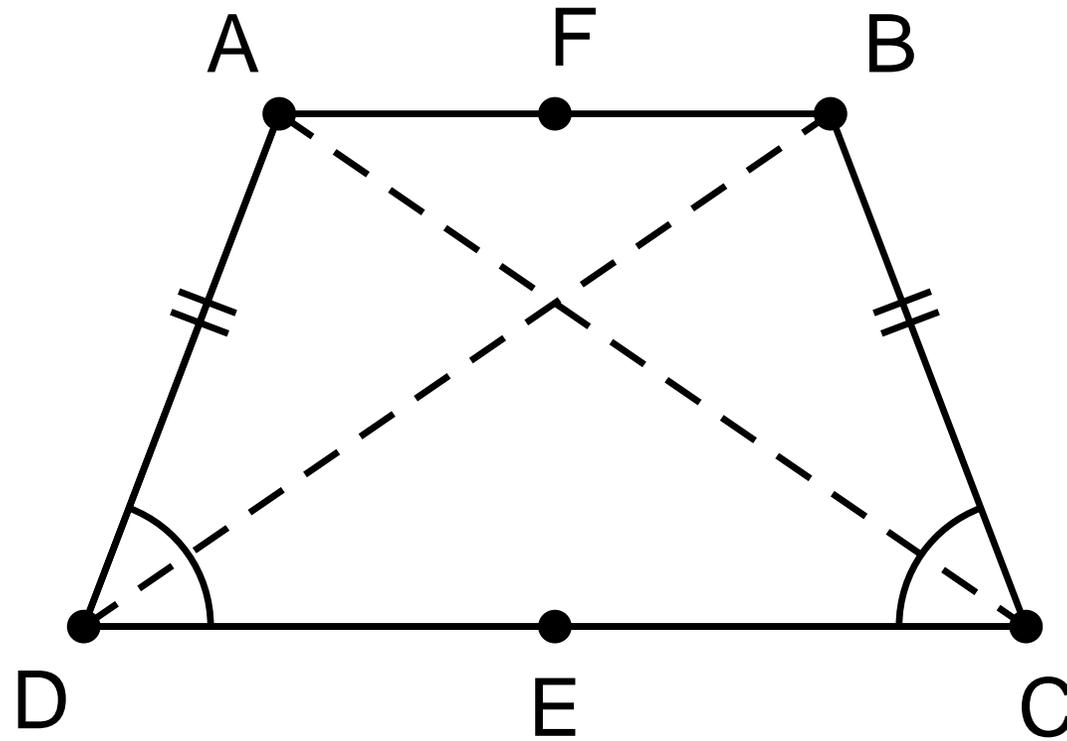


- Physical models enable students to make conjectures and build intuition quickly.

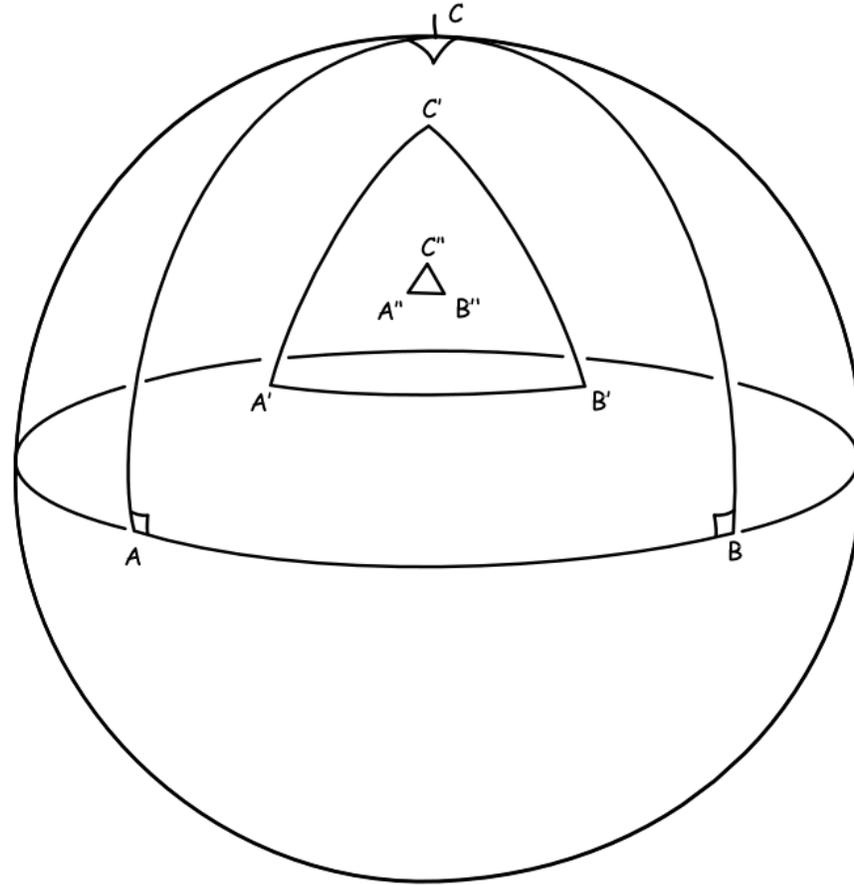
Students have intuitions in Euclidean geometry and we need to build on them, especially since they often haven't proven these results.



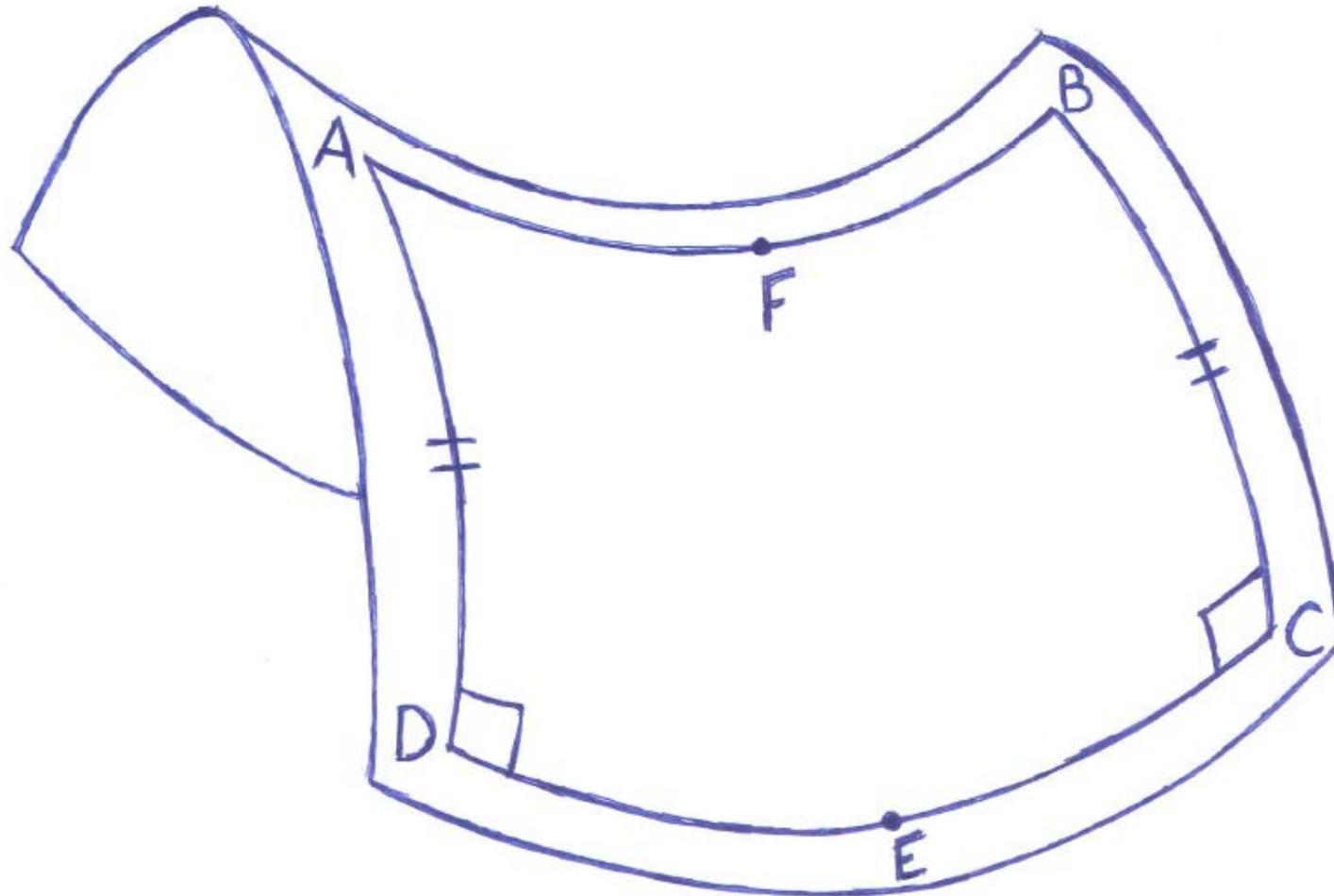
Saccheri-like quadrilateral



I have them “play” with triangles on a sphere before we prove relation of angles and area.



Using models they conjecture about Saccheri quadrilaterals in hyperbolic geometry.



Typical Conjectures

- The diagonals are congruent.
- The summit angles are congruent and acute.
- The segment EF is perpendicular to the summit and base.
- The summit is longer than the base.

I remind them of results they proved earlier.

