Today’s topic

Figure: Gauch (2012)
Why study the principles of scientific method?

1. You will become a Doctor of Science (Tech.)
2. It will improve your comprehension and make you more systematic and productive
3. It will help you to create more useful knowledge and solutions
4. It increases adaptivity and enables creativity
Today’s themes

Book: Scientific Method in Brief (Gauch 2012)

• Four bold claims
• Science’s contested rationality
• Science’s presuppositions
• Science’s power and limits
• Logic and reasoning
• Parsimony and efficiency
• Ethics and responsibility

This is only a brief introduction!
Teaching method: Inverted classroom

Assignment: Teach your topic to others
• Make poster of your topic
• Provide a brief background to your topic (others haven’t read it!)
• Focus on teaching the key points
• Presentation time 12 min. including discussion

Schedule:

<table>
<thead>
<tr>
<th>Time</th>
<th>Duration</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>12.30-13.30</td>
<td>60 min.</td>
<td>Poster making</td>
</tr>
<tr>
<td>13.30-13.45</td>
<td>15 min.</td>
<td>Break</td>
</tr>
<tr>
<td><strong>13.45-14.40</strong></td>
<td><strong>55 min.</strong></td>
<td><strong>4 presentations (groups 1-4)</strong></td>
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<tr>
<td>14.40-14.50</td>
<td>10 min.</td>
<td>Break</td>
</tr>
<tr>
<td><strong>14.50-15.30</strong></td>
<td><strong>40 min</strong></td>
<td><strong>3 presentations (groups 5-7)</strong></td>
</tr>
<tr>
<td>15.30-15.45</td>
<td>15 min.</td>
<td>Discussion</td>
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Discussion

• First impressions and thoughts on today's topic(s)?
• What did you learn today?
“Science without epistemology is – in so far as it is thinkable at all – primitive and muddled.”

– Albert Einstein